NATIONAL HEALTH AND MEDICAL RESEARCH COUNCIL

COMMONWEALTH DEPARTMENT OF HEALTH

Report of the Eighty-third Session

Hobart, April 1977

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General

The Eighty-third Session of the National Health and Medical Research Council was held in the Auditorium of the State Offices, 10 Murray Street, Hobart on Thursday, 21 April and Friday, 22 April 1977.

The following members were present:

Dr C. P. Evans (Chairman)	Acting Commonwealth Director-General of Health
Dr W. A. Langsford	representing the Commonwealth Department of Health
Dr N. J. McCarthy	representing the Commonwealth Serum Laboratories Commission
Dr R. G. McEwin	Chairman, Health Commission of New South Wales
Dr B. P. McCloskey	Chief Health Officer, Victoria
Dr P. R. Patrick	Director-General of Health and Medical Services, Queensland
Dr P. S. Woodruff	Director-General of Public Health, South Australia
Dr J. C. McNulty	Commissioner of Public Health, Western Australia
Dr G. Mackay-Smith	Director-General of Health Services, Tasmania
Dr T. H. Hurley	representing the Federal Council of the Australian Medical Association
Professor P. I. Korner	representing the Royal Australasian College of Physicians
Professor L. W. Cox	representing the Australian Council of the Royal College of Obstetricians and Gynaecologists
Dr N. A. Andersen	representing the Council of the Royal Australian College of General Practitioners
Dr R. G. Edwards	representing the Royal College of Pathologists of Australia
Mr A. J. Bloomfield	representing the Australian Dental Association
Dr B. W. Neal	representing the Australian Paediatric Association
Dr B. Kynaston	representing the Royal Australasian College of Radiologists
Dr M. J. Sainsbury	representing the Australian and New Zealand College of Psychiatrists
Professor R. H. Thorp	representing the Australian Federation of Consumer Organisations
Professor W. J. Simmonds	representing the Australian Universities having Medical Schools
Mr J. A. Hancock	an eminent layman
Mrs D. E. H. Cavaye	an eminent laywoman
Dr K. W. Edmondson	Secretary of the Council

Dr Evans, in the chair, presented the apologies of Dr Gwyn Howells, the Commonwealth Director-General of Health, whose absence overseas had precluded him from carrying out the duties of Chairman of the Council.

Apologies were also presented for Professor J. Ludbrook and Dr G. L. Lipton. Members were informed that Dr R. G. McEwin was unable to attend the first day of the Session.

A welcome was extended to Dr M. J. Sainsbury who attended in place of Dr Lipton, and to Dr D. Storey who deputised for Dr McEwin. Miss O. E. Anstey, the Chairman of the Nursing Committee, was also welcomed as a co-opted member.

Members were advised that Dr J. R. Macintyre had recently retired from the position of Director-General of Health Services, Tasmania. Appreciation was expressed for the valuable contribution made by Dr Macintyre to the Council over the past eight years.

Dr Mackay-Smith was congratulated on his appointment as Dr Macintyre's successor and was welcomed as the new member on the Council.

The Session was opened by the Hon. D. A. Lowe, M.H.A., Minister for Industrial Relations and Health. The Minister, on behalf of the Tasmanian State Government, welcomed the members to Hobart and expressed his pleasure at being invited to open the 83rd Session as it commemorated the fortieth year of the Council's history, the first Session having been held in Hobart in 1937.

Medical Research Advisory Committee

The Medical Research Advisory Committee met in the Gloucester Room, Queen Elizabeth the Second Building, University of Sydney on 17-18 March 1977. The report of the meeting was presented by the Chairman, Dr T. H. Hurley. Council approved the following recommendations arising from the report.

Needs in medical research in Australia

The Council recommended that a deputation call upon the Commonwealth Minister for Health to present the case for funds for medical research in Australia for 1978. The deputation is to include the following members of the Council or the Medical Research Advisory Committee.

Dr T. H. Hurley	Consultant Physician, Melbourne; Chairman of the Medical Research Advisory Committee
Professor D. R. Curtis	Department of Pharmacology, John Curtin School of Medical Research, Australian National University, Canberra
Dr D. A. Denton	Director, Howard Florey Institute of Experimental Physiology and Medicine, Melbourne
Professor E. G. Saint	Dean, Faculty of Medicine, University of Queensland

The case to be presented by the deputation is outlined in Appendix I, p. 20.

The Council viewed with concern the current level of funding and believed that the Medical Research Advisory Committee had substantiated the case for increased funding even in the light of the current economic climate. To support the case the Council endorsed the following Statement for use by the deputation to the Minister:

> The Council feels that in presenting its submissions for research funding for 1978 the budget, including the modest range of new initiatives, has been pruned to absolutely bedrock to answer to the present economic realities. The Council strongly feels that this low level of effort would be very detrimental to the Australian medical research effort and ultimately to the delivery of health care if allowed to continue beyond 1978. There has been a steady and significant increase in the number of recognised medical research groups active in Australia, with a good balance between basic research (which is so essential for future progress in all fields of medicine) and clinical research dealing with immediate problems of diagnosis and management. With the present method of bedrock budgeting there is at the present time inadequate opportunity for the support of newly developing areas of excellence in this country without adversely affecting existing projects. The attention of the Minister should be drawn to the fact that the need for Australia to attain greater self-sufficiency in all types of medical research is greater than ever before. Recently the United States Congress altered the immigration laws so that it will become impossible for our practitioners to enter the U.S.A. and engage upon clinical research programs unless they pass their specialist examinations which can only be taken within the United States itself. While strong representations have been made to the United States Government and it is possible that the law may be modified, it illustrates very well that a country such as Australia should become self-sufficient in all types of medical training that has to be provided. We believe that such training is an important by-product of increasing the overall medical research effort. Unless people are more adequately trained to cope with the increasing demands made by new diagnostic and delivery systems these are going to be used ineffectively and at great cost to the community. We certainly have the men to provide and benefit from such training, but not the money!

Budget proposals for calendar year 1978

The Council has previously authorised the Medical Research Advisory Committee to make recommendations to the Minister for Health for and on behalf of the Council relating to assistance under Section 6(1) of the Medical Research Endowment Act in accordance with budget proposals approved at its early session each year.

The Council recommended that the Medical Research Advisory Committee continue to exercise this delegation to recommend grants, including commitments, and forward these recommendations to the Minister provided that the total value of these recommendations does not exceed 95% of total funds available to the Council. For the calendar year 1978 the funds available to the Medical Research

Advisory Committee, that is, 95% of the total funds available to Council, will be applied by the Committee towards:

Project grants and program grants,

Grants for the support of the scientific establishment of certain research institutes,

Research units and research fellowships,

Scholarships, postgraduate and undergraduate,

Overseas fellowships,

Other grants which may be recommended.

The Council further recommended the adoption of a general rule, suggested by the Needs in Medical Research (Standing) Committee that the distribution of funds through the Medical Research Endowment Fund be divided in the following proportions:

15% training grants,

80% various other types of research grants,

5% Council's special grants.

Applied Health Sciences Fellowships

Early in 1977 the Council invited applications for Applied Health Sciences Fellowships in a broad range of health topics. The general purpose of the program is to assist appropriately qualified younger persons, within a definite period of time, to acquire research skills through study and observation, in approved research and teaching institutions both in Australia and overseas. The Fellowships provide an opportunity especially for training in research methods and their application to medicine, through collaboration with acknowledged experts in overseas and local laboratories and institutions.

The purpose of the Fellowships, which have replaced the NH & MRC Fellowships in Clinical Sciences, includes training in scientific research methods, together with those of the social and behavioural sciences which can be applied to clinical or community medicine. These areas might include research into, for example:

Biostatistics,

Clinical aspects of surgery,

Clinical pharmacology,

Demography,

Economics and evaluation of health care or health services,

Epidemiology,

Genetics,

Human nutrition,

Psychiatry,

Psychology.

or other areas where the applicant has an aptitude and interest in applied research, a specific study plan, affiliation with an overseas investigator or institution for the study, and reasonable prospects of a responsible position in Australia on completion of the Fellowship. They are not available to persons wishing to learn clinical techniques.

Eligibility includes graduates in all relevant fields, not only medical and dental graduates. In considering applications this year the Council placed emphasis on the applied value of the proposed research training and gave preference to persons who already have research training and are seeking advanced study not available in Australia. The Fellowships are competitive and shall be awarded annually by the Council on the recommendations of a selection committee. The Council shall exercise discretion as to the number of Fellowships recommended in any one year and does not undertake necessarily to award Fellowships in any particular areas.

While the acquisition of a broad experience is the prime purpose of the Fellowships, incidental qualification towards a higher degree may not be excluded.

The objectives of the Fellowships differ from those of the Council's C. J. Martin Fellowships which are primarily for persons who have been engaged in fields of basic research in the biomedical sciences to enable them to work overseas on specific projects under nominated advisers. The Council will not consider applications from the same candidate for both Fellowships.

The Council recommended the award of the first six Applied Health Sciences Fellowships, as listed below:

Dr P. J. Harris — Hallstrom Institute of Cardiology, Royal Prince Alfred Hospital, Camperdown, N.S.W. 2050

To study for two years overseas at the Duke University Medical Center, Durham, North Carolina, U.S.A. Commitment also for one year's support on return to Australia.

Epidemiology of heart disease

Proposed study: Epidemiological evaluation of the treatment of heart disease.

Commencing salary: $18 389 plus air fares and allowances

Dr R. C. Burton — Walter and Eliza Hall Institute of Medical Research, Parkville, Vic. 3052

To study for two years overseas at the Department of Surgery, Harvard University and Massachusetts General Hospital, Boston, Massachusetts, U.S.A. Commitment also for one year's support on return to Australia.

Surgery/Immunology

Proposed study: Studies of cell mediated immunity in prospective human and murine homograft recipients presensitised to foreign histocompatibility antigens

Commencing salary: $18 389 plus air fares and allowances

Dr J. V. Stoelwinder — Sir Charles Gairdner Hospital, Nedlands, W.A. 6009

To study for two years overseas at the Management and Behavioural Science Centre, University of Pennsylvania, Philadelphia, 19174, U.S.A. Commitment also for one year's support on return to Australia.

Health Administration

Proposed study: The organisational design of health care teams.

Commencing salary: $18 389 plus air fares and allowances

Dr P. A. L. Lancaster — Department of Paediatrics, Royal Hospital for Women, Paddington, N.S.W. 2021

To study for two years overseas at the Office of Population Censuses and Surveys, London, U.K., and the School of Public Health, University of California, U.S.A. Commitment also for one year's support on return to Australia.

Epidemiology

Proposed study: Epidemiology related to maternal and infant health.

Commencing salary: $18 389 plus air fares and allowances

Dr C. C. Tennant — School of Psychiatry, University of New South Wales, Prince Henry Hospital, Sydney, N.S.W. 2036

To study for two years overseas at the Maudsley Hospital, University of London, Denmark Hill, London, U.K. Commitment also for one year's support on return to Australia.

Social Psychiatry

Proposed study: Epidemiological studies in social psychiatry.

Commencing salary: $18 389 plus air fares and allowances

Dr B. D. Ward — Physics Department, University of Adelaide, Adelaide, S.A., 5000

To study for two years overseas at the Engineering in Medicine Laboratory, Imperial College of Science and Technology, London, U.K. Commitment also for one year's support on return to Australia.

Computing

Proposed study: Statistical signal and pattern processing applied to clinical and epidemiological data.

Commencing salary: $15 184 plus annual increment, air fares and allowances.

Award of C. J. Martin Fellowships

The Council considered sixteen applications for the Fellowships and recommended the award of three fellowships, as listed below:

Dr J. W. Goding — The Walter and Eliza Hall Institute of Medical Research, Parkville, Vic. 3052

To study for two years overseas at the Department of Genetics, Stanford University, Stanford, California, U.S.A. Commitment also for one year's support on return to Australia.

Proposed study: Function of antigen receptors on lymphocytes.

Commencing salary: $18 389 plus air fares and allowances

Dr M. J. McKinley — Howard Florey Institute of Experimental Physiology and Medicine, University of Melbourne, Parkville, Vic. 3052

To study for two years at the Royal Karolinska Institute, Stockholm, Sweden. Commitment also for one year's support on return to Australia.

Proposed study: Role of the circumventricular structures of the brain in the regulation of water balance.

Commencing salary: $15 797 plus annual increment, air fares and allowances.

Dr G. C. Farrell — Department of Medicine, University of Queensland, Royal Brisbane Hospital, Herston, Qld 4029

To study for two years at the Gastroenterology Research Unit, Department of Medicine, University of California, San Francisco, California 94143, U.S.A. A commitment also for one year's support on return to Australia.

Proposed study: A study of the mechanisms involved in steroid-hormone induced liver tumours.

Commencing salary: $18 389 plus air fares and allowances.

Conditions associated with Overseas Fellowships

POLICY ON SUPPORT FOR C. J. MARTIN AND OTHER NH & MRC OVERSEAS RESEARCH FELLOWS ON COMPLETION OF FELLOWSHIP

The current conditions of tenure associated with the C. J. Martin and Applied Health Sciences Research Fellowships state:

> *Tenure*
>
> The Fellowships are normally awarded for a period of three years, of which the first two years are to be spent overseas and the final third in Australia. A Fellow shall take up the Fellowship no later than 31 March of the year following the award, except with special permission of the Chairman of the Council.

The Council considered that applicants or Fellowship holders should be advised that the NH & MRC accepted no commitment for support beyond the third year of their Fellowship. Requests for support after this period could only be on a competitive basis with other research project grant applicants.

The Council noted that Fellows returning from overseas study often found that their third year in Australia did not coincide with the full January to December academic year. The Council reaffirmed its previous decision that, in these cases, the Secretariat would be allowed to make provision for interim support, to allow the Fellow to adjust his program in line with the NH & MRC's yearly granting operations:

> e.g. A Fellow who has completed his third year by August of any one year, would receive interim support until 31 December of that year provided he has already submitted an application for continued support.

It is not the intention for the above support to be longer than a period of six months.

Accordingly, the Council recommended that the section dealing with tenure in the C. J. Martin and Applied Health Sciences Fellowships information pamphlets be amended to emphasise that the NH & MRC accepts no commitment after the third year of a Fellowship.

VARIATION IN ALLOWANCE FOR NH & MRC FELLOWS IN NORTH AMERICA: RENT ALLOWANCE

The current conditions associated with the C. J. Martin Research Fellowships and other overseas Fellowships include provision for various travelling expenses and allowances.

Following difficulties experienced by Fellows in North America with regard to the high cost of rental accommodation, the Minister for Health, on the advice of a quorum of the Medical Research Advisory Committee acting on behalf of the Council, approved a rent allowance of $A200 a month to be payable to persons awarded NH & MRC overseas scholarships and fellowships tenable in North America, retrospectively from 1 July 1976 or when the person arrived in North America, whichever is the later.

Accordingly, the Council recommended that the section entitled: 'Travelling Expenses and Allowances' printed in the 'C. J. Martin Research Fellowships' and 'Research Fellowships in Applied Health Sciences' information pamphlets, be amended to include the following statement:

> '...United States of America and Canada — a monthly rent allowance as may be determined from time to time'.

Council endorsed a rent allowance of $A200 per month for 1977.

Report of the Subcommittee to Review NH & MRC Research Fellowships

At its meeting in May 1976, the Medical Research Advisory Committee established a Subcommittee to review the NH & MRC Fellowships Scheme. The members of the ad hoc Subcommittee were selected from the Medical Research Advisory Committee. The Subcommittee met on four separate occasions and the final report was presented by its Chairman, Dr R. L. Doherty, to the Medical Research Advisory Committee.

The Report of the Subcommittee to Review NH & MRC Research Fellowships, as amended by the Medical Research Advisory Committee, appears as Appendix II, p. 23.

The Council endorsed the following recommendations arising out of the Report:

That Council establishes formally a Fellowships Scheme as a continuation and expansion of the existing program of awarding Fellowships.

That Council affirms that scientific merit continues to be the basis for award and recommends that Fellowships be widely advertised annually.

That Council establish a Research Fellowships Committee having the following terms of reference and membership:

Terms of reference

To advise the Medical Research Advisory Committee on matters relating to the award of NH & MRC Research Fellowships associated with:

1. Project grants.
2. Grants to Institutes receiving NH & MRC institutional support.
3. Areas of special need determined from time to time by the Council.

To ensure uniformity of standards and practice in the areas of Research Fellowships nominated above.

To make recommendations on the method of appointment, review of progress, promotion and tenure of appointment of Research Fellows.

Membership

The Chairman of the Medical Research Advisory Committee or his nominee from the Medical Research Advisory Committee. (Chairman)

The Secretary of the Council.

A person representing the Appointments and Promotions Committees of the institutes receiving NH & MRC institutional support.

Three persons nominated by the Medical Research Advisory Committee.

For 1977 the Medical Research Advisory Committee nominated the following members for the Research Fellowships Committee:

Dr T. H. Hurley	Consultant Physician, Melbourne, Chairman of the Medical Research Advisory Committee (Chairman)
Professor D. R. Curtis	Department of Pharmacology, John Curtin School of Medical Research, Australian National University, Canberra
Dr D. A. Denton	Director, Howard Florey Institute of Experimental Physiology and Medicine, Melbourne
Dr R. L. Doherty	Director, Queensland Institute of Medical Research, Brisbane
Assoc. Professor L. Lazarus	Director, Garvan Institute of Medical Research, St. Vincent's Hospital, Darlinghurst, N.S.W.
Dr K. W. Edmondson	Secretary of the National Health and Medical Research Council

That Council, whilst determining each case on its merits, accepts the guidelines for tenured or career appointments as set out in the report of the Research Fellowships Committee.

The Council further recommended that the Report of the Subcommittee to Review NH & MRC Research Fellowships be distributed to interested parties.

Provision of Medlars/Medline searches free of charge to NH & MRC grantees

The Council noted that, in association with the National Library and the Commonwealth Department of Health, it was instrumental in the introduction of Medlars to Australia. It was important therefore that the Council's grantees be able to avail themselves of these services under the most favourable conditions possible. A decision had been taken by the National Library and the Department of Health

that various categories such as departmental medical officers, NH & MRC Committees and NH & MRC grantees should be provided with Medlars/Medline services without charge.

The Council endorsed the above action and considered that the provision of Medlars searches free of charge would be in the nature of a privilege. Further, the Council also agreed that it would be preferable for NH & MRC grantees to be informed of this additional benefit by the Secretary of the Council rather than by the Department of Health or the National Library.

The Council considered that requests for searches should be directed to the search analyst at the Department of Health Library. The NH & MRC could be kept informed by the analyst of the number of searches requested by NH & MRC grantees. At present this represents about 6% of searches and could be expected to rise with these new arrangements.

The Council stressed that this benefit should only apply to projects being supported.

Medical and Dental Postgraduate Research Scholarships

The Council noted a list of Medical and Dental Postgraduate Research Scholarships for 1977 and discussed the matter of the current level of stipends. Council reaffirmed a decision taken at the last meeting that there be no change in the value of the scholarship stipends and allowances for 1977.

Medical and Dental Research Scholarships (Undergraduate)

The Council noted that general difficulties were experienced this year with regard to the awarding of Medical and Dental Research Scholarships (Undergraduate). These included the rule that students are not permitted to hold two awards from Commonwealth sources and, at present, a student receiving a Commonwealth Tertiary Allowance is restricted to $150 p.a. from other sources.

The Council reaffirmed that the prime purpose of the NH & MRC Scholarships (Undergraduate) was to enable medical and dental students to interrupt their course to undertake a Bachelor of Medical Science or equivalent degree in order to gain some experience in research.

In the light of the above difficulties, the members discussed the possibility of increasing the value of the award. This was however, not recommended and the members voted to continue with the present system of awarding undergraduate scholarships.

Although provision was made this year for the award of up to fifty scholarships, many students who were already receiving Commonwealth Tertiary Allowances were ineligible for the NH & MRC award. Nineteen students were eligible to receive the scholarships and Council endorsed the following awards of nineteen Medical and Dental Research Scholarships (Undergraduate) for 1977 recommended by the Secretary of Council in accordance with authority delegated to him, as listed below:

Institution	*No. of scholarships*
NEW SOUTH WALES	
University of Sydney	5
University of New South Wales	4
VICTORIA	
University of Melbourne	3
Monash University	1
QUEENSLAND	
University of Queensland	2
SOUTH AUSTRALIA	
Flinders University of S.A.	1
WESTERN AUSTRALIA	
University of Western Australia	2
TASMANIA	
University of Tasmania	1
	19 @ $600 each; total: $11 400

FLINDERS UNIVERSITY OF SOUTH AUSTRALIA; ELIGIBILITY FOR NH & MRC UNDERGRADUATE SCHOLARSHIPS

The Council noted that at the Flinders University of South Australia it is possible, in some circumstances, for students enrolled in the B.M., B.S., course to undertake the B.Med.Sc. (Hons.) concurrently as the elective studies component of their medical course and by additional study in their own time and during University vacations.

The Council agreed, accordingly that students studying in the above circumstances should not be excluded from receiving the NH & MRC undergraduate award.

Conditions associated with NH & MRC awards — Project grants

NH & MRC PROFESSIONAL SALARY SCALES; INCLUDING DETERMINATION OF SALARY SCALES FOR PARA-MEDICAL PERSONNEL

The Council decided to accept the current State hospital employees awards as the basis for setting para-medical salaries on NH & MRC project grants. Also, if para-medical staff appear on grants in other than hospital based grants, the appropriate award salary will be obtained.

Accordingly, the Council recommended that the following criterion be added as paragraph vii to the NH & MRC Professional Salary Scales and Scholarship Stipend Rates:

> vii. Persons holding para-medical qualifications, e.g. physiotherapists, nurses, pharmacists, will be designated as such and paid according to appropriate State awards.

POLICY REGARDING PARA-CLINICAL LOADINGS

The Council noted that the NH & MRC currently pays clinical loadings to suitably qualified persons in line with the general principles laid down by the Academic Salaries Tribunal. Eligibility to receive these loadings is determined annually on the advice of a special Subcommittee of the Medical Research Advisory Committee.

The Council considered an extract from a recent report of the Academic Salaries Tribunal concerning the payment of para-clinical loadings. Discussion was held on whether para-clinical loadings as outlined by the Tribunal should be paid to suitably qualified NH & MRC personnel.

After discussing various aspects of the issue, the Council decided to continue to operate on the present basis for the next twelve months, i.e. to consider appropriate applicants receiving up to $4000 p.a. on a pro-rata basis for clinical loadings.

With regard to para-clinical loadings, the Council requested that the Secretariat provide a detailed analysis of what the Tribunal's recommendations could cost the NH & MRC.

Furthermore, the Council requested that advice be sought from the Department of the Treasury on the possibility of a special allocation to the Medical Research Endowment Fund to meet the various categories of clinical loadings. The Council was informed, however, that current Government policy requires requests for such additional funds to be matched by equivalent departmental savings.

The Council also requested that advice be sought from the Deans of medical faculties as to what steps the universities are taking to conclude agreements with teaching hospitals whereby payments will be made by the hospitals to the universities for clinical services performed by the university academic staff.

The Council noted the following paragraph of a recent report of the Academic Salaries Tribunal:

> Where a university allows clinicians to receive payments directly from teaching hospitals for the work done as full-time members of the university staff, the Universities Commission should make no provision for the funding of clinical loadings in such cases but should provide funding for para-clinical and pre-clinical loadings where these latter loadings may be appropriate.

With regard to the determination of policy in the future for clinical and para-clinical loadings, the Council notes the desirability for persons supported by NH & MRC grants, to be under the provisions of the Academic Salaries Tribunal and requested the Secretariat to investigate this matter.

REQUESTS FOR APPOINTMENT AT RESEARCH FELLOW LEVEL

The Council noted several outstanding requests from 1976 for appointment at NH & MRC Research Fellow level. After a thorough examination of the applications received and on the advice of independent assessors' reports, the Medical Research Advisory Committee recommended the following appointments to Research Fellow for five years from 1 January 1977:

Dr M. Esler
Dr J. Staszewska-Barczak
Dr M. Roberts
Dr N. E. Miller
Dr J. R. Johnstone

The Council endorsed these recommendations and noted that a review of scientific progress for each of the above would be carried out during 1979.

VARIATIONS IN GRANTS APPROVED BY THE SECRETARY OF THE COUNCIL, BY A QUORUM OF THE MEDICAL RESEARCH ADVISORY COMMITTEE AND MINOR GRANTS RECOMMENDED BY THE COUNCIL AT THE EIGHTY-THIRD SESSION

The Council endorsed the additional grants, variations in grants and appointments approved by the Secretary of the Council and by a quorum of the Medical Research Advisory Committee since the last meeting of the Council as shown in Appendix III, p. 30.

In addition several minor grants recommended by the Council at the Eighty-third Session are also shown in an attachment to Appendix III.

Project Grants Program 1977

REGIONAL GRANTS SUBCOMMITTEES 1977

The Council approved the appointment of six Regional Grants Subcommittees for 1977 and dates for their visits to interview recipients and/or applicants for NH & MRC grants, as set out on page 141.

INDEPENDENT ASSESSORS PANEL

The Council noted a detailed outline prepared by the Secretariat of proposed administrative changes relating to the use of independent assessors for project grants. The Council observed that in previous years, several problems had arisen with the allotment of independent assessors to applications for NH & MRC Project Grant support.

In order to overcome these problems, the Council noted the proposal that this year, a panel of assigners would be created on the advice of the Medical Research Advisory Committee, to act on behalf of the NH & MRC and to allocate independent assessors to the project grant applications.

Overseas visit by the Secretary of the Council

The Council noted that at its last meeting, a grant of $5000 had been recommended for the Secretary of the Council to visit overseas Fellows.

The Committee was informed that the grant had been approved by the Minister and that the proposed itinerary had been submitted to the Committee for Overseas Travel of the Department of Health for approval prior to its submission to the Overseas Visits Committee of the Department of Prime Minister and Cabinet. The Council was informed that the Departmental committee expressed a strong hope that the Secretary's visit would be approved.

The Committee observed that although funds had been provided by the NH & MRC, the approval of the Overseas Visits Committee was necessary and could not be regarded as a matter of course.

Council had previously noted how substantial was the investment of public money in research workers training overseas, currently some $620 000 p.a.

Council considered that it was essential that this investment be safeguarded by proper administrative control not readily available through local financial and scientific audits. Personal visits by the Secretary of the Council to supervisors, institutions and international scientific assessors would ensure at a modest cost, the development of a continuing stream of competent young scientists to the medical research field in Australia.

Medicine Advisory Committee

Council received the report of the meeting of the Medicine Advisory Committee held at the Institute of Medical and Veterinary Science, Adelaide on 10 and 11 March 1977. The report was presented by the Chairman of the Committee, Dr B. W. Neal. The Council approved the following recommendations arising from the report.

Adverse drug reactions

At its 82nd Session the Council agreed that a working party should be established to examine the feasibility of the NH & MRC undertaking a Phase IV evaluation of the adverse reactions to drugs and to estimate the cost of such a study.

It was noted that departmental resources, both staff and financial have to date prevented the establishment of this working party.

Obesity

Council noted that the Medicine Advisory Committee had undertaken an inve therapeutic problems associated with obesity and that the results of this study woul consideration at the next meeting of the Council.

Communication of Council recommendations to the public

Council was concerned that the advice contained in its recommendations should reach all those who might benefit from that advice.

Short recommendations by the Council appear in its session reports but do not routinely enjoy wide distribution. Longer recommendations are frequently authorised by the Council to be printed separately as monographs to be 'distributed widely'.

In the past there has been difficulty in ascertaining the target group for some of these documents and errors and omissions in distribution have occurred. Recently there has been the added burden of restricted funds preventing suitably wide distribution of endorsed statements.

Council therefore requested that its Advisory Committees include with their recommendations indications as to which elements or organisations in the community should be apprised of the recommendations. The Advisory Committees should also indicate the number of copies which should be produced of any document.

It was recommended that the Executive Committee report on the problems associated with the financing, publishing and distribution of NH & MRC documents for consideration by the Council at its next meeting.

Antibiotics (Reference) Committee

CHEMOTHERAPY WITH ANTIBIOTICS AND ALLIED DRUGS

Council noted that copies of the fourth edition of the publication *Chemotherapy with Antibiotics and Allied Drugs* will be available later this year. The book is being published by the Australian Government Publishing Service which will have copies for sale at its shops in capital cities. The cost will probably be between $10 and $15 per copy. In the past the Council has made this publication available free of charge to medical and dental students, university and institution libraries and to other interested people and organisations. Under the new arrangements for publishing at the Commonwealth's cost, free issues can only be available to groups such as medical, dental and veterinary students.

Council recommended that:

(i) the publication *Chemotherapy with Antibiotics and Allied Drugs* be made available free of charge to medical, dental and veterinary students during the year they study bacteriology; and

(ii) if funds are not available from normal departmental sources the Executive Committee be empowered to recommend a grant to the Department of Health to purchase 5000 copies of the publication estimated to cost $16 500.

Council was disturbed at the estimated cost of the for-sale copy of the publication and requested that the Minister for Health be asked to approach his colleague responsible for the Australian Government Publishing Service with a view to making copies available at cost, plus postage.

Dental Health (Standing) Committee

EMERGENCIES IN DENTAL PRACTICE

In 1975 the Chairman of the Council approved the setting up of a working party to revise the NH & MRC publication *Emergencies in Dental Practice* with the following members:

Professor N. D. Martin (Chairman)
Professor M. Jolly
Dr R. C. Wright
Dr C. A. Sara
Dr B. S. Clifton
Mr R. G. Woods
Dr T. O. Brophy
Dr J. Munro-Ashman (Secretary/Convener)

This document reflects the views of the working party but not necessarily those of the Council. In accepting the document, the Council expresses the desire that the dental profession should familiarise themselves with emergency treatment in the dental surgery, and that all Dental Schools should note the importance of undergraduate students receiving adequate training in the emergency care of dental patients.

CLEFT LIP AND PALATE

Council received a document titled *Cleft Lip and Palate and related Cranio-facial Anomalies* and drew attention to the special needs for continuing medical and dental care in all its aspects for persons suffering from cleft lip and palate and associated cranio-facial anomalies. This document, as amended, appears as Appendix IV, p. .

PREVENTIVE DENTISTRY

It was noted that while the fluoridation program had produced demonstrable results in the prevention of tooth decay, there had been no evaluation of the methods of delivering dental preventive and curative services.

The Council recommended to both State and Territorial instrumentalities that there was an urgent need for surveys of both children and adults according to the methods and procedures set out in the W.H.O. Oral Health Survey Manual to determine the current status of dental health in the whole of Australia and that such a survey should be repeated at quinquennial intervals to evaluate the effectiveness of current methods of delivering dental preventive and curative services.

It was further recommended that the initiation of such surveys and the results obtained from them should be co-ordinated nationally.

Maternal Health (Standing) Committee

HERPES SIMPLEX VIRUS (H.S.V.) — VENEREAL DISEASE

It was noted that the upper body or type I form of Herpes simplex virus is not the form dangerous to young children. Rather it is the lower body or type II virus which is dangerous.

Council recommended that hospital staff should not be excluded from duty while having acute Herpes simplex lesion with the proviso that this recommendation concerns type I Herpes simplex virus only.

Mental Health (Standing) Committee

MENTAL HEALTH STATISTICS CONFERENCE

Council agreed that the 5th Mental Health Statistics Conference ought to be held regardless of the imminent publication of the *9th International Classification of Diseases.*

Further, it was considered that the scheduling of the Conference should not be governed by the publication of the *9th ICD* since the major topic to be considered at the Conference did not depend upon the *ICD.* Council believed that the need for the 5th Mental Health Statistics Conference was now urgent.

ROAD SAFETY

Council noted that there were various units presently in use expressing blood alcohol levels, including milligrams per litre, milligrams per millilitre, grams per litre, milligrams per 100 millilitres, or milligrams per cent. Such a range of units makes it difficult to appreciate and correlate the significance

of reported levels. It also leads to confusion. Mistakes are made, not infrequently, in the positioning of the decimal point. Differing methods of expression are used within this country and in other countries. This presents difficulties in community education.

S.I. (Le Systeme International d'Unites) units are being adopted throughout all areas of science, including medicine and is the basis of the Metric Conversion Act. S.I. units, as they apply to medicine, are described in Broadsheet No. 14 of the Royal College of Pathologists of Australia *S.I. Units and You* produced jointly with the Australian Association of Clinical Biochemists.

In expressing blood alcohol levels, the S.I. units provide a simple scale ranging from 0 to 100 when using milli moles per litre. Accordingly, the Council recommended that for ease of communication, alcohol levels found in biological specimens should be expressed in whole numbers using Systeme International (S.I.) units (milli moles per litre).

Reproduction and Family Health (Standing) Committee

LEGISLATION ON ABORTION, STERILISATION AND CONTRACEPTION

Council noted that there were wide spread differences in the law currently in force and even more difference in the possible interpretation of these laws relating to persons under the age of consent.

It was recommended that the Law Reform Commission be requested to examine the current legislation in the States and Territories of Australia on abortion, with a view to recommending uniform laws throughout the country on sterilisation; and on abortion and the provision of contraceptives to persons under the age of consent.

Public Health Advisory Committee

A meeting of the Public Health Advisory Committee was held in the Conference Room, Australian Government Centre, 188 Collins Street, Hobart, on 24-25 March 1977. The report of the Committee was presented to Council by Dr W. A. Langsford, Acting Chairman.

Reports were received from the Communicable Diseases Committee, the Epidemiology Services Committee, the Food Standards Committee, the Nutrition Committee, the Poisons Schedule Committee and the Veterinary Public Health Committee.

The Council noted with interest the diverse range of matters, in addition to those submitted by its committees, that the Public Health Advisory Committee had under consideration. These included surveys on foods; use of antibiotics of value in human medicine, in animal feedstuffs; need for legislation to control skin piercing procedures; recall procedures for faulty and hazardous products; radiation from mining and industrial wastes; and environmental health matters which included model code of practice for the disposal of solid waste on land; relationship between variations in the ozone layer and skin cancer; zinc in seafoods; and health aspects arising from the Fifth Report of the Royal Commission on Petroleum.

Public Health Travelling Fellowships

Council recommended an award of a Public Health Travelling Fellowship, as follows, for the project and amount stated:

Name	*Project*	*Grant*
Miss B. McPhee	Study of the scope, teaching organisation and practice of occupational physiotherapy and its role in occupational health research	$6198

This replaces an award made at the 82nd Session but declined.

Grant for preliminary investigation of biomedical manifestations of community exposure to lead and cadmium, Port Pirie, South Australia

The Council recommended that a grant be made to Dr P. D. Clark and Dr A. J. McMichael of the South Australian Department of Public Health to assist them to carry out this preliminary investigation. The grant of $5250 is to provide primarily the salary of a community nurse for a period of six months to arrange for sampling, interviewing and testing, and to help prepare and process the data prior to it being put on computer.

Food surveys

Information on the progress of the microbiological status of foods and market basket (noxious substances) surveys being conducted on its behalf was received by the Council.

Microbiological Status of Foods Survey

A preliminary report on the *Microbiological Status of Foods Survey,* which was approved at its Seventy-sixth Session, was noted by the Council. The survey covered a variety of foods including:

(i) ready-to-eat take-away foods, including rotisseried chicken, deep fried chicken; meat pies, hamburgers, prepared fish dishes and salads;

(ii) processed meats, including corned beef, ham and devon-type sausage;

(iii) infant foods, in particular dried infant formulae and cereal products; and

(iv) imitation cream and cold-mix custards.

Council expressed its appreciation of the efforts expended by all those who assisted in the purchase, transportation and analysis of the samples and in the processing and statistical analysis of the questionnaires.

It noted that the microbiological status of foods was generally satisfactory. However certain foods gave rise to some concern and should continue to be monitored.

Market Basket (Noxious Substances) Survey of Food 1975

The report on the Market Basket (Noxious Substances) Survey of Food 1975, which had been conducted by the Australian and State Departments of Health and the Australian Department of Science, was accepted by the Council. The report is published at Appendix V, p. 36.

Council expressed its appreciation of the efforts expended by all those taking part in the survey and, in particular, noted the assistance of the School of Home Science, East Sydney Technical College, Sydney in the preparation and cooking of food samples.

It was noted that the results of the survey show that the residues of the organochlorine compounds monitored were generally well below the maximum residue levels specified by the Council. Continued monitoring of these compounds was indicated, however, because of their persistence.

The levels for lead, cadmium and mercury were, in general, comparable with those found in overseas food surveys. Cadmium levels were considerably lower than those reported in the 1974 survey. The levels determined for mercury in fish were all below the recommended 0.5 mg/kg limit. Continued monitoring of both cadmium and mercury was considered warranted.

Zinc and tin levels in canned foods were generally within the maximum residue limits specified by the Council. Heavy metals in canned foods and drink will be monitored in future surveys.

Council noted the levels of lead, particularly in canned foods, which were determined in the survey. It considered that there is need for an early review of the levels of lead and other metals permitted in some canned foods and directed that the Food Standards Committee undertake such a review and make recommendations to the Council.

Council recognised the need for continued surveillance of the levels of residues of noxious substances in food.

Market Basket (Noxious Substances) Surveys of Food 1976 and 1977

Council noted that the samples for the 1976 survey have been analysed and that the results are being evaluated. It further noted that purchasing of samples for the 1977 survey had commenced.

Ozone depletion and skin cancer

The Council considered the relationship between depletion of the stratospheric ozone layer and the aetiology of skin cancer.

It noted the possibility that alteration to the ozone layer may result from sources such as fluorocarbons and high altitude flights and that ozone depletion could lead to increased access of ultraviolet light to the earth's atmosphere. Current overseas opinion and the fact that some overseas countries proposed to reduce or phase out the use of certain fluorocarbons were noted also.

Council considered that variations in ozone levels and ultraviolet light radiation should be assessed for health hazard.

To achieve this object Council established a Working Party with the following Terms of Reference:

> To inquire into and report to the Epidemiology Services Committee on the incidence of skin cancer in Australia as related to the effects of variations in the ozone levels of the earth's stratosphere and resultant change in ultraviolet radiation.

Saccharin

The Council noted reports that the Canadian and United States Governments had acted to ban saccharin, following reviews of studies which revealed that laboratory animals, whose diet included large amounts of saccharin, had developed bladder cancer.

It directed the appropriate food committees to keep the subject under surveillance.

Recognition of public health as a medical specialty

Council stressed the need for increasing emphasis on public health and preventive medicine in Australia and drew attention to the lack of adequate numbers of appropriately trained specialists in this country.

It was concerned to encourage the development and expansion of existing facilities for postgraduate training to meet this need.

Council recommended, therefore, that the School of Public Health and Tropical Medicine in the University of Sydney should upgrade current courses and facilities to the standard required to enable specialist recognition and accreditation of those undertaking such training.

Recommended Maximum Residue Limits of Pesticides, Agricultural Chemicals, Feed Additives and Veterinary Medicines in Food

The Council considered proposed additions and amendments to the list of maximum residue limits and recommended that the document, *Recommended Maximum Residue Limits of Pesticides, Agricultural Chemicals, Feed Additives and Veterinary Medicines in Food,* as published at Appendix XIX of the Report of the Eighty-second Session, be amended as shown in Appendix VI, p. 54. The consolidated list of recommended maximum residue limits appears at Appendix VII, p. 57.

Antibiotics used as growth promotants in animal feedstuffs

Council was of the opinion that the continued use of therapeutic antibiotics as growth promotants in animal feedstuffs could lead to an impairment of their efficacy in the treatment of human disease.

It recommended that penicillins, tetracyclines, cephalosporins, sulphonamides, trimethoprim and related compounds, aminoglycoside antibiotics, chloramphenicol, and preparations of these antibiotics, be prohibited from use as growth promotants in animal husbandry in Australia.

In respect of sulphonamides, Council considered that these should be restricted to medical, dental or veterinary prescription, except for sulphaquinozaline for use as a coccidiostat and when incorporated in baits for the destruction of vermin.

It further considered that the use of tylosin and macrolides as growth promotants should continue to be permitted. However, the Council emphasised that it considered that their use as growth promotants is considered to be disadvantageous because of their value to veterinary medicine in the therapeutic treatment of serious infections in animals and birds.

Council therefore recommended that the amendments in Appendix XV, p. 91, to Antibiotics in Schedule 4; to Benzyl Penicillin, Chloramphenicol, Chlortetracycline, Oxytetracycline, Sulphanilamide and Sulphaquinoxaline in Schedule 6; and to Chloramphenicol, Sulphanilamide and Sulphaquinoxaline in Appendix A, to the Uniform Poisons Standard, adopted by the Council at its Eighty-Second Session, be adopted by States and Territories.

Use of antibiotics in veterinary medicine

The Council expressed the opinion that, because of their significance in the treatment of particular human diseases, cloxacillin and chloramphenicol warranted special consideration as Schedule 4 drugs.

The present usage of cloxacillin in the mastitis program was endorsed. However, the Council recommended that alternative programs be developed, using other drugs, to ensure the continued efficacy of cloxacillin in the effective control of staphylococci in human and animal medicine.

In relation to chloramphenicol, the Council recommended that the usage of all chloramphenicol preparations should be restricted, both in human and veterinary medicine, to the treatment of certain diseases.

Council directed the Poisons Schedule Committee to consider and to recommend the scheduling of chloramphenicol for specific usages in both human and veterinary medicine.

Communicable Diseases Committee

The Council received the report of the Communicable Diseases Committee.

MODIFICATION OF RUBELLA IMMUNISATION POLICY

The Council reviewed the document, *Recommendations on Immunisation with Rubella Virus Vaccines,* published at Appendix V to the Report of its Seventieth Session.

Council adopted the amendments to the document shown at Appendix VIII, p. 76 and recommended that the amended document shown at Appendix IX, p. 77, be published and distributed appropriately.

SEXUALLY TRANSMITTED DISEASES

Council endorsed the document, *Sexually Transmitted Diseases in Australia,* details of which are shown at Appendix X, p. 79, and recommended that it be published and distributed appropriately.

GONOCOCCAL COMPLEMENT FIXATION TEST

Council considered that the gonococcal complement fixation test, as currently performed, is of no value and recommended that this view be drawn to the attention of the Director-General of Health.

PENICILLIN-RESISTANT GONORRHOEA

The Council noted with concern the increasing occurrence of penicillinase-producing Neisseria gonorrhoea.

It stressed the importance of using penicillin as the drug of first choice in the treatment of gonorrhoea, but recommended that tests for antibiotic sensitivity be undertaken in all cases in which the disease does not respond to penicillin treatment.

MULTIDOSE CONTAINERS

The use of jet-guns for inoculations and the dangers inherent in the use of multi-dose containers was noted by the Council.

It also noted the increasing use of multidose containers and jet-guns in mass immunisations.

Council agreed that the statement 'Immunisation Techniques', as published in the report of the Seventy-first Session, be rescinded and replaced with the following:

(i) there is a risk of infection with any inoculation procedure, and the importance of a strict aseptic technique cannot be overemphasised;

(ii) the risk is minimal when a single-dose syringe and single-dose vial are used;

(iii) where the use of multidose containers is considered necessary, no container should contain more than ten doses; and the use of a new single-dose syringe and needle for each person being vaccinated is strongly recommended.

(iv) containers for use with jet-guns may hold more than ten doses but the label should carry the printed warning: 'FOR JET-GUN USE ONLY'; and

(v) even if only partially used, multidose containers should not be re-stored but should be discarded at the end of the immunisation session.

IMMUNISATION PROCEDURES

The Council considered reports which outlined reactions to immunisation, particularly those reactions alleged to have occurred following pertussis immunisation, which indicated that the incidence of side-effects was higher than previously reported in the medical literature.

It noted that recent doubts expressed by individuals, and by some authorities, on the efficacy of routine immunisation procedures against rubella and whooping cough, have resulted in some parents deciding not to immunise their children or to discontinue immunisation schedules already begun.

The view expressed in its document *Immunisation Procedures,* published at Appendix VII to the Report of the Seventy-eighth Session, regarding the advisability of immunisation of children against diphtheria, whooping cough, tetanus and certain other infectious diseases, was reaffirmed by the Council.

The benefits to be gained by immunisation, for individual children and for the community, far outweigh the slight risk of side-effects associated with such procedures.

The Council pointed out that the World Health Organisation had adopted the theme 'Immunise and Protect Your Child', for the recently observed World Health Day. This was a reflection of how successful immunisation campaigns had been on a world-wide scale in controlling the ravages of diseases such as diphtheria, whooping cough and poliomyelitis.

Epidemiology Services Committee

The Council received the report of the Epidemiology Services Committee.

NINTH REVISION OF INTERNATIONAL CLASSIFICATION OF DISEASES

The Council noted that the World Health Organisation (WHO) was preparing training materials, to assist with the introduction of the *Ninth Revision of International Classification of Diseases* into general use from 1 January 1979.

It recommended that State and Territory health authorities and the Australian Bureau of Statistics, in 1977-78, hold seminars to acquaint users of the advantages in using the *Ninth Revision of International Classification of Diseases,* and for training coders in the use of the Classification.

Council also drew attention to the revised requirements for statistics of perinatal and maternal deaths and to the possibility of the need for amendment of existing procedures of registration of such deaths.

SCREENING FOR BREAST CANCER

Council endorsed the following statement made by its Executive Committee on 14 January 1977:

The Executive Committee of Council considered that present evidence does not justify the use of mammography as a primary screening procedure in apparently well people and recommended that:

(i) mammography should not be used as a primary screening procedure in apparently well people; and

(ii) mammography should be performed only by specialist radiologists on patients referred specifically for this examination by medical practitioners who are responsible for the patient's continuing care.

Council further recommended that while the effectiveness of breast self-examination in reducing mortality from breast cancer had yet to be demonstrated, existing knowledge made it prudent that women should be educated and encouraged in breast self-examination and should expect examination of the breasts from doctors at routine consultations; instruction of women in breast self-examination should become standard medical practice.

It also recommended that these recommendations should be publicised through the local medical press; and that anti-cancer councils and health education organisations be invited to promote these aims through education of the public and the profession.

The need to keep this subject under review was recognised.

Food Standards Committee

The Council received reports of two meetings of the Food Standards Committee and adopted the following:

STANDARD FOR COCOA AND CHOCOLATE

The amendments in Appendix XI, p. 80:

(i) to permit the use of polyglycerol esters of interesterified ricinoleic acid; and

(ii) to include a provision for the incorporation of spirits, liqueurs or alcohol cordials in chocolate

in the Standard for Cocoa and Chocolate, adopted by the Council at its Seventy-eighth Session, be adopted by States and Territories.

STANDARD FOR CONDENSED MILKS

The amendment in Appendix XI, p. 80, to ensure that carrageenan complies with the specifications for identity and purity as outlined in WHO Food Additives Series No. 7 (1976) and that the words 'Irish Moss' or 'Carrageenan' be replaced by the words 'prescribed carrageenan' in the Standard for Condensed Milks, adopted by the Council at its Sixty-sixth Session, be adopted by States and Territories.

The amended Standard appears at Appendix XII, p. 83.

STANDARD FOR CONFECTIONERY

The amendments in Appendix XI, p. 80, to include a provision for the incorporation of spirits, liqueurs or alcohol cordials in confectionery in the Standard for Confectionery, adopted by the Council at its Seventy-Seventh Session, be adopted by States and Territories.

STANDARD FOR FOOD ADDITIVES

The amendments in Appendix XI, p. 80:

(i) to permit the use of polyglycerol esters of interesterified ricinoleic acid;

(ii) to ensure that carrageenan complies with the specifications for identity and purity as outlined in WHO Food Additives Series No. 7 (1976); and

(iii) to permit the use of diammonium hydrogen orthophosphate as a paring agent for fruits and vegetables; and 2-ethyl-hexyl sodium sulphate and sodium dodecyl benzene sulphonate as surface active agents for use in the paring of fruits and vegetables

in the Standard for Food Additives, adopted by the Council at its Eighty-first Session, be adopted by States and Territories.

STANDARD FOR THE SPECIFICATIONS OF IDENTITY AND PURITY OF FOOD ADDITIVES

The amendments in Appendix XI, p. 80, to include diammonium hydrogen orthophosphate, carrageenan and polyglycerol esters of interesterified ricinoleic acid in the Standard for the Specifications of Identity and Purity of Food Additives, adopted by the Council at its Eighty-first Session, be adopted by States and Territories.

STANDARD FOR LABELLING

The amendments in Appendix XI, p. 80, to include a statement requiring declaration of the country of origin of a packaged food in the Standard for Labelling, adopted by the Council at its Eightieth Session, be adopted by States and Territories.

STANDARD FOR SPECIAL DIETARY FOODS

The amendments in Appendix XI, p. 80:

(i) amending the labelling requirements for low energy foods;

(ii) to permit the use of sodium carboxy methyl cellulose in gluten-free breads;

(iii) to clarify the definition of gluten-free foods; and

(iv) deleting Sections 9 and 11

in the Standard for Special Dietary Foods, adopted by Council at its Eighty-second Session, be adopted by States and Territories.

STANDARD FOR FROZEN FOODS

The Council noted the increasing range and usage of frozen foods in Australia and reviewed its recommendations on the handling of these foods. It agreed that its document, *Code of Practice and Recommendations for the Handling of Frozen Foods,* as published at Appendix X to the Report of its Seventy-first Session, be rescinded.

Council recommended that the document *Standard for the Processing, Transport, Handling, Storage and Sale of Frozen Foods,* shown at Appendix XIII, p. 84, be adopted by States and Territories.

METHOD FOR THE DETERMINATION OF NISIN

The Council recommended that the following method for the determination of nisin be adopted by States and Territories as an approved method:

Method for Determination of Nisin in Foods

Proceed substantially as set out in the 'Specifications for Identity and Purity of Some Antibiotics', FAO Nutrition Meeting Report Series No. 45A/1969, pp.53—64.

APPROVED FOOD STANDARDS AND APPROVED FOOD ADDITIVES

A loose-leaf book of the Council's approved food standards and approved food additives can be purchased from the Australian Government Publishing Service.

Nutrition Committee

The Council received the report of the Nutrition Committee.

THIAMINE STATUS OF THE AUSTRALIAN PEOPLE

The Council received the report of the Working Party on the Thiamine Status of the Australian People and expressed its appreciation of the effort that had been expended by members of the Working Party.

It noted with concern that the available evidence suggested that some groups in the Australian population have a thiamine intake lower than desirable.

Council adopted the document, *Summary Report on the Thiamine Status of the Australian People* shown at Appendix XIV, p. 86 and recommended that it be published and distributed appropriately.

COLLECTION OF DATA ON FOODS CONSUMED IN AUSTRALIA

The Council viewed with concern the lack of readily available data on foods commonly consumed by Australians and agreed that collection of this information should be given priority.

Council considered that the Commonwealth Department of Health was the appropriate agency to undertake the collection and collation of such information and recommended that the Director-General of Health be requested to consider the feasibility of the Department undertaking that task.

Poisons Schedule Committee

The Council received reports of two meetings of the Poisons Schedule Committee.

UNIFORM POISONS STANDARD

The Council recommended that the *Uniform Poisons Standard,* as published in Appendix XXXVIII to the Report of the Eighty-second Session, be amended as shown in Appendix XV, p. 91.

ANALGESICS

The Council viewed with concern the health problems associated with the increasing consumption of analgesics by the community.

The Council therefore recommended that:

(i) aspirin, paracetamol and salicylamide and their derivatives should be available by open over-the-counter sale only when they are:
  (a) supplied as single substances not combined with any other therapeutically active substance;
  (b) packed in units containing not more than 25 tablets or 12 powders; and
  (c) supplied in strip packs or in containers with suitable child-resistant closures.

(ii) aspirin, paracetamol, salicylamide and their derivatives when:
  (a) combined only with not more than 1% of codeine;
  (b) packed in units containing not more than 25 tablets or 12 powders; and
  (c) supplied in strip packs or in containers with suitable child-resistant closures,
be scheduled S2.

(iii) a mixture of any two or more of aspirin, caffeine, paracetamol, and salicylamide and their derivatives should be scheduled S4.

Radiation Health Committee

The Council adopted the following items submitted by the Radiation Health Committee.

MEDICAL EXAMINATION OF RADIATION WORKERS

Council considered that, in relation to pre-employment and routine medical examinations, radiation workers do not require special consideration.

USE OF SI UNITS IN RADIOLOGY

The Council noted that the Metric Conversion Act (1970) requires that units adopted as SI units by the General Conference on Weights and Measures shall become units to be used in Australia.

It also noted that the Fifteenth General Conference on Weights and Measures (May-June 1975) had adopted the gray (Gy) as the unit for the measurement of absorbed dose and the becquerel (Bq) as the unit for the measurement of the activity of a radionuclide.

Council therefore recommended that these SI units be adopted for use in future publications of the National Health and Medical Research Council.

Veterinary Public Health Committee

The Council received the report of the Veterinary Public Health Committee.

RABIES CONTROL PLAN

Council endorsed the document *Plan for the Eradication of Rabies* shown at Appendix XVI, p. 104, which had been prepared jointly by Committees under its aegis and that of the Australian Agricultural Council. Council noted that the document had already been endorsed in February 1975 by the Australian Agricultural Council.

Council emphasised that prophylaxis and therapy are changing fields and, should a rabies incident occur in Australia, the appendices to this basic plan will need to be re-appraised at that time to ensure that the latest developments in prophylaxis and therapy for humans are adopted.

OCCUPATIONAL HEALTH ASPECTS OF BRUCELLOSIS

Council recommended that the document, *Occupational Health Aspects of Brucellosis,* as published at Appendix XXXVIII to the Report of the Eighty-first Session, be replaced by the document shown at Appendix XVII, p. 113.

Council further recommended that the document be published and distributed appropriately.

Appendix I — Funds for Medical Research in 1978

Introduction

The National Health and Medical Research Council is the Government's main adviser on medical research matters and recommends on the distribution of funds appropriated by the Government through the Medical Research Endowment Fund. The Council currently distributes these funds in the following forms:

Project grants for medical and dental research
Grants to W. & E. Hall and H. Florey Institutes
Grants to Special Fellows in arthritis, renal and cardiovascular research
Grant to the Social Psychiatry Unit
Various types of training schemes
Special grants for specific purposes.

Funding

In 1975 the Government allocated $24 million for the 1976-78 triennium for medical research on the basis of $7.15 million for 1976, $8 million for 1977 and $8.85 million for 1978 calendar years. In addition it agreed to provide funds for salary increases.

On the basis of funds available in the 1976-77 financial year, applicable to 1977, and agreement for the extension of commitments into the latter half of that year, funds for 1977 will rise to $9.2 million (inclusive of salary increases to 30.6.76). A factor in the higher sum available is an addition of $400 000 over and above the triennium budget which was added by the Government to ensure a 'small but real increase in medical research'.

In this paper the minimal level of funding needed in 1978 is examined. It is assumed that Government will continue its policy of increasing funds for research in the health sciences — within the limits of present economic constraints — with a view to the ultimate achievement of per capita expenditure comparable with levels obtained in countries comparable to our own (e.g. New Zealand, Canada).

In preparing this submission the Needs in Medical Research Committee has taken into consideration several factors which justify an appeal for an allocation of $11.135 million. Even if the number of personnel engaged in research in the health sciences was to remain static it is the fact that per capita cost is inexorably rising, because of the use of more sophisticated equipment and the rising costs of materials (isotopes, etc.) used in research. But the research scene cannot be allowed to remain static. Expansion of activities is an inevitable consequence of the expansion of existing medical schools and the creation of new schools, in which much of health science research is conducted. It is essential that the two great centres of excellence in research, the Walter and Eliza Hall and Florey Institute, both with distinguished international reputations, should continue to be securely and not ungenerously funded. The momentum of research on the causes, prevention and treatment of the trinity of diseases which occasion so much loss of life and earning capacity — cancer, high blood pressure, and coronary artery disease — must be maintained. Earlier diagnosis, effective preventive strategies, improved treatment will confer a tangible benefit to the community. The range of research in the health sciences needs to be expanded, to include evaluation of present methods of treatment, and evaluation of present methods of delivering health care at such exorbitant cost. Graduates attracted to research need to be trained: this submission includes provision for a modest extension of research training facilities. Research in the health sciences in Australia is not to be regarded as an ivory tower activity; benefits flow on through the communication network of undergraduate and postgraduate teaching to the practising profession and to the community.

Successive Governments in Australia and in other countries have endorsed the principle that in order that a reasonable level of research should be maintained the major financial support must come from the public sector. Government support is, of course, supplemented by private support, but this may be a variable and unpredictable quantum, one which, in the foreseeable future, will never become a major source.

Level of Funds for 1978 and Justification

In short the Committee recommends that $11.2 million should be available for medical research in 1978 including $10.2 million for the maintenance of existing policies and $1 million for extensions of these policies as justified below. The Committee expects that for the immediate future, funds will continue to be distributed approximately in the proportions

80% research grants
15% training programs
5% special grants from the Council.

The Committee therefore sees the use of the additional funds (in real terms) being directed in the main towards continuing such research in an organised manner as outlined hereunder.

Training

One of the basic needs of medical research is to have a cadre of trained workers. The NH & MRC recognises this and has implemented training programs to cover all professional levels. The Committee appreciates that many of those persons who are trained will not necessarily continue as full-time researchers. However the community gains from the improvements in the standard of medical practice. The training provided allows better assessment, interpretation and translation of medical research findings into the practical situation both in teaching and in clinical medicine.

A noted health economist recently commented that:

> Much research in the basic biological sciences has no direct and immediate application to current medical practice. It needs assessment, interpretation and translation into a form which is usable by current practitioners.

The NH & MRC training programs consist of

C. J. Martin Fellowships
Applied Health Science Fellowships
Public Health Fellowships
Postgraduate Scholarships
Undergraduate Scholarships

These programs encourage young graduates to take up medical and dental research as a career and provide opportunity for postgraduate people to obtain high calibre training in specialised research areas thus providing a pool of senior advisors and investigators. Also through the interaction of research and the practise of clinical medicine such training has the added benefit of raising standards of medicine taught and practised in the community.

Periodically Council reviews the need for the various types of training programs to ascertain whether they are providing adequate coverage. To this end Council is currently examining the need to introduce further training schemes for post-doctoral training, short-term Fellowships and possibly Community Medicine Fellowships.

For 1978 it is considered that a total of $1.3 million is needed to sustain the envisaged training programs.

Medical and Dental Research Grants

The bulk of moneys made available through the Medical Research Endowment Fund are expended on individual investigators leading small teams of researchers and on the Walter and Eliza Hall and Howard Florey Institutes.

An economic evaluation of the benefits derived from medical research cannot be validly made until a variety of measurement techniques are developed, e.g. measurement of decrease of pain, increase in happiness and gratification of a fuller way of life. However many of the benefits already yielded by medical research are readily recognised, e.g. increasing life span, control of many infectious diseases, etc. Also the interaction of research and clinical practice leads to a higher standard of patient care.

The NH & MRC already has a substantial commitment to support senior workers at the Walter and Eliza Hall and the Howard Florey Institutes and to date has not been able to provide a truly appropriate level of support services for these workers. It would be the intention to improve the level of support in this area.

Support for current project grant activities should be expanded to keep abreast of the increase in growth within Australia of medical graduates; and also to meet the increased cost of research due to inflationary factors particularly in the area of equipment and consumables.

To enable the Council to bring experts and facilities together in a properly co-ordinated manner it is proposed to establish 'program grants' in order to support research teams of larger size and provide greater flexibility than under project grants.

The NH & MRC strongly supports continuation of research in areas of special need to enable a broad approach to medical and dental research generally.

It is suggested further that 'development grants' which are aimed at linking basic research and its development towards practical application in the delivery of health care in the community should become a more important aspect of the existing program.

Development grants will include the initiation of research projects designed specifically to develop and establish a national or regional specialist service. When the project is completed then the service would be handed over to appropriate State or Federal government departments. Some examples of the type of service likely to be developed are tissue typing, diagnosis of auto-immune and immuno-deficiency diseases, genetic studies of biochemical defects, diagnostic and epidemiological studies of viral and virus-associated diseases etc.

Funds are also required for the further development of research programs which relate to community medicine.

Council, from time to time, awards new 'special grants'. These are generally of the nature of additional support for a particular line of research of national importance, e.g. assistance to the National Heart Foundation to conduct a National Blood Pressure Study; or clinical investigatory projects such as the trial of immuno-therapy versus continuous chemotherapy in the maintenance of acute adult leukaemia and the clinical trials to evaluate acupuncture, as well as Public Health type projects such as surveillance of the microbiological status of foods to obtain analytical microbiological data on which realistic and meaningful microbiological standards can be set for Australian foods.

The Committee believes that the conduct of seminars and workshops should be emphasised to help overcome the isolation of research workers, stimulate new ideas and help avoid duplication of effort as well as being used to co-ordinate research activities.

No expansion or increase is envisaged at this stage in the activities of the special Fellows in arthritis, renal and cardiovascular research and the Social Psychiatry Unit but the position is to be re-examined during 1977.

Summary

In summary the following amounts are strongly recommended for support in 1978.

	$ million
Project and program grants	7.141
Walter and Eliza Hall and Florey Institute	1.778
Special Fellows	0.157
Social Psychiatry Unit	0.179
Various training programs	1.323
Council grants	0.557
Total	11.135

All in all, Council considers that the additional $1 million in 1978 for medical and dental research and training is a level of increase consistent with the current policy of economic restraint in the public sector, particularly when compared with the likely benefit to be gained by the community.

Appendix II — Report of ad hoc Subcommittee to Review NH & MRC Research Fellowships

Contents of Report

1. Introduction

At its meeting in May 1976 the Medical Research Advisory Committee established a Subcommittee to Review the NH & MRC Fellowships Scheme. The members of the ad hoc subcommittee were selected from the Medical Research Advisory Committee.

2. Membership

Dr R. L. Doherty	Director, Queensland Institute of Medical Research (Chairman)
Dr T. H. Hurley	Consultant Physician, Melbourne, (Chairman of the Medical Research Advisory Committee).
Professor D. R. Curtis	Department of Pharmacology, John Curtin School of Medical Research, Australian National University, Canberra.
Dr D. A. Denton	Director, Howard Florey Institute of Experimental Physiology and Medicine, Melbourne
Professor D. L. Wilhelm	Department of Pathology, University of New South Wales.
Mr K. O'Brien	Commonwealth Department of Health, Canberra (Secretary and Convenor).
Miss J. R. Boston	Commonwealth Department of Health, Canberra, (Minute Secretary).

2.1 Terms of Reference

To inquire into and advise the Medical Research Advisory Committee on matters relating to the award of NH & MRC Research Fellowships.

To make recommendations especially on the method of appointment, review of progress, promotion and tenure of appointment.

2.1.1 *Further definition of terms of reference*

Three categories of fellowships were considered:

(a) Those included in the institutional grants to the Walter and Eliza Hall Institute of Medical Research and the Howard Florey Institute of Experimental Physiology and Medicine — referred to as *Institute fellowships.*

(b) Those awarded as part of NH & MRC project grants to University departments, hospitals, institutes or private practitioners — referred to as *project grant fellowships.*

(c) Those established by NH & MRC in special areas, including the Social Psychiatry Unit at the Australian National University and Research Fellow appointments in cardiology, renal disease and rheumatology in Sydney and Melbourne — referred to as *special areas fellowships.*

The subcommittee did not consider the C. J. Martin and Applied Health Sciences Fellowships.

3. Operations of the Subcommittee

3.1 MEETINGS OF THE SUBCOMMITTEE

The Subcommittee met on four occasions:

Canberra, 1 September 1976
Melbourne, 15 November 1976
Sydney, 23 November 1976
Melbourne, 7 March 1977

3.2 MATERIAL PROVIDED BY THE NH & MRC SECRETARIAT FOR THE SUBCOMMITTEE'S INFORMATION

The Secretariat provided the Subcommittee with the following documents:

(a) The *Medical Research Endowment Act* 1937

(b) Extracts from the Report of the First Session of the NH & MRC.

(c) Extract from the Commonwealth of Australia Gazette No. 19, 20 May 1975, setting out the constitution of the NH & MRC

(d) A summary of Research Fellows appointed 1966-1976.

(e) 'A Brief Outline of the Functions and Organisation of the National Health and Medical Research Council, with Particular Reference to the Medical Research Functions', a paper prepared by the Secretariat.

(f) Extract from 'Conditions associated with NH & MRC project grants'.

(g) Copies of the covering letter from the Secretary of the Subcommittee to various research workers, institutes, and granting bodies, inviting comment on matters relating to NH & MRC Fellowships.

3.3 INVITED SUBMISSIONS FROM MEMBERS OF THE SUBCOMMITTEE

Written submissions were prepared by two members of the Subcommittee, 'Towards a National Policy for Career Structure of NH & MRC Research Fellows' by Dr D. A. Denton, and a statement on staff arrangements in the John Curtin School of Medical Research, Australian National University by Professor D. R. Curtis.

3.4 INVITED SUBMISSIONS FROM INTERESTED PERSONS AND INSTITUTIONS IN AUSTRALIA

The Subcommittee considered interested persons and institutions to be those who fell within the following categories:

NH & MRC Research Fellows who have held appointments during 1966-76.

C. J. Martin and Clinical Sciences Fellows (a selection).

NH & MRC Fellows in special areas.

Senior administrative staff of Universities concerned with appointments.

Directors of major research institutes in Australia.

Relevant Government departments and statutory authorities.

Representatives of relevant organisations, National Heart Foundation, Australian Society of Medical Research.

Members of M.R.A.C. and Regional Grants Subcommittees in recent years, including members of NH & MRC Fellowships and Scholarships Committees.

Various academic staff who have written to the NH & MRC on matters relating to research appointments.

Each person was asked to summarise his own contact with the NH & MRC Research Fellowship scheme by commenting firstly on the scheme in general and then in particular on:

(a) the method of appointment of a NH & MRC Fellow

(b) the means of review of progress of the Fellow

(c) promotion, and

(d) tenure of appointment.

Finally, each person was invited to describe alternative developments of the NH & MRC Fellowship scheme which may be initiated.

3.4.1 *Interview by the Subcommittee of selected interested persons and representatives of institutions*

After analysing the replies received to the Subcommittee's letter, the chairman, Dr R. L. Doherty, invited selected people to be interviewed by the committee. Those interviewed were:

A. *In Melbourne*		*Group No.* (For identification of groups see paragraph 4.1)
Dr D. Metcalf	Acting Director, The Walter and Eliza Hall Institute of Medical Research	Group III
Dr J. F. A. P. Miller	The Walter and Eliza Hall Institute of Medical Research	Group I
Dr I. R. MacKay	The Walter and Eliza Hall Institute of Medical Research	Group I
Dr J. P. Coghlan	Howard Florey Institute of Experimental Physiology and Medicine	Group I
Dr H. D. Niall	Howard Florey Institute of Experimental Physiology and Medicine	Group I
Dr G. B. Ryan	NH & MRC Research Fellow in Renal Diseases, University of Melbourne	Group I
Dr B. Clarris	NH & MRC Research Fellow in Rheumatology, University of Melbourne	Group I
Dr E. L. French	Chief Research Scientist, CSIRO Animal Health Laboratory	Group III
Dr J. W. Funder	Department of Medical Research, Prince Henry's Hospital, Melbourne	Group I
Professor D. O. White	Department of Microbiology, University of Melbourne	Group III
Dr D. G. Jose	Department of Immunology, Royal Children's Hospital Research Foundation, Parkville	Group I
B. *In Sydney*		
Dr D. A. Shutt	Department of Obstetrics and Gynaecology, University of Sydney	Group I
Professor A. Basten	President elect, Australian Society of Medical Research	Group III
Dr D. Tiller	Head, Renal Unit, Royal Prince Alfred Hospital, Sydney	Group III
Dr D. S. Nelson	Director, Kolling Institute of Medical Research, Royal North Shore Hospital, Sydney	Group III
Dr F. W. Gunz	Director, Kanematsu Memorial Institute, Sydney Hospital	Group III
Professor W. J. O'Sullivan	Department of Medical Biochemistry, University of New South Wales	Group II
Professor M. G. Taylor	Deputy Vice Chancellor, University of Sydney	Group III
Mr John Elliot	Executive Officer, Research and Academic Staffing, University of Sydney	Group III
Professor W. Burnett	Department of Surgery, University of Queensland	Group III
Dr Telford Conlon	Sydney	Group III

3.5 INVITED SUBMISSIONS FROM VARIOUS MAJOR OVERSEAS GRANTING ORGANISATIONS

Twenty major overseas organisations were asked to outline their policy towards supporting career research scientists, including to what extent fellowships of limited duration or of permanent tenure were offered. The countries contacted were: New Zealand, the United Kingdom, France, Germany, Switzerland, Sweden, Canada and the United States of America.

4. Considerations of the Subcommittee

4.1 REPLIES TO THE SUBCOMMITTEE'S QUESTIONNAIRES TOGETHER WITH SUBMISSIONS HEARD AT INTERVIEW

A total of 166 letters were sent to interested persons and institutions in Australia. These covered the three groups:

Group I: Current NH & MRC Fellows

Group II: Past NH & MRC Fellows

Group III: Senior staff of Universities, Research Units and other organisations.

One hundred and four replies, spanning each group, were received.

4.2 GENERAL

The submissions received indicated widespread appreciation of the value of the Research Fellowship program. Emphasis was laid on the quality of the work done by Fellows able to devote their full time to research, either over an extended period or for a limited period before accepting teaching or clinical appointments. The Subcommittee had no doubt that the Research Fellowship scheme has been an important part of the total NH & MRC program that it ought to be continued and that it be allowed expansion as funds permit. It is suggested that a reasonable target would be 50 Fellows in Australia by 1980. (In 1976 there were 37 NH & MRC Research Fellows, 20 of whom were at the Institutes, 13 were working full time, and 7 part-time with NH & MRC Project Grants.)

4.3 GEOGRAPHICAL DISTRIBUTION OF RESEARCH FELLOWSHIPS

The geographical imbalance in past and current awards of Research Fellowships was noted by the Subcommittee which heard suggestions that a quota of Fellowships be set for each State. However, the Subcommittee was not willing to recommend departure from scientific merit as the basis for award. Further, the Subcommittee did not think it was feasible to direct appointees to institutions on a geographical basis. The Subcommittee recognised that this geographical imbalance may be due in part to the lack of effort made by many departments and institutions to attract Fellows. Thus it was strongly urged by the Subcommittee that the availability of Research Fellowships be advertised widely and applications be sought along with the annual advertisement of project grant awards.

4.4 PROPOSED RESEARCH FELLOWSHIP COMMITTEE

The Subcommittee recognised that the three categories of Research Fellow (see paragraph 2.1.1) have important differences. It also noted that NH & MRC institutional support to the Walter and Eliza Hall Institute of Medical Research and the Howard Florey Institute of Experimental Physiology and Medicine is subject to the following general provisions:

(a) that two NH & MRC representatives be on the Institute's Board

(b) that the NH & MRC be informed officially and as soon as practicable if any radical change in the Institute's current field of research activity is proposed;

(c) that no increase is made in the permanent scientific establishment of the Institute requiring or likely to require additional NH & MRC support unless and until the NH & MRC has been approached and has endorsed the proposal.

In relation to (c) above each Institute has established an Appointments and Promotions Committee, which has extra-mural membership, to consider the appointment or promotion of any person to a position provided by the NH & MRC which carries the status of 'Research Fellow', 'Senior Research Fellow', or 'Principal Research Fellow'. Appointments and promotions at these levels are made by the Director on the advice of the Appointments and Promotions Committee. The Council has endorsed and approved the principles as set out by the Boards of the Institutes for such appointments.

In order that uniform criteria for initial appointment, extension or termination of appointment and promotion may, as far as possible be applied to all NH & MRC Research Fellows, the Subcommittee considered that a Research Fellowships Committee of MRAC should be established. Its membership should have substantial overlap with the Appointments and Promotions Committee of the Institutes in order to ensure comparability of procedures and standards. The following terms of reference and membership for the Research Fellowship Committee were proposed by the Subcommittee.

Terms of Reference

To advise the Medical Research Advisory Committee on matters relating to the award of NH & MRC Research Fellowships associated with:

(1) Project grants,
(2) Grants to Institutes receiving NH & MRC institutional support
(3) Areas of special need determined from time to time by the Council.

To ensure uniformity of standards and practice in the areas of Research Fellowships nominated above.

To make recommendations on the method of appointment, review of progress, promotion and tenure of appointment of Research Fellows.

Membership of the Research Fellowships Committee

The Subcommittee proposed the following membership of the Research Fellowship Committee.

The Chairman of the Medicine Research Advisory Committee or his nominee from MRAC (Chairman).

The three NH & MRC representatives of the Boards of Management of the research institutes receiving institutional grants.

Two other representatives proposed by the Medical Research Advisory Committee.

The Subcommittee suggested that the proposed Committee use the following mechanism in dealing with each of the three areas.

4.4.1 *Institutes receiving NH & MRC Institutional support*

The Appointments and Promotions Committees of the Institutes will continue to make decisions within the framework of the approved financial provision of the triennial grant to the institutions. Matters dealt with by the institute committee will include appointments to vacant slots, promotions and termination of appointment. An annual report of these functions will be made to the Research Fellowships Committee which will advise the MRAC. In addition, the Institute Appointments and Promotions Committees will review the progress of each Fellow supported by the NH & MRC grant in each triennium and advise the Research Fellowships Committee, which will forward recommendations to the MRAC. Although this review of Research Fellows would be conducted triennially and in phase with the Institutes' triennial submissions to the NH & MRC, any definitive change in status of Research Fellows would be reported in interim annual reports during the triennium.

Also, the triennial report to the Research Fellowship Committee will include detailed recommendations about appointment, extension, termination or promotion of each Fellow to be covered by the NH & MRC grant.

4.4.2 *Research Fellowships associated with project grants*

The current NH & MRC Conditions of Awards concerning Research Fellows state:

> The primary award for grants for salaries of Research Fellows and Principal Research Fellows shall be for five years unless otherwise specified. A five-year award shall also normally be made on the promotion of a Research Fellow to Senior Research Fellow, and a Senior Research Fellow to Principal Research Fellow. During the third year of a five-year award each of these grants will be reviewed, following upon which a grant may be renewed for up to five years, or terminated with a minimum of two years' notice.

The proposed Research Fellowships Committee would advertise Fellowships, consider applications for appointment, extension or promotion, obtain references (from overseas when necessary, especially for initial appointments and promotions) and make recommendations to Medical Research Advisory Committee in the light of policy directions about, e.g. total number of Fellowships.

The Subcommittee noted that NH & MRC grantees, including Research Fellows, are employees of the institutions to which the grants are made. It was considered important that recommendations about appointment, extension, promotion, termination or tenure should be reached in consultation with the employing authority. Consideration of these issues should be initiated by application through the employing authority.

The Subcommittee noted as unsatifactory the situation pertaining to project grant Fellows, with their present need to make separate and usually asynchronous applications for project support and Fellowship renewal. The Subcommittee considered that applications for project grants submitted by a Research Fellow, or requesting the appointment of a Research Fellow, should be considered by the Research Fellowships Committee as well as the Regional Grants Committees. Most Fellowship awards would be (as at present) for 5 years with review after 3 years. In practice most Fellows will present comprehensive applications covering their own salary, technical assistance, equipment, maintenance etc., once every 3 years. A commitment would be accepted to provide adequate support for an additional two years if termination is recommended.

It is proposed that the assessment and review of these Research Fellows will proceed concurrently and where possible in conjunction with the project grant application submitted by the Fellow (or prospective Fellow).

The following procedural steps were suggested:

(a) As soon as possible after the closing date of project grant applications early in April, the advice of the Research Fellowships Committee would be sought on independent assessors for the applicants suitability for appointment or promotion as Research Fellows.

(b) The Regional Grants Committees would consider these assessments in reviewing project grants, but the applicants would be advised that in relation to their request for appointment or promotion as Research Fellows, further consideration would be given by the Research Fellowships Committee.

(c) The Research Fellowships Committee would meet as near as possible to the date of the Projects Grants Committee to allow for discussion in difficult cases.

(d) The above procedures would enable formal decisions to be made on Research Fellow appointments by the Medical Research Advisory Committee at the same time as project grant recommendations are finalised.

4.4.3 *Research Fellowships in Special Areas and Overseas Travelling Fellowships*

The fellowships in the NH & MRC special areas including psychiatry, renal diseases, cardiology and rheumatology, and overseas fellowships, would be dealt with by the Research Fellowships Committee with power to co-opt specialists in relevant areas.

This would ensure suitable liaison on the continuing careers of C. J. Martin, Applied Health Science and other Fellows.

4.5 SALARY SCALES AND PROMOTIONS

The Subcommittee received conflicting advice about salary scales for Research Fellows, and heard arguments for both increasing salary scales (to attract and keep the most able people) and for decreasing salary scales (to bring present awards into line with that of ANU) and to allow a greater number of fellowships to be awarded and for clinical loadings to be either awarded or withheld.

The Subcommittee viewed these various comments with interest, but saw greater value in the present policy that maintains parity with salaries in most Australian Universities. It is recommended that this parity be maintained with respect to both salary scales, clinical loadings and superannuation. The need for the Research Fellowships Committee to observe comparable criteria for appointment and promotion with Universities (equating Research Fellow with Senior Lecturer, Senior Research Fellow with Reader and Principal Research Fellow with Professor) is stressed.

The Subcommittee suggested that more use be made of the Senior Research Officer scale (equivalent to University Lecturer), as was done in one special area appointment. Further, the salary awarded within the Research Fellow range ought to be determined individually for each Fellow on appointment or extension.

4.6 TENURED FELLOWSHIPS

The Subcommittee received conflicting testimony on the question of tenured ('career') fellowships. There was some measure of agreement that tenured fellowships were feasible in the two major Institutes where a variety of useful roles would be available for research workers if there were to be some decline in productivity in later life. On the other hand there was reluctance to recommend life-long commitment to support project grant Research Fellows working in small units in association with departments whose interests, personnel, and associated research opportunities might change over a period. There was however a strong minority opinion that medical researchers, like other workers, were entitled to security of tenure after their demonstrating continued productivity.

The Subcommittee recognised that it was unlikely that funds available would allow for a commitment to maintain a large body of career scientists indefinitely into the future. However, there is value in having some flexibility in policy that would allow tenure of a limited number of Fellows after repeated assessments have confirmed continued productivity and high quality of research. Thus the Subcommittee considered that the Research Fellowship Committee, whilst determining each case on its merits, might, for example, consider tenure on the third renewal (i.e. after 9 years) as Research Fellow.

The Subcommittee recognised that some people selected for tenure, on the most rigid criteria, may become unproductive for various reasons, although it considered that the number of such cases is likely to be small. However, there are several measures that the Research Fellowship Committee might adopt to minimize commitment in such cases. For example, there may be merit in having retirement of all Fellows at 60, with the possibility of annual renewals to 65. The possibility was discussed of negotiating for an early retirement scheme which would lead to a modified version of tenure allowing a career fellow who becomes unproductive to be terminated on pension. It is suggested that these matters should be further explored by the Research Fellowships Committee.

4.7 NEW CATEGORIES OF FELLOWSHIPS

Several submissions received by the Subcommittee sought the creation of Junior Research Fellowships which would provide a 2-3 year bridging support in the immediate post-doctoral period, at salaries in the present Research Officer — Senior Research Officer ranges. There were also several suggestions for a new category of Visiting Fellow, to provide short-term (usually 1 year or less) support for senior overseas workers wishing to collaborate with Australian workers.

The Subcommittee recognised the value in each of these proposals but was not convinced that they cannot be met within the present framework of project grants and research fellowships.

Lastly, the Subcommittee's inquiries indicated a strong measure of support for NH & MRC Postgraduate Scholarships and for an increase in their number. The Subcommittee brings this to the notice of MRAC, whilst recognising that the matter lies outside its terms of reference.

5. Recommendations arising from the Subcommittee's consideration

The Subcommittee has drafted the following recommendations for consideration by the Medical Research Advisory Committee and subsequent endorsement by Council.

RECOMMENDATIONS

1. That Council establishes formally a Fellowships Scheme as a continuation and expansion of the existing program of awarding Fellowships.
2. That Council affirms that scientific merit continues to be the basis for award and recommends that Fellowships be widely advertised annually.
3. That Council establish a Research Fellowships Committee having the following terms of reference and membership:

   Terms of reference

   To advise the Medical Research Advisory Committee on matters relating to the award of NH & MRC Research Fellowships associated with:

   (1) Project grants.
   (2) Grants to Institutes receiving NH & MRC institutional support.
   (3) Areas of special need determined from time to time by the Council.

   To ensure uniformity of standards and practice in the areas of Research Fellowships nominated above.

   To make recommendations on the method of appointment, review of progress, promotion and tenure of appointment of Research Fellows.

   Membership

   The Chairman of the Medical Research Advisory Committee or his nominee from the Medical Research Advisory Committee. (Chairman).

   The Secretary of the Council.

   A person representing the Appointments and Promotions Committees of the institutes receiving NH & MRC institutional support.

   Three persons nominated by the Medical Research Advisory Committee.

   For 1977 the Medical Research Advisory Committee nominated the following members for the Research Fellowships Committee:

Dr T. H. Hurley	Consultant Physician, Melbourne; Chairman of the Medical Research Advisory Committee (Chairman).
Dr K. W. Edmondson	Secretary of the National Health and Medical Research Council
Dr D. A. Denton	Director, Howard Florey Institute of Experimental Physiology and Medicine, Melbourne
Professor D. R. Curtis	Department of Pharmacology, Australian National University, Canberra
Dr R. L. Doherty	Director, Queensland Institute of Medical Research, Brisbane
Assoc. Professor L. Lazarus	Director, Garvan Institute of Medical Research, St Vincent's Hospital, Darlinghurst, N.S.W.

4. That Council, whilst determining each case on its merits, accepts the guidelines for tenured or career appointments as set out in the report of the Research Fellowships Committee.

Appendix III — Variations in grants approved by the Secretary of the Council or a quorum of the Medical Research Advisory Committee

The attached additional grants, variations in grants and appointments for the period up to February 1977 were approved by the Secretary of the Council. A further two grants involving variations of over $5000 and which were approved by a quorum of the Medical Research Advisory Committee are also included.

Grants for travel expenses to attend meetings of scientific associations for this period totalled $6415.20.

New South Wales

UNIVERSITY OF SYDNEY	
Professor A. Basten	Approval given to ultilise unspent salary of $407 to cover wages of Mr Leslie Burnet till 11.2.77.
Dr P. M. Colman	Approval given to defer appointment as Senior Research Officer for period 3 months to 1.1.78 instead of 1.10.77 as granted.
Dr P. Ghosh	Approval given for $1000 to be transferred from maintenance expenses for salary purposes.
Professor T. K. F. Taylor	Approval to appoint Dr G. Bushell in Senior Research Officer position where only Research Assistant position was provided. Difference in salaries to be provided from Professor Taylor's Departmental funds.
UNIVERSITY OF NEW SOUTH WALES	
Professor J. B. Adams	Approval given to Professor Adams to advertise for a graduate for employment in a Research Assistant position in lieu of a Senior Technical Officer position as originally granted.
Assoc. Professor J. G. Andrews	Approval given to appoint N. J. O'Dwyer as Research Assistant at 5th salary level on 'Synergic Relations in Stuttered Speech' grant. 'Synergic Relations in Stuttered Speech' — Approval to carry forward $1484 into 1977. 'Treatment of Defective Speech in Cerebral Palsy' — Approval to defer until 1978. 'Psycholinguistic Factors in Stuttering' — Research Assistant, Ms M. Young to be employed as Research Officer (part-time) Curriculum vitae requested.
Dr A. Bagnara	Increase of equipment funds from $10 373 to $14 795 to cover inflationary increase.
Dr P. C. Farrell	Approval given for an equipment variation to enable increased sampling.
Professor L. E. Smythe	Approval given to transfer $716.77 unused funds remaining from 1976 grant for completion of project in 1977.
Professor Wade and Dr Dougan	Approval given to increase Technical Officer's salary to $7860 in 1977. Approval also given to increase maintenance component of grant to $2250 in 1977, $2400 in 1978 and $2550 in 1979.
CHILDREN'S MEDICAL RESEARCH FOUNDATION	
Drs M. A. Menser and J. M. Forrest	Approval for grant to be placed in Dr Menser's name due to Dr Forrest resigning from Foundation.
INSTITUTE OF DENTAL RESEARCH	
Dr K. W. Knox	Approval given for Miss Lynette N. Hardy to take up position as Research Assistant.
Dr K. W. Knox and Assoc. Professor A. J. Wicken	Approval given to carryover unexpended maintenance funds during 1976 into 1977 for the purchase of minor pieces of equipment necessary to the project.
Dr R. G. Schumshula	Approval given for transfer of funds awarded for salary to employ a graduate assistant instead of a junior technical assistant for as long as funds last into 1977.
ST GEORGE'S HOSPITAL	
Drs J. Edmonds and H. Bashir	Approval given for appointment of Miss Kerri Seagar as Technical Officer — Salary to be $9823.

Victoria

UNIVERSITY OF MELBOURNE

Dr G. W. Boyd	Approval given for transfer of NH & MRC grant from University of Melbourne to University of Tasmania effective from 1.1.77.
Professor A. E. Doyle	Approval given for transfer of Dr T. Morgan's NH & MRC grant from University of Melbourne to University of Newcastle.
Dr Bruce Gray	Approval given to appoint a Technical Assistant, Grade 4 instead of a Research Assistant as provided for under Dr Gray's grant and for the difference in salaries to be returned to NH & MRC.
Professor S. J. Leach and Dr R. S. Sharma	Approval given for transfer of grant from University of Melbourne to Queen Victoria Hospital.
Dr R. G. Larkins	Approval given to appoint Technical Officer, Grade 1, under Dr Larkins's grant.
Professor P. C. Reade	Approval given to transfer $1216.52 from salary to cover deficit in maintenance section.
Dr M. L. Roberts	Approval given to take up grant in September, 1977 on completion of his Fellowship at the Leverhulme Trust.

MONASH UNIVERSITY

Professor A. W. Linnane	Approval given to appoint Mr S. Gutowski as Research Assistant from 10.1.77.
Professor R. C. Nairn	Approval given to appoint Mr R. S. Savvas as Research Assistant at top of range ($11 488) pending confirmation of Ph.D. — then to be promoted to Senior Research Officer — ($13 850).
Dr F. A. Stephenson and Professor J. Bornstein	Approval given to transfer grant to Drs Zimmet and Simms and Professor J. Bornstein on departure of Dr F. A. Stephenson.

AUSTIN HOSPITAL

Dr J. M. Connellan	Approval given to change title of project from 'A study of the relationship between complement and blood coagulation in relation to immunological disease' to 'The Platelet contribution to the initiation of coagulation. A study of platelet — contact factor inter-relationship'.

CANCER INSTITUTE

Dr J. S. Wiley	Approval given for transfer of grant from University of Melbourne to Cancer Institute.

DEPARTMENT OF REPATRIATION

Dr W. R. Adams	Approval given for increase in salary moneys to employ Technical Assistant, Grade 2.

HOWARD FLOREY INSTITUTE OF EXPERIMENTAL PHYSIOLOGY AND MEDICINE

Dr B. Hudson	Approval given for overseas travel leave for Dr Hudson to attend a meeting of the Steering Committee of the Task Force for the Methods of Regulation of Male Fertility from 17.1.77 to 20.1.77.
Dr G. W. Tregear	Approval given for overseas travel leave for G. W. Tregear to attend a WHO Task Force Committee on Immunological Approaches to Contraception on 16 November 1976 at the Pandoz Research Laboratories in East Hanover, New Jersey and to visit related institutions.

PRINCE HENRY'S HOSPITAL

Dr J. W. Funder	Approval for 10% of Research Assistant salary to be used to purchase animals and supplies for the project.

ROYAL MELBOURNE HOSPITAL

Dr P. Kincaid-Smith	Approval given for transfer of $174 from maintenance to equipment component.

ST VINCENT'S HOSPITAL

Dr J. Santamaria	Approval given for $1393.60 to be deducted from the $6939 to be refunded to NH & MRC (being unused moneys from drinking-driver rehabilitation program) and used to purchase breathalyser unit from Selby Scientific Ltd.

WALTER AND ELIZA HALL INSTITUTE OF MEDICAL RESEARCH

Dr J. Miller	Approval given for overseas travel leave for Dr Miller to attend a meeting of the WHO on Biological Units of Carcinogenesis at the International Agency for Research on Cancer in Lyons, France from 3.1.77 to 10.1.77.

Dr G. F. Mitchell	Approval given for overseas travel leave for Dr Mitchell to attend a meeting of the Steering Committee of the WHO Task Force on Immunological Methods of Fertility Regulation, in Geneva, and to visit Dr Viquar Zaman, Department of Parasitology, University of Singapore from 11.12.76 to 20.12.76.

Queensland

UNIVERSITY OF QUEENSLAND

Drs P. B. Berry and R. J. Andrews	Approval given to transfer $730 from maintenance funds to equipment component.
Professor B. T. Emmerson and Dr R. B. Gordon	Approval given for increase of $1995 in equipment section of grant to cover inflationary costs.
Dr W. B. Wood	Approval given to divide salary rate of $10 354 between the appointment of 2 part-time Research Assistants — Ms Kaye Grayson and Mrs Helen Noad.

QUEENSLAND INSTITUTE OF TECHNOLOGY

Dr A. S. Webber	Approval given for transfer of $522.42 from unspent 1975 maintenance to salary component.

South Australia

UNIVERSITY OF ADELAIDE

Drs G. J. Anderson and T. C. Smeaton	Approval given to transfer grant from Flinders Medical Centre to Flinders University of South Australia.
Dr R. M. Douglas	Approval to vary Research Assistant salary to employ a part-time Research Assistant plus a part-time Clerical Assistant/ Stenographer.
Drs T. S. Miles and G. C. Scroop	Approval given for purchase of Digitimer Programmable Stimulator at a cost of $3120 in lieu of stereotoxic apparatus for which $3150 was allocated.
Dr Margaret Parr	Approval given for additional $204, due to devaluation, to purchase Dupont Diamond Knife as approved under grant.
Professor D. Rowley	Approval given to negotiate a 2-year tenure with Mr D. Horsfall in the post of Senior Research Officer.

FLINDERS UNIVERSITY OF SOUTH AUSTRALIA

Professor M. N. Berry	Approval to use unspent 1976 salary to employ a Research Assistant, plus a part-time student in December 1976.
Drs B. E. Kemp and M. G. Clark	Approval given to redistribute funds allocated for the purchase of a Forced Air Oven and Specialised Glassware to the purchase of a High Voltage Electrophoresis apparatus.
Drs R. A. Rush and M. Costa and Professor L. B. Geffen	Approval given for an increase of $684 to salary component to reappoint Miss S. Y. Lewis as Research Assistant ($11 204 from $10 354).

FLINDERS MEDICAL CENTRE

Dr A. M. Mackinnon	Approval given to carryover balance of 1976 maintenance budget to 1977 (approx. $900 — $1000).

Western Australia

UNIVERSITY OF WESTERN AUSTRALIA

Professor D. B. Allbrook and Dr J. K. McGeachie	Approval given for salary allocation for full-time permanent Technical Officer to be used to employ temporary laboratory assistant.
Dr G. D. Bower and K. J. Turner	Approval given to appoint Mrs Margaret Minehin (nee Chappell) as Graduate Research Assistant. Approval given for advance payment of $4000 for equipment on basis that copies of relevant invoices are forwarded to NH & MRC for records. Approval given for transfer of project from University of Western Australia to Princess Margaret Hospital.
Dr J. R. Johnstone	Approval given for Senior Research Officer salary to be brought forward 1 month and commence from 1 July 1976.

Tasmania

TASMANIAN COLLEGE OF ADVANCED EDUCATION

Dr M. S. Roberts	Approval given for an increase of $780 to equipment allocations to cover inflationary costs.

Australian Capital Territory

AUSTRALIAN NATIONAL UNIVERSITY

Professor J. F. Williams and J. B. W. Halley	Approval given for transfer of $124.91 from maintenance back to salary component, due to shortage (Original variation approved $1425 unspent salary to maintenance component).

CANBERRA COLLEGE OF ADVANCED EDUCATION

Drs Dunstone and Di Michiel	Approval given for carryover of unexpected funds from 1976 to finance completion of project in 1977.

Clinical Sciences Fellows

Dr R. Day	Approval given to commence Fellowship in June 1977.
Dr D. B. Jarrett	Approval given for Dr Jarrett to delay final year of Fellowship to 1 July 1978 to enable him to accept overseas appointments.
Dr P. Trembath	Approval given for Dr Trembath to spend the first year of his Fellowship at St Bartholomew's Hospital, London instead of the McMaster University, Ontario.

Social Psychiatry Unit

Dr A. S. Henderson	Approval to appoint Dr G. Steele to above Unit as Senior Research Officer.

Quorum

UNIVERSITY OF MELBOURNE

Professor Sir Macfarlane Burnett	Approval to increase funds on 1976 grant to $8841 as recommended by the visiting Committee in lieu of the $3380 originally granted. (Quorum members: Dr Hurley, Professor E. Webb, Professor Kiloh and Dr R. Doherty).

QUEENSLAND INSTITUTE OF MEDICAL RESEARCH

Dr J. R. Sheridan	Approval for Dr Sheridan's NH & MRC salary, now being supplied by Greenwood Foundation, to be used to employ Research Officer on the grant. Approval also given for transfer of grant from University of Western Australia to Queensland Institute of Medical Research. (Quorum members: Dr Hurley, Dr Denton, Professor Wilhelm and Professor Cooper).

	Approved by Minister	*81st Session Report*		*Variation*
Garvan Institute, Dr E. W. Kraegen	27 982	27 111	+	871
Garvan Institute, Dr G. A. Smythe	10 600	10 288	+	312
Institute of Dental Research, Dr G. J. Walker	11 135	10 373	+	762
Kanematsu Memorial Institute, Drs Gunz and Vincent	16 316	16 376	–	60
University of Melbourne, Dr P. M. Robinson	8 535	9 535	–	1 000
University of Melbourne, Dr G. Jerums	7 833	8 033	–	200
University of Melbourne, Dr J. D. Mathews	27 508	28 508	–	1 000
University of Melbourne, Drs Hoffman and Smallwood	12 380	12 780	–	400
University of Melbourne, Prof. R. Porter	28 114	28 308	–	194
Prince Henry's Hospital, Drs D. de Kretser and H. Burger	46 262	44 802	+	1 460
Prince Henry's Hospital, Drs Herington and Burger	18 128	18 312	–	184
Prince Henry's Hospital, Dr Y. Patel	26 654	25 878	+	776
Royal Childrens' Hospital, Dr D. Jose	22 064	21 415	+	649
Garvan Institute, Dr D. Byrnes	11 784	11 472	+	312
				$2 104

The discrepancies that occurred between the grants approved by the Minister and those shown in the 81st Session Report are shown above. These errors were caused when the checking of the schedule of grants revealed addition errors and different on-cost percentages. The overall effect of these balances when adjusted resulted in $2104 approved by the Minister being returned to the Trust Fund.

Appendix IV — Cleft lip and palate and related cranio-facial anomalies

Introduction

Cleft lip and palate together with a small but significant group of other cranio-facial anomalies are developmental deformities which affect both the hard and soft tissues of the face including the jaws and tooth bearing dento-alveolar arches.

The total management of these problems usually involves a multi-disciplinary approach including both medical and dental specialists. In general the soft tissue surgery and grafting procedures are managed by Plastic and Paediatric Surgeons whereas the skeletal and dento-alveolar deformities are managed mainly by dental specialists including Orthodontists, Paedodontists, Oral Surgeons and Prosthodontists. In addition to the management of the deformity itself, these patients frequently require special dental attention to reduce the incidence of dental caries and peridontal disease. This is essential if facial and jaw deformity are to be minimized.

At the present time the National Health Scheme only insures patients for the medical aspects of the above treatment and no provision is made for any specialised dental treatment. Nevertheless, specialised dental care (in particular orthodontic treatment) is frequently essential before adequate surgical repair of soft tissue and bony defects can be undertaken. Such treatment, if undertaken at a private practice level, can provide an economic barrier to adequate treatment.

The magnitude of the problem

(a) PREVALENCE OF CLEFT LIP AND PALATE

Australian surveys show varying incidences from approximately 1.2 to 1.6/1000 live births. Assuming 1.5/1000 births, and based on an annual birth rate of approximately 230 000, it can be assumed that approximately 350 cases of cleft lip and palate occur in Australia each year.

The degree of deformity within this group will vary but the statistics suggest the following approximate distributions of deformities requiring treatment:

Cleft lip and cleft palate combined	50%
Cleft palate alone	25-30%
Cleft lip alone	20-25%

(b) PREVALENCE OF CRANIO-FACIAL DEFORMITY

This group includes another 50 annually:
- Branchial Arch Syndrome
- Crouzon's Disease
- Aperts Syndrome
- Pierre-Robin Syndrome
- Treacher-Collins Syndrome and other related anomalies

The prevalence of these deformities is not accurately recorded but figures from the Royal Children's Hospital of Melbourne suggest that they represent approximately 8% of a combined total with cleft lip and palate (119 cases in 1560 total between 1958-75).

(c) TOTAL PREVALENCE: 50 ADDED FROM LIST

Based on the foregoing it is reasonable to predict prevalence in Australia of approximately 400 cases per year.

Special requirements of dental care

Dental care for children suffering cleft lip and palate should commence at birth or soon after. Pre-surgical orthodontics may be advisable within the first few weeks of life and early paedodontic care and advice to the parents is essential.

In addition to normal dental surveillance a wide range of specialised dental services may be required both during growth and in adult life.

(a) ORTHODONTICS

Specialised orthodontic treatment may be required from birth to adult life. The need is usually greatest in the combined cleft lip and palate cases (approximately 50%) but all cases require orthodontic surveillance. While based on conventional orthodontic techniques the management of these problems frequently requires additional specialised knowledge and training.

(b) SPECIALISED PROSTHETICS AND RESTORATIVE PROCEDURES

Prosthetic or crown and bridge restorative treatment may be required from the age of 6 years. Final replacement of missing normal teeth from cleft areas is required at termination of orthodontic treatment between 14-16 years

when a chrome cobalt denture is frequently fitted. In the adult patient this may be replaced with fixed crown and bridge prostheses.

(c) ORAL AND MAXILLO-FACIAL SURGERY

In addition to plastic surgery, major oral and maxillo-facial surgery may be required to correct residual defects and secondary deformities (e.g. Mandibular prognathism or maxillary hypoplasia), however, this surgery is currently covered within the Australian National Health Scheme.

Less major oral surgery of the dento-alveolar complex is not covered by Health Insurance. At present this would include:—

(i) Surgical exposure of teeth

(ii) Removal of displaced, malformed or supernumerary teeth.

Recommendation

Council draws attention to the special needs for continuing medical and dental care in all its aspects for persons suffering from cleft lip and palate and associated cranio-facial anomalies.

Appendix V — Market basket (noxious substances) survey of food — 1975

Introduction

1. This survey is the fourth in a series of such surveys conducted by the National Health and Medical Research Council in conjunction with the Australian Government Analytical Laboratories and the State Health authorities. Monitoring of the Australian diet is in accordance with the recommendations of the FAO/WHO Joint Expert Committees on Pesticide Residues[1] and in agreement with the objectives of the Joint FAO/WHO Food Contamination Monitoring Program[2] which is being developed.

2. Council at its Seventy-ninth Session in October 1974 recommended that a further market basket survey be planned for 1975, along the lines of previous surveys conducted during 1970 and 1974. The survey was to include those substances monitored in the previous surveys for which continued surveillance was considered necessary, together with any other substances deemed necessary.

Background

NATIONAL FOOD CONTAMINATION MONITORING PROGRAMS

3. The intake of specific contaminant from food may be estimated either from studies of the levels of the contaminant in samples of foods mixed in proportion to the amounts occurring in a total diet or from levels of the contaminant in a number of individual foods.

4. In total diet studies the foods are prepared for consumption, cooked (where appropriate) and divided into a number of groups (usually 9 to 12) e.g. meats, dairy products, fruits. The foods within each group are blended in the proportion in which they occur in the total diet, giving one composite sample per food group. The samples are then analysed for a number of contaminants giving mean contaminant levels for each group. The average daily intakes from each group and from the total diet are then calculated.

5. In Canada,[3-6] the U.K.,[7,8] and the U.S.A.[9-10] the intake of contaminants is estimated by the total diet study method; in Japan and in most cases in the Federal Republic of Germany, the method using a number of individual foods is used.

6. The composition of total diet samples is usually based on information from national surveys of the dietary habits of people. This method is used in the U.K. and the U.S.A. In several other countries e.g. Canada and Australia[2,3] food consumption is estimated from food disappearance statistics. These are compiled from market figures of food quantities bought and sold, imported and exported, and hence show the amounts of food 'consumed' during the year.

7. In Canada and the U.K. the total diet sample represents the average diet of the average person, whereas in the U.S.A. the sample represents the diet of a 19-year-old male, considered to have the largest food intake and to consume the widest range of foods. The American study poses the question: What is the greatest residue that might be consumed? The other studies ask: What is the average consumption?

8. In Canada, the U.K. and the U.S.A. total diet studies are undertaken on a regular basis. High priority is given in these and other countries to the study of the levels of heavy metals, particularly lead, cadmium and mercury. Other metals which are being examined in some countries include arsenic, antimony, chromium, cobalt, copper, manganese, nickel, selenium, tin and zinc. Organochlorine and organophosphorus pesticide residues are regularly monitored in most countries.

MARKET BASKET SURVEYS CONDUCTED BY NH & MRC

9. The first Australian national survey of contaminants in food was conducted by the National Health and Medical Research Council in 1970.[11] The survey was a total diet study and was designed to measure the maximum dietary intake of pesticide residues, as in the U.S. surveys. A hypothetical diet for a physically active 15-18 year old male was used. Each of ten food groups was analysed for arsenic, lead, mercury, bromide, organochlorine and organophosphorus pesticides. The analyses indicated the need for further monitoring of HCB and dieldrin.

10. The second survey[12] was carried out in 1973. The survey used eight food groups for analysis although selected foods were chosen for these food groups rather than using the full menu of the 1970 survey. Each of the food groups was analysed for dieldrin, HCB and mercury. The analyses indicated that the residue levels of dieldrin and HCB were generally within acceptable limits. Further monitoring of mercury levels in fish and fish products was indicated.

11. The third survey[13] was carried out in 1974. This survey was a total diet study and was designed to measure maximum dietary intakes of pesticide and metal residues. The composition of the diet was planned by using apparent food consumption data for Australia[2,3] calculated as production plus imports less exports, build-up of stocks, and wastage.

Ten food groups were selected and analysed as follows:

dichlorvos	— group 1 (cereal products)
dieldrin	— all groups except 1 (cereal products) and 3 (fish)
HCB	— all groups except 1 and 3
lead	— all groups
cadmium	— all groups
mercury	— groups 3 (fish) and 4 (offal and eggs)
zinc	— all groups

The survey showed that in relation to the organochlorine compounds monitored, HCB and dieldrin residue levels would not generally be in excess of limits set by WHO and FAO. Dichlorvos levels in cereal products were shown to be within acceptable limits.

The levels of lead and cadmium intake were of concern and further monitoring was indicated for these metals as well as mercury in fish and zinc in selected food groups.

Design of the 1975 market basket survey

12. The 1975 survey differs from the 1970 and 1974 surveys in that it is not a total diet study. A number of individual foods were analysed for contaminants rather than analysing food group composites. Such analyses complement the total diet studies. In particular, they afford an opportunity for a more detailed check of those food groups which appear to contribute most of an individual contaminant to the total diet.

While surveys of this kind serve to provide reassurance or indicate the need for further control, it is not possible, unless enough individual foods are analysed, to assess average daily intakes using these data.

FOODS SELECTED FOR SAMPLING AND CONTAMINANTS MONITORED

13. The individual foods selected, together with the contaminants to be monitored in each case, are listed below:

Group 1 — Cereals

(a) Wholemeal bread (b) White bread	organochlorine pesticides

Group 2 — Meats

(a) Chicken (b) Mutton chops (c) Pork chops (d) Minced steak	organochlorine pesticides; lead, cadmium, mercury

Group 3 — Seafood

(a) Fish (b) Shellfish	lead, cadmium, mercury

Group 4 — Eggs and offal

(a) Eggs (b) Lamb's fry	organochlorine pesticides, lead, mercury

Group 5 — Dairy products

(a) Butter — copper

Group 6 — Vegetables

(a) Potatoes (representing root vegetables) — cadmium, lead
(b) Cabbage (representing leafy vegetables) — arsenic, lead

Group 7 — Fruits

(a) Apples (b) Pears	organochlorine pesticides, lead, arsenic
(c) Sultanas (d) Raisins (e) Currants	lead, arsenic

Group 8 — Canned foods

(a) Grapefruit juice
(b) Pineapple juice
(c) Tomato juice
(d) Fruit salad
(e) Peaches
(f) Pineapple
(g) Asparagus
(h) Peas
(i) Beans
(j) Beetroot
(k) Corn
(l) Condensed milk
(m) Evaporated milk
(n) Baby orange juice
(o) Baby gel
(p) Baby vegetables

All canned foods were analysed for lead, zinc, and tin.

NUMBER OF SAMPLES, SAMPLING FREQUENCY

14. Food samples were bought in each capital city in each season of 1975 by officers of the State Health authorities. Three different areas were randomly selected in each capital city for each season of the year. The foods listed in paragraph 13 were purchased at supermarkets and specialty shops in these areas.

SAMPLE PREPARATION

15. After purchase, foods were packed and sent by the State office of the Commonwealth Department of Health to East Sydney Technical College for preparation and cooking. Instructions for preparing these food items were prepared by a nutritionist of the Commonwealth Department of Health. Foods normally washed before use, e.g. cabbage, were washed. Alternate samples only of foods eaten with skins, e.g. apples, were washed. The foods normally cooked were cooked simply—by baking, grilling or boiling rather than frying, which would add fat.

The individual foods, e.g. chicken, bought in the three areas of each capital city were blended together prior to analysis.

ANALYSIS

16. The analyses were carried out by the Sydney Regional Laboratory of the Australian Government Analytical Laboratories.

In general, gas chromatography was used to measure pesticide residue levels and atomic absorption spectrophotometry was used to measure metal residue levels. Full details of the methods used can be obtained from the Australian Government Analyst, Department of Science, Canberra.

EVALUATION OF RESULTS

Statistical analysis

17. The term significance is used in this report in a statistical sense to indicate the statistical significance of differences between average residue levels.

The generally quoted levels of significance are 5% and 1% and these have been used in the report. To say that a test is significant at the 5% level is to say that the probability of the observed results (differences) having occurred by chance is no greater than 1 in 20. Because of the arbitrary nature of this cut-off point, there are cases in this report where probabilities greater than 5% have been referred to. A significance level of 1% is termed highly significant.

18. The concentrations of pesticide and metal residues detected were analysed using an analysis of variance package program available in SPSS (Statistical Packages for the Social Sciences)[14] to test for significant variation in residue levels. For each residue, an initial analysis over all foods was performed to test for variation in residue level between foods, between cities and between seasons of purchase. Each food was then analysed independently to test for variation in residue level between cities and between seasons.

19. For food groups 1 to 7 only one reading of residue level is recorded for each combination of city *and* season. Thus, for the purpose of testing for significance in variation between seasons or between cities, the combined effect of a city *and* a season is assumed to be no more than the added effect of the city and the season.

20. The effect of an outlier, an atypically large level of residue, on the analysis of variance for such a design is worthy of illustration. Consider, for example, the analysis for dieldrin in eggs. The average residue levels (mg/kg) for each season are estimated as 0.004, 0.006, 0.001 and 0.145, for summer, autumn, winter and spring respectively but the analysis of variance does not show any significant difference between seasons.

Residue limits as a basis for comparison

21. In the case of *pesticides*, maximum residue limits are recommended internationally by FAO/WHO and in Australia by NH & MRC. The levels recommended by Council[14] are generally incorporated into State and Territory legislation. The maximum residue limits recommended by Council are updated at each Session of Council. In the Council Standard for Residues of Pesticides in Food the limit for organochlorine compounds in meat and milk are expressed on a fat basis. Results received from the Australian Government Analytical Laboratories were reported, as requested, on a whole-product basis. Therefore the Council recommended maximum residue limits were converted to equivalent whole-products limits by assuming the following proportions of fat in the meats[15]:

baked chicken	10%
mutton chops	30%
pork chops	40%
minced steak	20%
lambs fry	10%

It should also be noted that the Council Standard for Residues of Pesticides in Food refers to raw foods. The analyses in this survey were on cooked foods.

22. In the case of *metals*, the most recent standard recommended by Council is the Standard for Metals in Food[16] approved in October 1971. The original levels were set when lead and arsenic were used extensively for agriculture and there was little knowledge of the effects of trace metals other than these.

Many of the limits reflect the situation existing some years ago and some of the limits are now unrealistic in the light of current developments in toxicology and food technology, e.g. the Standard has no specific

provision for cadmium and hence in solid foods the level of 5.5 mg/kg for metals not specifically listed applies to this metal. This level bears no relationship to the provisional tolerable weekly intake of 0.4 — 0.5 mg per individual, recommended by WHO[17]. The Standard is in the process of being revised.

As the currently approved Standard for Metals in Food is of variable utility, it was considered appropriate to compare the 1974 market basket survey results with the 1975 results for metal residues. In addition, comparisons with overseas survey results and standards were considered to be of value. *It must be remembered, however, that comparisons with overseas survey results can act as a guide only because of the varying design factors inherent in each survey.*

23. Results were compared with the recommended limits by counting the number of occurrences of samples with an observed level of contaminant above the recommended limit. This analysis leads to statements of the form:

> for 2 out of the 24 samples analysed, the measured level of contamination was above the maximum limit recommended by NH & MRC.

No idea is given in such a statement, however, of its accuracy in reflecting the percentage of samples in the community at large that would be contaminated beyond the NH & MRC recommended levels. To do this would mean estimating the variance of the underlying distribution and producing a statement more like:

> it is estimated (with 95% confidence) that between 1.5% and 16.7% samples can be expected to be contaminated beyond the NH & MRC recommended limit.

Results

The results reported below are expressed in mg/kg on a wet weight basis. In general, mean values for individual foods are given. The original results and full statistical comments can be obtained on request from the NH & MRC.

Organochlorine pesticides

The limit of detection for the results reported is 0.001 mg/kg. In calculating the means, values less than the limit of detection, i.e. 0.001, were taken to equal 0.0005.

DDT

The results reported in Tables 1 and 2 are for total DDT levels, i.e. DDT and its derivatives DDD and DDE.

Table 1 shows that the total DDT levels did not exceed the maximum residue limits recommended by NH & MRC.

TABLE 1. Total DDT residue levels (mg/kg) in individual foods

Food	*Number of samples*	*Mean (mg/kg)*	*Range (mg/kg)*	*Derived NH & MRC maximum residue limit*	*Number of samples >NH & MRC limit*
Wholemeal Bread	23	0.005	<0.001-0.012	NR	
White bread	24	0.011	<0.001-0.023	NR	
Chicken	24	0.033	<0.001-0.113	0.7	0
Mutton chops	24	0.037	<0.001-0.228	2.1	0
Pork chops	22	0.084	<0.001-0.302	2.8	0
Minced steak	24	0.015	<0.001-0.059	1.4	0
Eggs	24	0.075	0.012-0.430	0.5	0
Lambs fry	24	0.022	<0.001-0.078	0.7	0
Apples	24	0.009	<0.001-0.062	3.0	0
Pears	24	0.015	<0.001-0.241	3.0	0

Limit of detection 0.001 mg/kg

NR — no recommended maximum residue limit approved by NH & MRC. In such cases the NH & MRC Standard provides that the presence of the pesticide residue in the food is prohibited, except when there is in a manufactured food a proportionate carry-over of pesticide residue from a food component which is allocated a maximum residue limit.

Of the wholemeal bread samples, 21 (91.3%) were at or above the limit of detection.

Of the white bread samples, 23 (95.8%) were above the limit of detection.

TABLE 2. Total DDT residues (mg/kg) in bread compared with total diet results

	1975 NH & MRC survey		*1970 NH & MRC*[11]	*U.S. grains and cereals*[18]		*U.S. total diet*
	Wholemeal bread	*White bread*	*Grain and cereals*	*Domestic foods*	*Imported foods*	
Mean	0.005	0.011	0.023	0.02	0.01	0.005

A comparison of the levels found in bread with that found in the group 'grains and cereals' used in total diet studies in presented in Table 2. Such a comparison can act as a guide only, because of the large number of foods represented in the group composite.

Variation in residue levels between foods, cities and seasons

1. Analysis over all foods showed a significant variability between foods and between seasons at the 1% level of significance:
   (i) Pork and eggs had the highest level of DDT, with mean levels of 0.084 mg/kg and 0.075 mg/kg respectively. Mutton chops and chicken were also above the average level of 0.030 mg/kg, with means of 0.037 and 0.033 respectively.
   (ii) The mean DDT level over all foods in summer was 0.048. This is approximately twice the level for any of the other seasons.

2. Analysis of city and season effects for individual foods showed the season effect to be significant for white bread and apples at the 5% level and for chicken, minced steak and lambs fry at the 1% level. In each case the average DDT residue level was highest in summer.

3. There was no significant variability in the average DDT level between cities for any of the foods analysed.

DIELDRIN

The residue levels of dieldrin found are shown in Tables 3 and 4. Table 3 shows that the dieldrin levels exceeded the maximum residue limits recommended by NH & MRC for pork chops (2 samples) and eggs (1 sample).

TABLE 3. Dieldrin residue levels (mg/kg) in individual foods

Food	*Number of samples*	*Mean (mg/kg)*	*Range (mg/kg)*	*Derived NH & MRC maximum residue limit*	*Number of samples >NH & MRC limit*
Wholemeal bread	24	0.001	< 0.001-0.002	NR	
White bread	23	0.001	< 0.001-0.004	NR	
Chicken	24	0.003	< 0.001-0.010	0.02	0
Mutton chops	24	0.002	< 0.001-0.009	0.06	0
Pork chops	23	0.017	< 0.001-0.227	0.08	2
Minced steak	24	0.001	< 0.001-0.010	0.04	0
Eggs	24	0.039	< 0.001-0.860	0.1	1
Lambs fry	23	0.002	< 0.001-0.006	0.02	0
Apples	24	0.001	< 0.001-0.002	NR	
Pears	24	0.001	< 0.001-0.004	NR	

Limit of detection = 0.001 mg/kg. NR = See footnote to Table 1.

The following proportions of samples were at or above the limit of detection:

Wholemeal bread	50.0%
White bread	65.2%
Apples	12.5%
Pears	8.3%

The NH & MRC Standard allows a maximum residue level for dieldrin of 0.02 in raw cereals and therefore some carry-over into bread could be expected.

Statistical analysis over all foods did not show a significant variability between foods.

A comparison of the levels of dieldrin found in various surveys is useful as a guide and is presented in Table 4.

TABLE 4. Dieldrin residues (mg/kg) compared with total diet results

DIELDRIN LEVELS – BREAD AND CEREAL PRODUCTS

	1975 NH & MRC survey		*1973 NH & MRC*[12]	*U.S. grains and cereals*[18]		*Total diet*
	Wholemeal bread	*White bread*	*Cereal products*	*Domestic foods*	*Imported foods*	
Mean	0.001	0.001	0.004	< 0.005	< 0.005	0.003

DIELDRIN LEVELS – MEATS

	1975 NH & MRC survey		*1974 NH & MRC*[13]	*1973 NH & MRC*[12]	*U.S. survey*[10] *1972/73*
	meats	*pork chops*	*meats*	*meats*	*meats*
Mean	0.006	0.017	0.003	0.011	0.004

DIELDRIN LEVELS – EGGS AND OFFAL

	1975 NH & MRC survey		*1974 NH & MRC*[13]	*1973 NH & MRC*[12]	*U.S. eggs*[18]	
	eggs and lambs fry	*eggs*	*offal and eggs*	*offal and eggs*	*domestic*	*imported*
Mean	0.021	0.039	0.025	0.005	0.01	< 0.005

The levels of dieldrin found in the meats in 1975 appear to be comparable with the 1974 survey although two of the samples for pork chops were high.

The mean level for dieldrin in eggs was high but this is because of one particularly high reading of 0.860 in the spring season.

The level of dieldrin averaged over all foods was 0.007 mg/kg but if the reading of 0.860 is excluded and the mean recalculated, it drops to 0.003 mg/kg.

Seasonal and city differences

1. Independent analysis of each food did not show up any significant differences between seasons or between cities.

2. With the exception of pears and eggs, the level of dieldrin was highest in winter.

3. For mutton chops the level of significance for differences between seasons is 7.9%, with the average residue level for winter higher than the overall average.

4. Similarly, for lambs fry the level of significance for differences between seasons is 8.9%, with the average residue level for autumn and winter higher than the overall average.

HEPTACHLOR

The results for heptachlor residues are shown in Table 5.

The residue levels found were generally at a very low level, with only six of a total of 239 samples being at or above the limit of detection. All six samples were taken in summer, the highest readings being in the egg samples (0.008 and 0.021). The remaining four samples were bread.

TABLE 5. Heptachlor residue levels (mg/kg) in individual foods

Food	*Number of samples*	*Mean (mg/kg)*	*Range (mg/kg)*	*Derived NH & MRC maximum residue limit*	*Number of samples >NH & MRC limit*
Wholemeal bread	23	0.001	<0.001-0.006	NR	
White bread	24	0.001	<0.001-0.001	NR	
Chicken	24	<0.001	<0.001	0.02	0
Mutton chops	24	<0.001	<0.001	0.06	0
Pork chops	24	<0.001	<0.001	0.08	0
Minced steak	24	<0.001	<0.001	0.04	0
Eggs	24	0.002	<0.001-0.021	0.05	0
Lambs fry	24	<0.001	<0.001	0.02	0
Apples	24	<0.001	<0.001	NR	
Pears	24	<0.001	<0.001	NR	

Limit of detection 0.001 mg/kg
NR — See footnote to Table 1.

In the case of apples and pears no residue of heptachlor were found. For wholemeal bread one sample was above the limit of detection, while for white bread three samples (12.5%) were at the limit of detection. In the case of bread, an NH & MRC maximum residue limit of 0.02 mg/kg is set for raw cereals and therefore some carry-over into bread could occur.

LINDANE

The results for lindane are reported in Table 6.

Lindane levels were found to be low, with only 15 of a total of 238 samples being at or above the limit of detection. Of the 60 samples taken during winter all were below the limit of detection. Of the 15 equal to or above the limit, 5 were taken during summer, 4 during autumn and 6 during spring.

TABLE 6. Lindane residue levels (mg/kg) in individual foods

Food	*Number of samples*	*Mean (mg/kg)*	*Range (mg/kg)*	*Derived NH & MRC maximum residue limit*	*Number of samples NH & MRC limit*
Wholemeal bread	23	0.001	<0.001-0.004	NR	
White bread	24	0.001	<0.001-0.002	NR	
Chicken	24	<0.001	<0.001	0.07	0
Mutton chops	24	<0.001	<0.001	0.6	0
Pork chops	23	<0.001	<0.001	0.8	0
Minced steak	24	<0.001	<0.001	0.4	0
Eggs	24	0.001	<0.001-0.009	0.1	0
Lambs fry	24	0.001	<0.001-0.015	0.2	0
Apples	24	0.002	<0.001-0.020	2.0	0
Pears	24	0.001	<0.001-0.001	2.0	0

Limit of detection 0.001 mg/kg
NR — See footnote to Table 1

Three (13.0%) of the wholemeal bread samples were at or above the limit of detection. Four (16.7%) of the white bread samples were at or above the limit of detection. In the case of bread, an NH & MRC maximum residue limit of 0.5 mg/kg is set for lindane in raw cereals and therefore some carry-over into bread could occur.

HCB

The results for HCB are reported in Table 7. The levels were generally below the NH & MRC recommended levels.

The difference between foods were highly significant: The highest average level of HCB (0.017) was in pork chops. This compares with the next highest average level of 0.004 in wholemeal bread.

N.C.B. levels in chicken varied significantly between seasons, with higher average levels in summer and autumn.

HCB used to be used as a fungicide seed dressing for wheat, but since 1972 registration for this purpose has been withdrawn. It is recognised, however, that food contamination with HCB will continue for some years because of its persistence.

TABLE 7. HCB residue levels (mg/kg) in individual foods

Food	*Number of samples*	*Mean (mg/kg)*	*Range (mg/kg)*	*Derived NH & MRC maximum residue limit*	*Number of sample >NH & MRC limit*
Wholemeal bread	23	0.004	<0.001-0.073	0.01	1
White bread	24	0.001	<0.001-0.007	0.01	0
Chicken	24	0.002	<0.001-0.008	0.1	0
Mutton chops	24	0.002	<0.001-0.010	0.3	0
Pork chops	23	0.017	<0.001-0.110	0.4	0
Minced steak	24	0.001	<0.001-0.001	0.2	0
Eggs	24	0.003	<0.001-0.018	1.0	0
Lambs fry	24	0.002	<0.001-0.036	0.2	0
Apples	24	0.001	<0.001-0.008	NR	
Pears	24	0.001	<0.001-0.002	NR	

Limit of detection 0.001 mg/kg
NR — See footnote to Table 1.

Five (20.8%) of the apple samples were at or above the limit of detection. Five (20.8%) of the pear samples were at or above the limit of detection.

While comparisons between surveys are not strictly valid, Table 8 is presented as a guide. It shows that HCB levels are of the same order or lower than those found in earlier surveys.

TABLE 8. HCB residues (mg/kg) compared with total diet results

HCB LEVELS – BREAD AND CEREAL PRODUCTS

	1975 NH & MRC survey		*1973 NH & MRC*[12]
	Wholemeal bread	*White bread*	*Cereal products*
Mean	0.004	0.001	0.003

HCB LEVELS – MEATS

	1975 NH & MRC survey	*1974 NH & MRC*[13]	*1973 NH & MRC*[12]
Mean	0.005	0.021	0.019

HCB LEVELS – EGGS AND OFFAL

	1975 NH & MRC survey	*1974 NH & MRC*[13]	*1973 NH & MRC*[12]
Mean	0.003	0.007	0.045

HCB LEVELS – FRUIT

	1975 NH & MRC survey		*1974 NH & MRC*[13]	*1973 NH & MRC*[12]
	apples	*pears*		
Mean	0.001	0.001	0.001	0.001

Metals

Results for the metals lead, cadmium, mercury, arsenic, zinc, copper, and tin are reported below.

The toxic nature of lead, cadmium, and mercury at relatively low concentrations is well known[25]. While it is known that copper and zinc are potential toxicants if present in sufficiently large amounts, each of these is known to be necessary for some essential metabolic function and is thus classified as an essential nutrient. Tin has been shown to be essential in animal nutrition but there is no clear evidence that it is essential to man.

LEAD

For those people who are not industrially exposed to lead, food and drink is the major source of lead[26]. Another pathway of importance is lead in air, particularly that arising from lead in petrol.

Background

The 1974 market basket survey was a total diet study and therefore it was possible to estimate the intake of lead from the food consumed by an Australian male aged 18-35 years and weighing 70 kg.

The Joint FAO/WHO Expert Committee on Food Additives[17] has suggested a 'provisional tolerable weekly intake' of 3.0 milligrams of lead for adults. The 1974 survey [13] showed that this intake would be exceeded in most States during at least one season of the year.

Results

The 1975 survey examined levels of lead in four varieties of meat, fish, shellfish (oysters), eggs, lambs fry, two varieties of vegetables, fresh and dried fruit, and canned foods. The limit of detection for the results reported in Tables 9 and 10 is 0.02 mg/kg.

TABLE 9. Lead in individual foods

Food	*Number of samples*	*Mean (a) (mg/kg)*	*Range (mg/kg)*
Chicken	24	0.11	0.02-0.19
Mutton chops	24	0.15	0.06-0.34
Pork chops	23	0.12	0.04-0.17
Minced steak	24	0.12	0.05-0.22
Fish	24	0.16	0.05-0.37
Shellfish (oysters)	13	0.28	< 0.02-0.65
Eggs	24	0.10	0.03-0.21
Lambs fry	24	0.25	0.06-0.59
Potatoes	9	0.11	0.04-0.21
Cabbage	24	0.09	0.02-0.17
Apples	24	0.15	0.02-0.45
Pears	24	0.18	0.04-0.69
Sultanas	24	0.46	0.18-0.84
Raisins	24	0.49	0.19-1.20
Currants	24	0.51	0.18-1.08

(a) <0.02 was taken to equal 0.01 in calculating the mean.
(b) Includes 3 samples of canned shellfish

In Table 9 the differences between foods are highly significant, with the higher average lead levels occurring in currants, raisins, and sultanas. Of the remaining foods, the average lead content is higher in shellfish and lambs fry.

TABLE 10. Lead in individual canned foods

Canned food	*Number of samples*	*Mean (a) (mg/kg)*	*Range (mg/kg)*
Grapefruit juice	73	0.16	0.05 – 0.50
Pineapple juice	69	0.14	0.04 – 0.51
Tomato juice	72	0.17	0.06 – 0.56
Fruit salad	66	0.28	0.03 – 0.81
Peaches	72	0.27	0.08 – 0.74
Pineapple	72	0.23	0.03 – 1.18
Asparagus	70	0.20	0.05 – 0.66
Peas	72	0.16	< 0.02 – 0.88
Beans	72	0.21	0.04 – 1.06
Beetroot	71	0.84	0.06 – 3.38
Corn	65	0.15	0.03 – 0.44
Condensed milk	71	0.11	< 0.02 – 0.80
Evaporated milk	71	0.20	0.01 – 0.94
Baby orange juice	64	0.17	0.06 – 0.46
Baby gel	64	0.10	0.02 – 0.29
Baby vegetables	71	0.16	0.03 – 0.60

(a) <0.02 was taken to equal 0.01 in calculating the mean.

For the canned foods (Table 10) there is a highly significant variation between foods, with the average lead level for beetroot (0.84 mg/kg) being much higher than that for fruit salad (0.28 mg/kg), the next highest.

Evaluation of results

The Council approved Standard for Metals in Food[16] sets out maximum levels for lead in food. Those applicable to the foods examined in this survey are shown below:

	Maximum level in mg/kg calculated as the metal
Fruit and fruit products other than dried fruit	4.0
Dried fruit	15.0
Milk and milk products in tinplate containers	2.0
Vegetables	4.0
Fish in tinplate containers	5.5
All other foods	2.0

As mentioned earlier, the Standard for Metals in Food is now in the process of being brought up to date. A similar review has taken place in the United Kingdom for lead levels in food.[19]

Individual foods

The list above shows that all lead levels found are currently below the maximum permitted levels recommended by the National Health and Medical Research Council.

In the United Kingdom, the Working Party on the Monitoring of Foodstuffs for Heavy Metals has published two reports on lead in food covering the periods 1970-1972[20] and 1972-1974.[21]

Tables 11 and 12 present a comparison of the mean concentrations found in the 1975 market basket survey, with mean values found in the U.K. surveys.

TABLE 11. Comparison of mean concentrations (mg/kg) of lead for individual foods

Food	*1975 market basket survey (b)*	*U.K. survey[20] 1970-1972 (a)*	*U.K. survey[21] 1972-1974 (a)*
Chicken	0.11		cooked meat 0.20
Mutton chops	0.15		
Pork chops	0.12		
Minced steak	0.12	0.23	
Fish	0.16	< 0.5 – 0.8	0.2 – 0.7
Shellfish (oysters)	0.28	0.37 – 1.7	1.0
Eggs	0.10	0.03	0.09
Potatoes	0.11	0.04	0.10
Cabbage	0.09	0.08	0.09
Apples	0.15	0.01	0.26
Pears	0.18	0.10	0.03

(a) <0.01 (limit of detection) taken to equal 0.01 in calculating means (b) <0.02 (limit of detection) taken to equal 0.01 in calculating means

It is seen from Table 11 that the 1975 market basket survey results are generally of the same order or lower than those in the U.K. surveys. In the case of the meats, the lead levels found were in agreement with those found in a much larger survey done by the Department of Primary Industry.[22] For beef, a mean lead level of 0.15 mg/kg was found for a total of 345 samples, with the means for the States ranging from 0.12 to 0.22 mg/kg. For mutton, a mean lead level of 0.14 mg/kg was found for a total of 78 samples, with the means for the States ranging from 0.11 to 0.26 mg/kg. It should be noted that the Department of Primary Industry survey was on raw meats.

TABLE 12. Comparison of mean concentrations (mg/kg) of lead for individual canned foods

Canned Food	*1975 market basket survey*	*U.K. survey[20] 1970-1972*	*U.K. survey[21] 1972-1974*
Grapefruit juice	0.16	fruit juices 4 kinds 0.66	fruit juices 0.16
Pineapple juice	0.14		
Tomato juice	0.17		
Fruit salad	0.28		0.49
Peaches	0.27		0.27
Pineapple	0.23	0.29	
Asparagas	0.20	0.17	0.16
Peas	0.16	0.21	0.22
Beans	0.21		
Beetroot	0.84		
Corn	0.15	1.22 (1 sample)	0.66
Condensed milk	0.11	0.05	0.14
Evaporated milk	0.20		
Baby orange juice	0.17	baby food in cans 0.24	baby food in cans 0.07
Baby gel	0.10		
Baby vegetables	0.16		

Table 12 shows that the lead levels found in canned food are generally of the same order as those found in the U.K. surveys.

Seasonal differences

1. The seasonal effect was highly significant over all foods sampled, with a below average level of lead in spring.
2. The levels of significants of the seasonal effect for sultanas, raisins and currants were 0.8%, 8.3% and 3.6% respectively. In each case, the lowest average lead level occurred in spring and the highest in summer. For no other food was the seasonal effect significant.
3. Seasonal effects near the 5% significants level were found in chicken (6.8%) and fish (6.0%), with the average level of lead being highest during summer for both foods.

TABLE 13. Mean lead concentrations (mg/kg) compared with total diet results

	1974 market[13] *basket survey*	*1975 market basket survey*	*U.S. survey*[10] *1972-1973*	*U.K. survey*[21] *1972-1974*
Cereals	Mean 0.26 24 composites Range 0.09-1.01			Mean 0.12 50 composites <0.01-0.70
Meat and poultry	Mean 0.29 24 composites 0.04-1.41	Mean 0.13 95 samples 0.02-0.34	Mean Trace 23 composites Trace – 0.02	Mean 0.16 50 composites < 0.01-0.40
Fish	Mean 0.21 24 composites < 0.02-0.82	Mean 0.17 24 samples 0.05-0.37	included in meat and poultry group	Mean 0.11 48 composites < 0.01-0.42
Offal and eggs	Mean 0.22 24 composites < 0.02-0.94	Mean 0.18 48 samples 0.03-0.59	included in meat group	included in meat group
Fats	Mean 0.36 24 composites <0.02-1.35		Mean Trace 16 composites Trace – 0.2	Mean 0.08 50 composites <0.01-0.25
Dairy products	Mean 0.28 24 composites < 0.02-1.66		Mean Trace 10 composites Range Trace	included in fats group
Milk	Mean 0.21 24 composites < 0.02-0.68		included in dairy products group	Mean 0.02 49 composites < 0.01-0.06
Root vegetables	Mean 0.18 24 composites 0.03-0.66		Mean 0.1 25 composites Trace – 1.0	Mean 0.09 50 composites < 0.01-0.70
Potatoes		Mean 0.12 9 samples 0.04-0.21	Mean Trace 17 composites Trace – 0.1	
Green vegetables	Mean 0.25 24 composites 0.05-0.74		Mean legume vegetables 0.3 Mean leafy vegetables Trace	Mean 0.19 50 composites < 0.01-0.80
Fruit	Mean 0.19 24 composites < 0.02-0.51	Mean 0.36 120 samples 0.02-1.20	Mean Trace 21 composites Trace – 0.4	Mean 0.11 50 composites < 0.01-0.37

1. Results are expressed as mg/kg.
2. The 1974 market basket survey, the U.S. and the U.K. surveys are total diet studies. The means given are for composite samples blended from a number of individual foods.
3. The 1975 market basket survey measured levels in individual foods. The means are calculated using all the individual samples in a food group.
4. The food groups used in the Australian surveys, the U.K. and the U.S. surveys are not strictly comparable. The main differences are mentioned in the table.

CADMIUM

Human beings are exposed to cadmium through food, water, and air. Exposure via food is the most significant.

Background

The 1974 Market Basket Survey was a total diet study and therefore it was possible to estimate the intake of cadmium from the food consumed by an Australian male aged 18-35 years and weighing 70 kg.

The joint FAO/WHO Expert Committee on Food Additives[17] proposed a *provisional tolerable weekly intake of 400-500 micrograms per individual.* The 1974 survey [13] showed that this intake would be exceeded in all States at some time during the year.

Results

The 1975 survey examined levels of cadmium in four varieties of meat, fish, shellfish, and potatoes. The limit of detection for the results reported in Table 14 is 0.002 mg/kg.

TABLE 14 . Cadmium in individual foods

Food	*Number of samples*	*Mean (a) (mg/kg)*	*Range (mg/kg)*
Chicken	24	0.009	< 0.002 – 0.024
Mutton chops	24	0.012	< 0.002 – 0.039
Pork chops	23	0.010	< 0.002 – 0.036
Minced steak	24	0.012	< 0.002 – 0.049
Fish	23	0.027	0.002 – 0.160
Shellfish (oysters) (b)	13	0.237	0.048 – 0.640
Potatoes	24	0.021	0.002 – 0.063

(a) <0.002 was taken to equal 0.001 in calculating the means (b) includes 3 samples of canned shellfish.

Analysis of variance shows the difference between foods to be significant at the 1% level.

Evaluation of results

The current limits recommended by Council for unspecified metals, which includes cadmium, in foods are:

(a) Maximum level in solid foods: 5.5 mg/kg (Standard for Metals in Food — 73rd Session)[16]

(b) Maximum level in any beverage: 0.15 mg/kg (Standard for Metals in Food — 73rd Session)

and the maximum level for cadmium in fish, crustaceans, molluscs, fish content of fish products, fish content of canned fish is 2.0 mg/kg (NH & MRC — 77th Session)[27].

As was pointed out earlier, the Standard for Metals in Food has not been significantly changed for many years. Except for the level set in fish, the levels for cadmium above are obtained from a general clause in the Standard, permitting all metals other than those metals specifically named in the Standard to be present in quantitites up to 5.5 mg/kg in solid foods. It is now apparent that for cadmium such a level is unrealistic.

Individual foods

Friberg[28], in an extensive review of the literature, reports that normal levels of cadmium in food are generally below 0.05 mg/kg. A recent U.K. study by the Working Party on the Monitoring of Foodstuffs for Heavy Metals[29] showed that the mean cadmium concentrations in the vast majority of the foods examined were between 0.01 and 0.04 mg/kg. The U.K. study and a recent New Zealand Study[30] show that foods which were appreciably above these figures include beef, pork and lamb kidneys; wholegrain cereals; condiments; shellfish; and canned fish such as mackerel and sardines.

Table 15 compares means from the 1975 market basket survey with those obtained in the other surveys.

TABLE 15. Comparison of mean concentrations (mg/kg) of cadmium for individual foods

Food	*1975 market basket survey*	*New Zealand survey*[30]	*United Kingdom survey*[29]
Chicken	0.01	0.03	0.02
Mutton chops	0.01	0.03	0.02 (lamb)
Pork chops	0.01	0.04	0.03
Minced steak	0.01	0.03	0.03
Fish	0.03	0.07 (cod)	< 0.1 for most areas
Shellfish (oysters)	0.24	3.31 (canned)	< 0.5, 1.1, 1.9 (three areas)
Potatoes	0.02	0.05	0.08

It is seen from Table 15 that the 1975 market basket survey results are comparable with or lower than other surveys of this kind. The levels for cadmium in oysters are all below 2.0 mg/kg as set by Council at its Seventy-seventh Session.[27]

The mean cadmium levels found in the Department of Primary Industry survey[22] of raw meats were 0.017 for beef (345 samples) and 0.012 for mutton (78 samples). For beef the means for the States ranged from 0.012 to 0.026 while for mutton the means for the States ranged from 0.006 to 0.018.

Seasonal and city differences

Variability between seasons for shellfish was significant at the 5.7% level, with the samples taken during winter having the highest average level (0.354 mg/kg).

In the samples of chicken the variability between seasons was significant at the 5% level, with the highest average level (0.015 mg/kg) occurring during autumn.

Total diet studies

Published estimates of cadmium intake from food (in micrograms per person per day) have been reviewed by Friberg[28]. Values quoted are 4-60 (U.S.A.), 48 (West Germany), 38-64 (Rumania), 60 (Czechoslovakia), 47 and 59 (non-polluted areas of Japan), 92 (U.S.A.), 50 (U.S.A.), and 38 (U.S.A.). Friberg concludes that in uncontaminated areas, the average daily intake will be about 50 micrograms, with regional and individual variations.

The 1974 market basket survey found that the FAO/ WHO provisional tolerable weekly intake was exceeded in all capital cities in at least one season.

In the United Kingdom the Working Party on the Monitoring of Foodstuffs for Heavy Metals[29] looked at both the total diet and individual foods. It was estimated that the intake of cadmium from food for the average person was about 15-30 micrograms per day. Allowing an intake of 1-2 micrograms per day from beverages, a weekly maximum intake of 250 micrograms per person was estimated. This is well within the FAO/WHO level of 400-500 micrograms per week.

Table 16 compares mean from various surveys. Such a comparison can act as a guide only because of the varying design of the surveys. The means in the 1974 market basket survey are generally much higher than those found in overseas surveys, as already borne out by comparing weekly intakes of cadmium. The 1975 results, on the other hand, are of the same order as those found in overseas surveys.

TABLE 16. Mean cadmium concentrations compared with total diet results

	1974 market[13] *basket survey*	*1975 market basket survey*	*U.S. survey*[10] *1972-1973*	*U.K. survey*[29] *1971-1972*
Cereals	Mean 0.10 24 composites Range 0.011-0.442		Mean 0.03 30 composites Range 0.02-0.05	Mean < 0.03 42 composites Range < 0.01-0.10
Meat and Poultry	Mean 0.10 24 composites < 0.002-0.380	Mean 0.01 96 samples < 0.002-0.049	Mean 0.01 12 composites 0.01-0.06	Mean < 0.02 42 composites < 0.01-0.09
Fish	Mean 0.13 24 composites 0.002-0.514	Mean 0.03 23 samples 0.002-0.160	included in meat and poultry group	Mean < 0.02 40 composites < 0.01-0.06
Offal and eggs	Mean 0.11 24 composites < 0.002-0.422		included in meat group	included in meat group
Fats	Mean 0.08 24 composites < 0.002-0.518		Mean 0.03 29 composites < 0.01-0.06	Mean 0.03 42 composites < 0.01-0.15
Dairy products	Mean 0.03 24 composites < 0.002-0.320		Mean Trace 5 composites 0.01-0.06	included in fats group
Milk	Mean 0.03 24 composites < 0.002-0.084		included in dairy products	Mean < 0.002 30 composites < 0.001-0.007
Root vegetables	Mean 0.03 24 composites < 0.002-0.120	Mean potatoes only 0.02 24 samples 0.002-0.063	Mean root vegetables 0.02 Mean potatoes 0.05	Mean < 0.02 42 composites < 0.01-0.07
Green and other vegetables	Mean 0.04 24 composites < 0.002-0.206		Mean leafy vegetables 0.05 Mean legumes Trace	Mean < 0.01 42 composites < 0.01-0.03
Fruit	Mean 0.04 24 composites < 0.002-0.140		Mean Trace 4 composites 0.01-0.02	Mean < 0.01 42 composites < 0.01-0.02

1. The results are expressed as mg/kg.
2. The 1974 market basket survey, the U.S. and the U.K. surveys are total diet studies. The means given are for composite samples blended from a number of individual foods.

3. The 1975 market basket survey measured levels in individual foods. The means are calculated using all the individual samples in a food group.

4. The food groups in the Australian surveys, the U.K. and the U.S. surveys are not strictly comparable. The main differences are mentioned in the table.

Conclusion

The 1975 results indicate that cadmium levels are comparable with surveys from overseas, where intakes have been found to be below the FAO/WHO provisional tolerable weekly intake. The 1975 results are also supported by a recent study in Brisbane[31] where urinary excretion of cadmium from occupationally unexposed adults was consistent with normal values from other developed countries.

MERCURY

The most significant exposure of human beings to mercury is through food, particularly fish. Occupational exposure apart, other sources include drinking water, mercury-containing pharamceuticals, and cosmetics.

In fish, mercury is most frequently encountered as methylmercury which is the most toxic form.

Background

Council in the Standard for Metals in Food[16] has recommended the following maximum levels for mercury:

Mercury in fish, crustaceans, molluscs, the fish content of fish products and the fish content of canned fish	0.5 mg/kg
Mercury in any other food	0.03 mg/kg

The 1970 market basket survey[11] found that in no case did the mercury residue in any food groups from any city exceed 0.03 mg/kg during any season. (Fish were included in a meat, fish and poultry group for analysis.)

The 1973 survey[12] found that all fish samples contained more than 0.1 mg/kg, with two samples of a total of 24 being above 0.5 mg/kg. The greatest value found was 1.05 mg/kg. In the other groups examined no samples exceeded 0.03 mg/kg.

In the 1974 survey[13] the two groups analysed for mercury were fish, and eggs and offal. Six of a total of 24 fish samples were above 0.5 mg/kg (greatest value 0.755 mg/kg).

In the eggs and offal group none of the samples exceeded 0.03 mg/kg, the greatest value being 0.006 mg/kg.

Results

The 1975 survey examined levels of total mercury (i.e. inorganic and organic forms) in fish and shellfish (oysters), four varieties of meat, eggs and lambs fry. The limit of detection for the results reported in Table 17 is 0.005 mg/kg.

TABLE 17. Mercury in individual foods

Food	*Number of samples*	*Mean (a) (mg/kg)*	*Range (mg/kg)*
Fish	24	0.15	$<0.005 - 0.34$
Shellfish	13 (b)	0.03	$<0.005 - 0.11$
Chicken	24	0.02	$<0.005 - 0.07$
Mutton chops	24	0.01	$<0.005 - 0.08$
Pork chops	23	0.03	$<0.005 - 0.20$
Minced steak	24	0.01	$<0.005 - 0.06$
Eggs	24	0.01	$<0.005 - 0.02$
Lambs fry	21	0.02	$<0.005 - 0.05$

(a) <0.005 was taken to equal 0.0025 in calculating the mean
(b) includes three samples of canned shellfish.

Analysis of variance shows the difference between foods to be highly significant, with the mean mercury level markedly higher in fish.

In the case of foods other than fish and shellfish, Table 18 shows the number of samples which exceeded 0.03 mg/kg:

TABLE 18. Mercury level in foods (other than seafood) exceeding 0.03 mg/kg

Food	*Number of samples >0.03*	*Total number of samples*
Chicken	6	24
Mutton chops	2	24
Pork chops	5	23
Minced steak	2	24
Eggs	0	24
Lambs fry	4	21

Evaluation of results

The tables above show that the levels of mercury found in fish and shellfish were all below 0.5 mg/kg in contrast to results reported in previous surveys. The results are comparable with surveys done in the U.K. by the Working Party on the Monitoring of Foodstuffs for Heavy Metals[32,33].

In the case of meats it is apparent that in each case some samples were above the maximum recommended limit, up to a maximum of 25 per cent of the chicken samples. The results for beef and mutton were comparable with the much larger Australian survey undertaken by the Department of Primary Industry.[22] In the latter survey, 34 (9.9%) of a total of 345 beef samples were above 0.03 mg/kg while 5 (6.4%) of a total of 78 mutton samples were above 0.03 mg/kg. In the NH & MRC survey, 2 (8.3%) of a total of 24 samples were above 0.03 mg/kg for both beef and mutton.

The results in Table 19 are taken from the first U.K. study[26] as a basis for comparison.

TABLE 19. Mercury in individual meats in the U.K.[32] 1970-71

Food	*Number of samples*	*Mean (mg/kg)*	*Range (mg/kg)*
Beef and veal	7	0.01	0 – 0.02
Mutton and lamb	2	0	
Pork	6	0.02	0 – 0.05
Liver	2	0.04	0 – 0.09
Pork sausages (uncooked)	5	0.02	0 – 0.07
Beef sausages (uncooked)	2	0.04	0.02 – 0.06

A recent study in Austria[34] found mean mercury contents of 0.01 mg/kg in pork and 0.02 mg/kg in beef. Another recent study in Italy[35] determined mercury levels in 154 samples of fresh and canned meat and meat products and found the concentrations to be ≤ 0.048 mg/kg.

It is seen that the mercury levels found in the meats in the NH & MRC survey are comparable with those found in other developed countries.

ARSENIC

Arsenic is found in soils, many waters, almost all plants and most animal tissues. It occurs naturally in foods and drinks and is normally present in relatively high concentrations in crustacea and other shellfish.[40]

Background

The 1970 market basket survey[11] found that residues in all food groups were below 0.1 mg/kg except in three instances where the level was 0.1 mg/kg and in one group in Perth where during the summer a level of 0.6 mg/kg was found in the dairy products group.

Results

The 1975 survey examined levels of arsenic in cabbage, apples, pears and dried fruit. The limit of detection for the results reported in Table 20 is 0.10 mg/kg.

TABLE 20. Arsenic in individual foods

Food	*Number of samples*	*Mean (a) (mg/kg)*	*Range (mg/kg)*
Cabbage	23	0.05	all <0.1
Apples	24	0.06	<0.1 – 0.1
Pears	24	0.06	<0.1 – 0.1
Sultanas	24	0.09	<0.1 – 0.2
Raisins	23	0.1	<0.1 – 0.4
Currants	24	0.1	<0.1 – 0.3

(a) <0.1 was taken to equal 0.05 in calculating the mean.

Variability between foods is significant at the 1% level, with the average level of arsenic being above the overall average in sultanas, raisins, and currants.

The differences between cities or seasons were not significant for any food.

Evaluation of results

The Council approved Standard for Metals in Food[16] sets out maximum levels for arsenic in food. Those applicable to the foods examined in this survey are listed below:

	Maximum level in mg/kg calculated as the metal
Vegetables	1.2
Dried fruit	3.0
Fruit and fruit products other than dried fruit	1.2

The results indicate that residues of arsenic in the foods examined are well below the recommended maxima. One might expect such a result in view of the low usage of arsenical sprays.

The comparisons in Table 21 exemplify this point for apples (see reference 28):

TABLE 21. Arsenic in Australian apples over time

	Number of samples	*Mean (mg/kg)*	*Range (mg/kg)*
1963-64 crop[28]	20	0.3	0 – 1.7
1964-65 crop[28]	45	0.2	0 – 1.3*
1975 survey	24	0.06	< 0.1 – 0.1

ZINC

Zinc is an essential trace element for many living organisms. Zinc deficiency has been demonstrated to be a public health problem in several countries.

The problem of zinc toxicity appears to be one of restricting zinc content in foods to prevent the occurrence of acute intoxication. The emetic dose of zinc sulphate is 1-2 g (225-450 mg zinc). The symptoms of acute intoxication are those of acute gastrointestinal upset.

Zinc is also of importance because of its apparent neutralizing effect on the toxicity of cadmium.[37]

Background

The 1974 market basket survey analysed all food groups for zinc and all gave positive findings ranging from 0.18 mg/kg to 48.15 mg/kg. All findings greater than 40 mg/kg were in the meat and poultry group.

Results

The 1975 survey examined levels of zinc in canned foods. The results are shown in Table 22.

TABLE 22. Zinc in individual canned foods

Canned Food	*Number of samples*	*Mean (mg/kg)*	*Range (mg/kg)*
Grapefruit juice	73	3.0	0.5 – 9.3
Pineapple juice	69	4.9	0.8 – 14.0
Tomato juice	72	3.1	1.2 – 5.0
Fruit salad	66	4.0	1.7 – 11.0
Peaches	72	2.7	0.3 – 8.8
Pineapple	72	4.9	1.6 – 29.6
Asparagus	70	5.4	2.4 – 12.5
Peas	72	8.0	2.0 – 19.5
Beans	72	4.2	1.3 – 13.3
Beetroot	71	4.5	1.7 – 9.1
Corn	65	5.9	2.4 – 9.3
Condensed milk	71	9.6	4.0 – 13.0
Evaporated milk	71	10.0	3.0 – 14.0
Baby orange juice	64	4.5	0.6 – 11.3
Baby gel	64	1.8	0.5 – 10.0
Baby vegetables	71	4.6	1.1 – 11.8

Analysis of variance shows the differences between foods to be significant at the 1% level, with evaporated milk (10.0 mg/kg), condensed milk (9.6 mg/kg) and peas (8.0 mg/kg) having the higher average levels.

Evaluation of results

The Council approved Standard for Metals in Food[16] sets out maximum levels for zinc in food:

	mg/kg calculated as the metal
Zinc in beverages	5.0
Zinc in gelatine	100.0
Zinc in other foods	40.0

All the canned foods examined fell below these levels, with the exception of grapefruit juice and pineapple juice.

In the case of grapefruit juice 10 of the 73 samples were in the range ≥ 5-10 mg/kg.

In the case of pineapple juice 25 of the 69 samples were in the range ≥ 5-10 mg/kg, with one sample being above 10.0 mg/kg.

COPPER

Copper has been identified as a component of several enzymes. Copper deficiency has been implicated in the aetiology of distinct clinical syndromes in the infant.

So far as its toxicity is concerned, the tolerance of most monogastric species for copper is high. The fourteenth report of the Joint FAO/WHO Expert Committee on Food Additives[38] suggested that, provided the copper intake of man did not exceed 0.5 mg/kg body weight per day, no deleterious effects would be expected.

Results and evaluation

Copper levels were determined in butter. 24 samples were analysed, giving a mean copper level of 0.19 mg/kg (range 0.05-0.40).

This value is well below the level recommended by Council in the Standard for Metals in Food.[16]

Copper in ghee	0.15
Copper in other foods	30.0

The mean value is of the same order as that recommended for copper in ghee as the maximum limit.

TIN

Tin deficiency has been produced in rats but not in man.

Tin may be encountered as a contaminant in canned food products. A number of acute poisoning incidents have resulted from fruit juices containing tin.The symptoms observed were vomiting, diarrhoea, fatigue and headache.[39] The levels of tin that produced symptoms appear to be around 300-500 mg/kg. In human test subjects, nausea and diarrhoea occurred at 1370 mg/kg of tin, but not at lower levels and not when the test was repeated one month later.

Results

The 1975 survey examined levels of tin in canned foods. The limit of detection is 5.0 mg/kg.

TABLE 23. Tin in individual canned foods

Canned Foods	*Number of samples*	*Mean (a) (mg/kg)*	*Range (mg/kg)*	*Number of samples > 250.0 mg/kg*
Grapefruit juice	73	73.2	6.0 – 260.0	1
Pineapple juice	69	76.0	< 5.0 – 275.0	2
Tomato juice	72	67.6	5.3 – 143.0	
Fruit salad	66	54.7	< 5.0 – 155.0	
Peaches	72	44.2	5.0 – 83.0	
Pineapple	72	67.1	< 5.0 – 173.0	
Asparagus	70	134.2	< 5.0 – 278.0	2
Peas	72	8.0	< 5.0 – 25.0	
Beans	72	107.0	< 5.0 – 318.0	7
Beetroot	71	7.8	< 5.0 – 35.0	
Corn	65	6.2	< 5.0 – 43.0	
Condensed milk	71	7.8	< 5.0 – 38.0	
Evaporated milk	71	39.3	< 5.0 – 98.0	
Baby orange juice	64	74.4	< 5.0 – 243.0	
Baby gel	64	8.9	< 5.0 – 75.0	
Baby vegetables	71	9.6	< 5.0 – 80.0	

(a) < 5.0 was taken to equal 2.5 in calculating the means.

The variations in tin concentrations between foods were highly significant, with the higher average concentrations of tin in asparagus and beans. The remaining foods appear to divide into a 'medium' concentration of tin group (76.03 mg/kg to 39.31 mg/kg) consisting of grapefruit juice, pineapple juice, tomato juice, fruit salad, peaches, pineapple, evaporated milk and baby orange juice, and a 'low' concentration of tin group (6.22 mg/kg to 9.60 mg/kg) consisting of peas, beetroot, corn, condensed milk, baby vegetables and baby gel.

Evaluation of results

The Council approved Standard for Metals in Food[16] currently recommends a maximum level of 250 mg/kg (calculated as the metal) of tin in any food packed in tinfoil or tinplate containers. Table 23 shows that some samples of grapefruit juice, pineapple juice, asparagus and beans were above the 250 mg/kg level, the highest level being 318 mg/kg in a sample of beans.

Conclusions

This survey determined organochlorine pesticide residues and residues of the metals lead, cadmium, mercury, arsenic, zinc, copper and tin in a number of individual foods. As the survey was not a total diet study it is not possible to calculate directly daily intakes for these contaminants. This limitation must be borne in mind.

The survey showed that organochlorine residues were generally well below the maximum residue limits specified by Council. Some samples contained dieldrin residues above these limits. The levels of heptachlor and lindane

residues were found to be very low, while HCB residue levels were of the same order or lower than those found in earlier surveys.

Lead, cadmium and mercury were generally found to be at levels comparable with those found in food surveys overseas.

The cadmium levels found were lower than those reported in the 1974 market basket survey and are of the same order as those found in overseas surveys.

Mercury levels determined in fish were all below the recommended 0.5 mg/kg maximum limit. Mercury levels in meat were generally low although some samples were above the Council approved maximum limit of 0.03 mg/kg.

The levels of arsenic found in the foods sampled were low. Zinc and tin levels in canned foods were determined and were generally found to be within the maximum residue limits specified by Council. The exceptions were grapefruit juice and pineapple juice for zince and tin, and asparagus and beans for tin.

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Appendix VI — Amendments to the recommended maximum residue limits of pesticides, agricultural chemicals, feed additives and veterinary medicines in food

Substance	*Maximum residue limits (mg/kg)*	*Food*
New entries		
Aliphatic Alcohol Ethoxylates (based on 1 mole lauryl alcohol and 23 moles ethylene oxide)	1	milk
	*PO.1	meat of cattle
2-Amino butane	30	citrus fruit (post harvest)
Avoparcin	*0.5	edible offal of pigs and poultry
	*0.2	meat of pigs and poultry
Cycloprate	P3	pome fruit — 14D
Endothal	PO.1	cotton seed — 1D
Ethofumesate	PO.3	fat of meat of cattle
Fentin	1	celery
	0.2	sugar beet, carrots
	0.1	potatoes, celeriac
	0.05	peanuts
Glycophene	P10	peaches
Lasalocid	P1	meat of poultry
Metaldehyde	P1	vegetables and fruit — 7D
+Nitrothal-isopropyl	P1	apples — 3W
Perfluidone	*0.01	cotton seed
Amend the entries under		
Azinphos-methyl by adding:	2	grapes
Cambendazole to read:	0.1	meat of sheep and cattle — 3W
	2	liver of sheep and cattle — 3W
Captafol by adding:	0.05	peanuts — 2W
	*0.1	meat of sheep and cattle, milk
Captan by adding:	P50	celery
	10	raspberries and cranberries
Captan with respect to berry fruit to read:	20	berry fruit (except raspberries and cranberries)
Carbaryl by adding:	5	mangoes
	10	nuts (whole in shell)

Substance	*Maximum residue limits (mg/kg)*	*Food*
Carbendazim amend the entries to read:	10	citrus (post harvest)
	5	stone fruit, strawberries
	1	bananas (post harvest)
	3	grapes — 1D
	2	apples, pears
	0.5	cucurbits
	0.1	peanut kernels — 4W
Chlordane with respect to vegetables to read:	0.02	vegetables (except cucurbits)
Chlordane by adding:	0.1	cucurbits
	0.05	milk and milk products (fat basis) fat of poultry
	0.02	eggs, citrus fruit, pome fruit, stone fruit
	0.5	crude linseed oil, crude soyabean oil
	0.1	crude cotton seed oil
	0.02	edible cotton seed oil, edible soyabean oil
Chlorfenvinphos by adding:	0.4	carrots, celery
	0.1	cauliflower, radish, horseradish, tomatoes
	0.05	brussel sprouts, cabbage, broccoli, swede turnips, turnips, sweet potatoes, onions, leeks, eggplant, mushrooms, peanuts, maize, wheat, cotton seed, rice.
Chlorobenzilate by adding:	2	pears
Chlorpyrifos by adding:	PO.5	cole crops — 7D
Chlorpyrifos with respect to vegetables to read:	*0.01	vegetables (except cole crops and tomatoes)
Coumaphos by adding:	0.05	eggs
Coumaphos delete the entry for meat of sheep and cattle and replace with:	0.5	fat of sheep, pigs and goats
	1	fat of cattle and poultry

Substance	*Maximum residue limits (mg/kg)*	*Food*
Diazinon by adding:	0.1	vegetable oil (except olive oil)
	0.7	sweetcorn
	2	olives (unprocessed) olive oil
	0.1	nuts
Dichlorvos with respect to fruit by deleting:		(except citrus)
Dichlorvos by adding:	5	cocoa beans
2, 4-D by adding:	0.1	potatoes
	2	edible offal of cattle, pigs, sheep and goats
	0.2	meat
	*0.05	milk and milk products, poultry and eggs
2, 4-D amend the entry under raw cereals to read:	0.2	raw cereals
Demeton-S-methyl by adding:	*0.05	macadamia nuts
Endosulfan with respect to pome and stone fruits, strawberries, passion fruit, avocadoes, custard apples and paw-paws to read:	2	fruit
Endosulfan by adding:	30	tea (dry manufactured)
	0.1	rice (in husk)
Endrin by deleting the entry for rice and adding:	0.1	cotton seed oil (crude)
	*0.02	cotton seed oil (edible), raw grain, milk and milk products (fat basis)
Ethylene dibromide by adding:	*0.1	vegetables
N-(1-ethylpropyl)-3, 4-dimethyl-2, 6, dinitro-benzeneamine by adding:	*0.05	barley, navy beans
Fenchlorphos by adding:	*0.05	eggs
Fenitrothion by adding:	20	wheat bran
	10	wheat
	5	wheat flour (wholemeal)
	1	wheat flour (white)
	0.5	rice (in husk)
	0.2	bread (white)
	0.1	rice (polished)
	0.5	dried green tea
Fenitrothion by deleting the entry for:		tea green (at harvest)
Fenitrothion with respect to the entry for red cabbage and tomatoes to read:	0.5	red cabbage and tomatoes
Fenitrothion with respect to the entry for meat or fat of meat to read:	*0.05	meat or fat of meat
Fenithrothion with respect to the entry for milk to read:	*0.05	milk
Fenthion by adding:	2	figs and grapes
Folpet by adding:	20	strawberries
Glyphosate by adding:	0.5	citrus
	*0.05	grapes, sugar cane
	*0.1	raw cereals
Glyphosate delete the entry for:		wheat
Heptachlor with respect to carrots to read:	0.2	carrots
Heptachlor with respect to soyabean oil where first appearing by inserting before soyabean oil:		crude
Maldison by inserting after the entry for cauliflower:		collard
Maldison by adding:	8	grapes, dried beans, lentils
Mancozeb by adding:	5	soya beans — 7D, figs — 2W
Maneb by adding:	5	figs — 2W
Methidathion by adding:	0.2	custard apples — 7D
	*0.01	macadamia nuts — 3W
	2	mangoes — 3W
	PO.2	passionfruit — 2W
	*0.01	garlic
	0.5	fat of meat of cattle — 7D
	0.5	milk and milk products (fat basis)
	*0.01	stone fruit
Methidathion with respect to cabbages, cauliflowers, broccoli to read:	0.1	cole crops — 7D

Substance	*Maximum residue limits (mg/kg)*	*Food*
Methomyl by adding:	0.1 PO.5 P1	sorghum — 3W strawberries — 3D lupins — 1D
Metribuzin by adding:	*0.05	meat and milk
Metribuzin with respect to peas to read:	*0.05	peas
Monocrotophos by adding:	*0.01	sweet corn
Phosphamidon by adding:	0.2	strawberries
Propargite by adding:	3	passionfruit — 7D
Thiabendazole with respect to apples and pears (post harvest) to read:	10	apples, pears (post harvest)
Trichlorfon by adding:	*0.05 0.2 0.1 0.05	sugar cane grain legumes soya beans, peanuts sugarbeet
Trichlorfon with respect to meat to read:	0.1	meat, fat and offal of cattle and pigs

Appendix 2

PART 1

New entries:

Glyphosate		herbicide on pastures
Metribuzin		herbicide on forage crops
Thiabendazole		treatment of seed wheat, seed barley, seed oats
Thiophanate-methyl		ginger sets

Amend the entries under

Captan by adding:		and vegetable seeds
Carbendazim by adding:		treatment of ginger sets
Naled by adding:		insecticide on sugar cane (locust control)

Appendix 2

PART 2

New Entries

Ethylene diamine tetracetic acid disodium salt	B Not more than 5% of pesticide formulation	Sequestrant
2-Butoxyethanol	B	Solvent
Methyl isoamyl ketone	B	Solvent
Propylene oxide	B Not more than 0.2% of pesticide formulation	Stabilizer
Pyridine bases 95/180	B Not more than 1% M/V of herbicide formulation	Odorant in liquid paraquat formulation

Amend the entries for

o-dichlorobenzene to read:	ODB	
Bis(dimethyldithiocrabamyl)-ethylene-bisdithiocarbamate to read:		1, 2-bis(dimethyldithiocarbamoyldithio (thiocarbonyl) amino) ethylene
N-(1-ethylpropyl)-3, 4-dimethyl -2,6 dinitrobenzeneamine to read:		Penoxalen
Pentachlorophenol to read:		PCP
Metham sodium to read:		Metham

Prefix the following with a plus sign as they are not approved common names:

Glyphosate
Methazole
Napthalophos
Phenothiazine
Triforine
Vernolate

Appendix VII — Recommended maximum residue limits of pesticides, agricultural chemicals, feed additives and veterinary medicines in food

Substances which when used as directed may result in detectable residues in or upon foods and for which the following maximum residue limits apply.

Note:

1. 'P' in column 2 indicates a provisional maximum residue level.
2. *indicates the level is set at or about the limit of determination.
3. + indicates that the name is not an approved common name.
4. The letters H, D, W and M after a commodity indicate the withholding period in hours, days, weeks or months respectively.

Substance	*Maximum residue limits (mg/kg)*	*Food*
Acephate	10	cauliflower, cabbage — 3D, lettuce — 7D
	6	brussel sprouts — 3D, broccoli — 2W
	P6	tomatoes — 3D
	P2.5	cotton seed — 3W
	P1	soya beans — 2W
	0.5	potatoes — 3D
	PO.1	fat of meat, meat and milk
Acinitrazole	*0.1	meat of poultry and pigs
Aklomide	*0.1	meat of poultry
Alachlor	*0.1	wheat, barley, maize, seed and pod vegetables, cabbages, cauliflowers and peanuts
Aldrin	0.2	fat of meat
	0.15	milk and milk products (fat basis), goat milk (fat basis)
	0.1	eggs (shell free), asparagus, cole crops, carrots, cucumber, eggplant, horse radish, lettuce, onions, parsnips, peppers, pimentos, potatoes, radishes and radish tops
	0.05	citrus fruit
	0.02	raw cereals
Aliphatic Alcohol Ethoxylates (based on 1 mole lauryl alcohol and 23 moles ethylene oxide)	1	milk
	*PO.1	meat of cattle
Allidochlor	*0.1	vegetables, raw cereals
Aluminium phosphide	0.1(as PH_3)	raw cereals
	0.01(as PH_3)	flour and other milled cereal products, dried vegetables, spices
Ametryn	0.1	pome fruits
	*0.05	sugar cane, pineapples — 14W
2-Amino butane	30	citrus fruit (post harvest)
Aminocarb	4	apples, pears — 3D
	1	cottonseeds
	P1	fruits (other than apples and pears) vegetables
Amiton	*0.002	all foods
Amitraz	0.1	meat, milk and milk products
	*0.05	pome and stone fruit — 4W
Amitrole	*0.01	citrus, grapes, pome fruits, sugar cane, water, bananas, paw-paws, pineapples, raw cereals
Amprolium	8	egg yolk
	4	whole eggs
	1	liver and kidney of poultry
	0.5	meat of poultry
Arsenic containing compounds	1.15 (as As)	fruits, raw cereals, vegetables, vegetable oils, meat of cattle, sheep, pigs and poultry
	0.5 (as As)	eggs
Asulam	*0.1	sugar cane, hops, meat, milk
Atrazine	*0.1	citrus, maize, sorghum, grapes, sugar cane, pineapples

Substance	Maximum residue limits (mg/kg)	Food
Avoparcin	*0.5	edible offal of pigs and poultry
	*0.2	meat of pigs and poultry
Azinphos-ethyl	2	pome fruits, citrus fruit
	1	vegetables
	0.2	raw cereals
Azinphos-methyl	2	pome and stone fruit, citrus, grapes
Aziprotryne	0.5	vegetables
Barban	*0.02	raw cereals
Benomyl	P10	mushrooms, ginger, citrus (post harvest dip)
	P6	strawberries
	P5	pome and stone fruits, mangoes (post harvest dip)
	P3	avocados, vegetables
	P2	grapes, mangoes, (pulp) (post harvest dip)
	P1	bananas
	PO.2	peanuts
	PO.1	sugar cane (pre-planting)
Bentazone	*0.1	soya beans, beans; peanuts — 3W
Beta-hydroxye-thylhydrazine	*0.04	pineapples — 4M
BHC (other than the gamma isomer)	0.1	raw cereals, eggs, milk and milk products (fat basis)
	0.3	fat of meat
Binapacryl	1	other pome and stone fruits, citrus — 3W
	0.5	grapes, apples, pears
	0.3	plums, nectarines
Bioresmethrin	P5	raw cereal and milled products from grain
	P*0.05	cooked cereal products including bread
Bromacil	*0.04	citrus, asparagus, pineapple
Bromophos-ethyl	3	fat of meat of cattle and sheep
	1	milk and milk products (fat basis)
Bromopropylate	5	pome and stone fruits — 3W
Bromoxynil octanoate	*0.2	raw cereals
+Bromsalans	0.05	milk
	0.1	meat of cattle and sheep — 7D
	0.2	liver and kidney of cattle and sheep — 7D
+Brotianide	1	liver and kidney of sheep — 2W
	0.1	meat of sheep — 2W
Bupirimate	P1	apples — 7D

Substance	Maximum residue limits (mg/kg)	Food
+Buquinolate	0.4	liver, kidney and skin with fat of poultry
	0.1	meat of poultry, eggs
Butacarb	1	meat of sheep
+Butachlor	*0.05	rice
+Cambendazole	2	liver of sheep and cattle — 3W
	0.1	meat of sheep and cattle — 3W
Camphechlor	3	carrots, maize, cotton seed, tomatoes
Captafol	15	apricots, nectarines, peaches
	10	cherries (sour)
	5	other fruits and vegetables
	2	cherries (sweet), melons, cucumbers
	*0.1	meat of sheep and cattle, milk
	0.05	peanuts — 2W
Captan	P50	celery
	20	berry fruits (except raspberries and cranberries), cotton seed, cucurbits (except cucumbers), pome and stone fruits (except plums), potatoes, soya beans
	15	citrus fruit, plums, rhubarb, tomatoes
	10	cranberries, cucumbers, lettuce, green beans, peppers, raspberries
+Carbadox	0.1	meat of pigs — 5W
Carbaryl	10	apricots, asparagus, leafy vegetables, blackberries, boysenberries, nectarines, okra, raw olives, peaches, raspberries, nuts (whole in shell)
	7	blueberries, citrus fruit, strawberries
	5	grapes, pome fruits, vegetables (except leafy vegetables and cucurbits), bananas (pulp), poultry skin, plums and cherries, mangoes
	3	rice, cucurbits
	1	cotton seed, sweat corn, nuts, olives (processed), raw cereals (except rice) (locust control)
	0.5	poultry (total edible portion)
	0.2	eggs, potatoes, meat of cattle, goats and sheep

Substance	*Maximum residue limits (mg/kg)*	*Food*
Carbendazim	10	citrus (post harvest)
	5	stone fruit, strawberries
	3	grapes — 1D
	2	apples, pears
	1	bananas (post harvest)
	0.5	cucurbits
	0.1	peanut kernels — 4W
Carbofuran	PO.5	pome fruit, peaches — 4W
Carbon disulphide	10	raw cereals
	2	milled cereal products that will be subject to baking or cooking
	*0.5	bread and other cooked cereal products
Carbon tetrachloride	50	raw cereals
	10	milled cereal products that will be subject to baking or cooking
	*0.05	bread and other cooked cereal products
Carbophenothion	1	citrus, bananas, grapes, pome and stone fruits, vegetables; fat of meat of sheep and cattle — 2W
	0.1	milk and milk products (far basis)
Carboxin	0.1	raw cereals
Chloraniformethan	PO.5	cucurbits — 3D
Chlorbenside	3	pome fruits
Chlordane	0.5	crude linseed oil, crude soya bean oil
	0.3	sugar beet
	0.1	crude cotton seed oil, cucurbits, pineapples
	0.05	raw cereals, milk and milk products (fat basis), fat of poultry
	0.02	vegetables (except cucurbits), eggs, citrus fruit, stone fruit, pome fruit, edible cotton seed oil, edible soya bean oil
Chlordecone	*0.01	bananas
Chlordimeform and its metabolities determined as 4-chloro-o-toluidine expressed as chlordimeform	5	pears, stone fruit — 7D
	3	apples, grapes — 7D, strawberries — 2D
	2	citrus, cole crops — 7D, cotton seed — 2D
	1	tomatoes — 1D, fat of meat and edible offal of cattle — 3D
	0.5	milk and milk products (fat basis)
	*0.05	edible vegetable oil
Chlorfenson	3	pome fruit
Chlorfenvinphos	0.4	carrots, celery
	0.2	fat of meat of cattle and sheep — 3D, milk and milk products (fat basis)
	0.1	potatoes — 7D, cauliflower, radish, horseradish, tomatoes
	0.05	brussel sprouts, cabbage, broccoli, swede turnips, turnips, sweet potatoes, onions, leeks, eggplant, mushrooms, peanuts, maize, wheat, cotton seed, rice
Chlorinated terpene isomer	3	fruit, raw cereals, vegetables
Chlormequat	0.75	dried vine fruits, grapes
Chlornidine	*0.05	cotton seed, french beans, soya beans and peanuts
Chlorobenzilate	2	pears
	1	citrus, melons
	0.2	almonds, walnuts
Chloromethiuron	P1	milk and milk products (fat basis); edible offal and fat of cattle — 3D
	PO.2	meat of cattle — 3D
5-Chloro-3-methyl-4-nitropyrazole	PO.1	oranges
	P*0.001	orange juice
Chloropicrin	*0.1	raw cereals
Chloropropylate	5	pome fruits, stone fruits
Chlorothalonil	30	peaches — 7D
	10	celery — 1D, grapes — 7D, cherries — 7D
	7	vegetables (except celery and potatoes) and plums — 1D, apricots — 7D
	0.2	peanuts
	0.1	potatoes, almonds
Chloroxuron	0.5	strawberries, vegetables
Chlorpropham	50	potatoes
	*0.05	berry fruits, vegetables (other than potatoes)
Chlorpyrifos	3	grain sorghum
	2	fat of meat of cattle
	0.5	tomatoes — 3D
	PO.5	cole crops — 7D
	0.2	pome fruit and citrus — 2W
	0.1	fat of meat of pigs — 3W, raw cereals (other than grain sorghum), sugar cane
	0.05	oil seeds and cotton seed oil
	*0.01	bananas, vegetables (except cole crops and tomatoes)
Clenpyrin	2	fat of meat of cattle — 3D
Copper containing compounds	30 (as Cu)	fruit, vegetables
Coumaphos	1	fat of cattle and poultry
	0.5	fat of sheep, pigs and goats
	0.1	milk and milk products (fat basis)
	0.05	eggs
4-CPA	*0.02	stone fruits

Substance	Maximum residue limits (mg/kg)	Food
Crotoxyphos	0.05	meat
	0.01	milk
Crufomate	1	meat
	0.05	milk
Cyanazine	0.02	peas, potatoes (pre-emergence)
Cycloprate	P3	pome fruit — 2W
Cyhexatin	3	apples, pears, stone fruits — 2D; strawberries
2, 4-D	5	citrus, sugar cane
	2	edible offal of cattle, pigs, sheep and goats
	0.2	meat, raw cereals
	0.1	water, potatoes
	*0.05	milk and milk products, poultry and eggs
Daminozide	30	pome fruit, peaches — 6W
	20	peanuts — 6W
	0.2	meat and eggs
	*0.05	milk
2, 4-DB	*0.02	raw cereals
DDT (including DDD and DDE)	7	fat of meat of cattle, sheep, pigs and poultry, leafy vegetables
	3	fruit (other than citrus)
	1.25	milk and milk products (fat basis), goat milk (fat basis)
	1	edible oils, fish, seed and pod vegetables, margarine, root vegetables, tomatoes
	0.5	all other vegetables, eggs
	0.2	citrus fruit
Decoquinate	6	meat of poultry
Demeton (including demeton-O, demeton-S, demeton-O-methyl, demeton-S-methyl and oxydemeton-S-methyl)	0.5	hops, oil seeds, pome fruits, raw cereals, stone fruits, vegetables, strawberries
	*0.05	macadamia nuts
Desmetryn	*0.05	cole crops
Di-allate	*0.02	raw cereals
Diazinon	2	olives (unprocessed), olive oil
	0.7	peaches, citrus fruits, vegetables; fat of meat of cattle, sheep and pigs; sweet corn
	0.5	all other fruits, milk and milk products (fat basis), sugar cane
	0.1	raw cereals, nuts, vegetable oil (except olive oil)
1, 2-Dibromo-3-chloropropane	*0.01	cucurbits, berry vegetables, grapes, leafy vegetables, pome fruits

Substance	Maximum residue limits (mg/kg)	Food
Dicamba	*0.05	raw cereals
Dichlobenil	*0.1	vine, pome, stone, citrus fruits
Dichlone	15	strawberries
	3	fruits other than strawberries, vegetables
1, 1-Dichloro-2, 2-bis (p-ethylphenyl) ethane	5	fruits, raw cereals, vegetables
Dichlorvos	5	cocoa beans
	2	raw cereals — 7D, coffee beans (green), soya beans, peanuts, lentils
	1	lettuce
	0.5	milled cereal products, mushrooms, tomatoes
	0.3	vegetables (except lettuce and tomatoes)
	0.1	fruit, miscellaneous food items not otherwise specified (e.g. bread cakes, cooked meats, etc.)
	0.05	eggs, meat and poultry
	0.02	whole milk
Dicloran	20	beans, onions, lettuce, tomatoes, sweet potatoes, berry fruits
	15	stone fruits, carrots
	10	grapes
Dicofol	5	almonds, fruit (except citrus), vegetables
	0.1	cotton seeds
Dieldrin	0.2	fat of meat
	0.15	milk and milk products (fat basis), goat milk (fat basis)
	0.1	eggs (shell free), asparagus, carrots, cole crops, cucumber, eggplant, horseradish, lettuce, onions, parsnips, peppers, pimentos, potatoes, radishes and radish tops
	0.05	citrus fruit, bananas
	0.02	raw cereals
+Difenzoquat	0.1	wheat
	0.05	barley
Dimethirimol	1	cucurbits
Dimethoate (including its oxygen analogue)	2	all other vegetables, fruits
	1	tomatoes, peppers
	0.1	oil seeds — 2W
	*0.05	peanuts; eggs, meat — 2W; raw cereals — 4W
1, 2-bis (Dimethyl-dithiocarbamoyl-dithio (thiocarbonyl) amino) ethylene	7	fruits, raw cereals, vegetables

Substance	*Maximum residue limits (mg/kg)*	*Food*
Dimetridazole	0.1	meats of pigs — 5D
	*0.05	meat of poultry
Dinitramine	*0.05	oil seeds, peanuts, soya beans, meat, milk
3, 5-Dinitro--toluamide	6	liver and kidney of poultry
	3	meat of poultry
	2	fat of poultry
	7	cucurbits, grapes, pome and stone fruits, strawberries
Dinoseb	*0.06	peanuts, peas, pome and stone fruits
Dioxathion	5	pome fruit
	3	citrus fruit
	2	grapes
	1	fat of meat
	0.3	milk and milk products (fat basis)
Diphenamid	*0.1	tomatoes
Diphenyl	110	citrus fruit
Diphenylamine	10	apples
	7	pears
Diquat	5	barley, poppyseed, rice (in husk)
	2	rapeseed, sorghum, wheat
	1	cottonseed, beans, sunflower seed, rice (polished)
	0.2	potatoes, wheatflour
	0.1	onions, maize, sugarbeet, peas, cottonseed oil, rapeseed oil, sesameseed oil, sunflowerseed oil
	*0.05	other vegetables, meat and meat products
	*0.01	milk
Disulfoton	0.5 (as Demeton)	cotton seed, vegetables, potatoes — 10W; hops
Dithianon	2	canning peaches — 1D; fruits other than canning peaches — 3W
Diuron	2	fruits, asparagus, oil seeds, raw cereals, sugar cane
DNOC	*0.02	onions, pome and stone fruits
Dodine	5	pome and stone fruits
2, 2-DPA	*0.06	citrus, raw cereals, grapes, pome fruits, sugar cane, bananas, vegetables, paw-paw, pineapples
EDB	20	raw cereals
	5	milled cereal products that will be subject to baking or cooking
	0.5	citrus
	*0.1	fruit (other than citrus), bread and other cooked cereal products, vegetables

Substance	*Maximum residue limits (mg/kg)*	*Food*
Endosulfan (including endosulfan sulphate)	30	tea (dry manufactured)
	2	tomatoes — 1D, other berry vegetables — 7D, fruit
	1	oil seeds — 4W, vegetables (other than berry vegetables), peanuts
	0.5	milk and milk products (fat basis), goat milk (fat basis)
	0.2	fat of meat of cattle and sheep, macadamia nuts
	PO.2	sorghum, sweet corn
	0.1	rice (in husk)
Endothal	PO.1	cotton seed — 1D
Endrin	0.1	vegetables, cotton seed, cotton seed oil (crude)
	*0.02	fruit, cotton seed oil (edible), raw grain, milk and milk products (fat basis)
EPTC	0.1	oil seeds
	*0.04	raw cereals, vegetables
Ethephon	15	cherries — 7D
	2	pineapples, tomatoes — 7D
	1	blackcurrants, apples — 7D
	0.5	peaches — 6W
Ethion	5	tea (dry manufactured)
	2.5	fat of meat of cattle
	2	grapes
	1	citrus, pome and stone fruit
	0.5	milk and milk products (fat basis)
Ethofumesate	PO.3	fat of meat of cattle
+Ethopabate	15	liver and kidney of poultry
	5	meat of poultry
Ethoprophos	*0.05	bananas
Ethoxyquin	3	apples, pears
5-Ethoxy-3-trichloromethyl-1, 2, 4-thiadiazole	0.2	vegetables
	*0.02	beetroot, cotton seed, peanuts
Ethyl formate	P1	dried fruits
Ethylene dichloride	50	raw cereals
	10	milled cereal products that will be subject to baking or cooking
	*0.1	bread and other cooked cereal products.
Famphur	0.05	meat of cattle — 2W
Fenaminosulf	*0.05	citrus, pome fruit, stone fruit

Substance	*Maximum residue limits (mg/kg)*	*Food*
Fenamiphos	0.2	carrots and beetroot — 12W, strawberries — 6W
	0.1	sweet potatoes and potatoes — 12W, mushrooms — 6W
	*0.05	tomatoes, leafy vegetables, cucurbits, citrus, pineapples, grapes, bananas, ginger
Fenazaflor	2	apples, pears — 2W
Fenbendazole	0.5	meat of sheep — 2W
	*0.1	meat of cattle — 2W
	0.1	milk
+Fenbutatin-oxide	3	pome fruit, peaches — 2D
Fenchlorphos	7	fat of meat of cattle, sheep, pigs and poultry
	*0.05	eggs
Fenitrothion	20	wheat bran
	10	raw cereals (locust control), wheat
	6	sorghum — 1D (locust control)
	5	wheat flour (wholemeal)
	1	wheat flour (white)
	0.5	apples, cherries, red cabbage, grapes, lettuce, rice (in husk) dried green tea, tomatoes
	0.3	soya beans — 4D
	0.2	bread (white)
	0.1	cocoa, rice (polished)
	*0.05	milk products (fat basis), meat or fat of meat, milk
	0.02	sugar cane — 3D
Fenoprop	*0.02	sugar cane
Fenson	3	fruits, raw cereals, vegetables
Fensulphothion	*0.02	bananas
Fenthion	2	citrus, berry vegetables, pome and stone fruits, figs, grapes
	1	meat of cattle — 1D
	0.5	meat of pigs — 7D
	0.2	milk and milk products (fat basis)
Fentin	1	celery
	0.2	sugar beet, carrots
	0.1	potatoes, celeriac
	0.05	peanuts
Ferbam	7 (as Zineb)	fruits, raw cereals, vegetables
Flamprop-methyl	P*0.05	wheat
	P*0.01	meat, milk and milk products
Fluchloralin	*0.1	cotton seed
Flumeturon	0.5	citrus fruits — 7W
	*0.1	cottonseed, raw cereals, pineapples — 7W
Fluorine (inorganic salts of)	7 (as F)	fruits, raw cereals, vegetables
Folpet	30	currants (fresh)
	25	grapes, blueberries
	20	potatoes, strawberries
	15	cherries, raspberries
	10	apples, citrus fruit
	5	tomatoes
	2	cantaloupes, onions, cucumbers, watermelons
Formetanate	1	apples, pears, peaches, plums (for prune manufacture only) — 7D, strawberries — 2D
Formothion	2(as dimethoate)	all other vegetables, fruits
	1 (as dimethoate)	tomatoes, peppers
Gibberellic acid	2	grapes
Glycophene	P10	peaches
+Glyphosate	0.5	edible offal, citrus
	*0.1	water, meat, raw cereals, poultry and milk
	*0.05	grapes, sugar cane
Halquinol	*0.1	meat of poultry, meat of pigs — 2D
HCB	1	fat of meat and poultry, eggs (shellfree)
	0.5	milk and milk products (fat basis)
	0.05	raw cereals
	0.01	flour and similar milled cereal products
Heptachlor (including its epoxide)	0.5	crude soya bean oil
	0.2	fat of meat, carrots
	0.15	milk and milk products (fat basis)
	0.05	all other vegetables, eggs
	0.02	raw cereals, tomatoes, cotton seed, soya beans, edible soya bean oil
	0.01	pineapples, citrus fruit
Hexaflurate	1	meat
	*0.2	milk
Hydrocyanic acid and its salts	75 (as HCN)	raw cereals
	25 (as HCN)	fruits, vegetables
	6 (as HCN)	flour
+Imidocarb	P3	edible offal of cattle — 4W
	P0.2	meat of cattle — 4W
Inorganic bromide	400	spices and herbs
	250	dried figs
	100	dried dates, dried vine fruit
	75	avocados

Substance	Maximum residue limits (mg/kg)	Food
	50	raw cereals, dried peaches, whole meal flour, capsicums
	30	strawberries, citrus fruit, all other dried fruit
	20	dried prunes, all other fruit, vegetables (except capsicums)
Iodofenphos	0.1	fat of meat of cattle — 3D
Isobenzan	0.1	fruits, raw cereals, vegetables
Isocarbophos	*0.05	cotton seed — 6W
Lasalocid	P1	meat of poultry
Lead arsenate	4 (as Pb)	grapes, pome and stone fruits, vegetables
Lenacil	*0.04	strawberries — 4W
Leptophos	P10	cole crops — 7D
	3	tomatoes
	2	pome fruits — 4W, grapes — 3W
	P0.3	cotton seed
Levamisole	1	eggs
	0.1	meat of cattle, sheep and pigs — 3D, meat of poultry — 7D, milk and milk products
Lindane	3	cherries, cranberries, grapes, plums, strawberries
	2	fat of meat of cattle, sheep, pigs, all other fruit, vegetables
	1	fish
	0.7	poultry (fat basis)
	0.5	raw cereals
	0.2	milk and milk products (fat basis), goat milk (fat basis)
	0.1	eggs, egg pulp
	0.05	oil seeds
Linuron	*0.05	raw cereals, vegetables
Maldison	8	raw cereals, dried fruit, nuts, grapes, dried beans, lentils
	4	citrus fruit
	3	tomatoes, kale
	2	all other fruits, all other vegetables, whole mean and flour from rye and wheat
	1	fat of meat and poultry, eggs, milk and milk products (fat basis), strawberries
	0.5	pears, blueberries, peas, cauliflower, collard peppers, eggplant, kohlrabi, root vegetables (except turnips), Swiss chard
Mancozeb	20	grapes — 2W
	10	celery — 7D
	5	lettuce, apples, pears, plums, peaches, nectarines, apricots, spinach, silverbeet — 2W; cabbage, cauliflower, brussel sprouts, green beans — 7D, soya beans — 7D, figs — 2W
	2	carrots — 7D, citrus, cucurbits, tomatoes; rhubarb, beetroot — 2W
	1	bananas
	0.5	onions — 7D, peanuts — 2W
	*0.02	potatoes
Maneb	7 (as Zineb)	apples, bananas, citrus, vegetables
	5	figs — 2W
MCPA	*0.02	raw cereals
MCPB	*0.02	raw cereals, seed and pod vegetables
Mebendazole	*0.02	meat — 7D
Menazon	1	citrus, pome and stone fruits, vegetables
Mercury containing compounds	0.03 (as Hg)	apples, pears
Metaldehyde	P1	vegetables and fruit — 7D
Methabenz-thiazuron	*0.05	raw cereals
Metham	*0.1	berry fruits, vegetables
Methamidophos	0.25	peaches, tomatoes — 3W, capsicums — 2W
	0.05	potatoes — 7D
+Methazole	*0.1	onions
Methidathion	2	citrus fruit — 3W, mangoes — 3W
	1	oil seeds — 3D
	0.5	fat of meat of cattle — 7D, milk and milk products (fat basis)
	0.2	apples, pears — 2W, custard apples — 7D
	P0.2	passionfruit — 2W
	0.1	tomatoes, seed and pot vegetables — 7D, cole crops — 7D, edible vegetable oil
	*0.05	grapes
	*0.01	root vegetables — 7D, raw cereals — 6W, onions, garlic, stone fruit, macadamia nuts — 3W
Methomyl	2	cherries — 1D
	1	peaches, nectarines, and apples — 1D, leafy vegetables, berry vegetables, seed and pod vegetables — 1D, potatoes

Substance	Maximum residue limits (mg/kg)	Food
	P1	grapes, rapeseed, citrus — 2D; lupins — 1D
	P0.5	strawberries — 3D
	P0.2	cotton seed
	0.1	sorghum — 3W; maize (including sweet-corn)
Methoxychlor	3	fat of meat of cattle
Methyl bromide	50	raw cereals
	10	milled cereal products that will be subject to baking or cooking
	*0.5	dried fruits, fruit, herbs and spices, bread and other cooked cereal products
+Metichlorpindol	15	liver and kidney of poultry
	5	meat of poultry
Metiram	6	apples, grapes, pears, celery, cucumbers, tomatoes
	1	vegetables (other than celery, cucumbers, tomatoes)
Metobromuron	*0.06	potatoes
Metoxuron	*0.2	carrots
	*0.1	wheat
Metribuzin	*0.05	soya beans, potatoes, tomatoes, meat and milk, peas
Mevinphos	0.25	pome and stone fruits, vegetables
	0.1	cotton seed — 2D
+Monensin	0.5	fat of poultry
Monocrotophos	0.5	apples, pears — 4W, tomatoes — 3W, sorghum grain, maize, millet, panicum and soyabeans — 5D, wheat (locust control only) — 5D
	0.2	beans — 3W
	0.1	cotton seed — 3W, potatoes, sorghum — 8W
	*0.05	edible vegetable oil
	*0.02	meat, milk products and eggs
	*0.01	sweet corn
	*0.002	milk
Monuron	5	asparagus, pineapples
	*0.03	cotton seed, sugar cane
+Morantel	2	liver and kidney of sheep, pigs and cattle — 7D
	0.3	meat of cattle, sheep and pigs — 7D
	*0.1	milk and milk products
Naled	2	citrus, pome and stone fruits, vegetables
	0.5	cotton seed (locust control)
a-Naphthalene acetic acid	1	apples, pears, pineapples
+Naphthalophos	*0.1	meat of sheep
beta-Napthoxy acetic acid	1	tomatoes
Napropamide	*0.1	stone fruit, berry fruit, grapes, almonds, tomatoes
Nicotine and its salts	2 (as Nicotine)	fruits, vegetables
Nifursol	0.5	livery of poultry
	*0.1	meat of poultry
Nimidane	1	fat of meat of cattle — 3D, milk and milk products (fat basis)
Nitralin	*0.03	cucurbits, peanuts, cottonseed, seed and pod vegetables
Nitrofen	*0.02	cole crops, seed and pod vegetables
+Nitrothal-isopropyl	P1	apples — 3W
Nitroxynil	1	meat of cattle and sheep — 4W
	0.2	milk — 3D
Noruron	*0.02	cottonseed, vegetables
ODB	0.01	fat of meat of sheep
Olaquindox	P0.2	meat of pigs — 2D
Omethoate	2	all other vegetables, fruit
	1	tomatoes, peppers
	*0.05	raw cereals, oil seeds
Oxibendazole	*0.1	meat — 7D
Oxyclozanide	2	edible offal of cattle and sheep — 14D
	0.5	Meat of cattle and sheep — 14D
	0.05	milk
Oxythioquinox	0.5	pome and stone fruit, cucurbits
Paraquat	10	rice (in husk)
	1	olives (fresh)
	0.5	rice (polished), sorghum
	0.2	cottonseed, potatoes
	0.1	maize, soybeans
	0.05	cottonseed oil (refined)
	*0.05	other vegetables, fruit, sugar cane, nuts, raw cereals (other than rice and maize)
	*0.01	milk
Parathion	1	peaches, apricots
	0.7	vegetables (except carrots)
	0.5	all other fruits, raw cereals, carrots
Parathion-methyl	1	cottonseed, fruits, vegetables
	0.05	cottonseed oil
Parbendazole	*0.1	milk — 6D, meat — 3W
PCP	*0.01	citrus, grapes, potatoes, pineapples
Penoxalin	*0.05	wheat, cotton seed, peanuts, soya beans, barley, navy beans

Substance	Maximum residue limits (mg/kg)	Food
Perfluidone	*0.01	cotton seed
Phenkapton	1	fruits, vegetables
Phenmedipham	*0.1	beetroot
+Phenothiazine	P1	meat of cattle, milk and milk products
o-Phenylphenol	25	pears
	20	carrots, peaches
	P20	citrus fruits
	15	plums, prunes, sweet potatoes
	10	cantaloupes, cucumbers, pineapples, tomatoes, peppers
	3	cherries, nectarines
Phorate	0.5	cottonseed, vegetables
Phosalone	3	peaches — 6W
	2.5	apples, pears — 3W
	1	fat of meat of sheep
Phosmet	1	fat of meat of cattle; pome and stone fruit — 3W
	0.2	milk and milk products (fat basis)
Phosphamidon	1	stone fruits, all other vegetables, oilseeds
	0.5	pome fruits
	0.4	citrus fruits
	0.2	cole crops, strawberries
	0.1	watermelons, tomatoes, lettuce, cucumbers, raw cereals
	*0.05	root vegetables
Phosphine	0.1	raw cereals
	0.01	flour and other milled cereal products, breakfast cereals, dried fruit, dried vegetables, all other dried foods, spices, nuts, peanuts, cocoa beans
Picloram	1	water
	0.2	raw cereals
Piperonyl butoxide	20	raw cereals
	8	fruit, vegetables, nuts, oil seeds, dried fruit, dried vegetables
Pirimicarb	1	vegetables — 2D
	0.5	fruits, hops — 2D
Pirimiphos-ethyl	*0.02	bananas
Pirimiphos-methyl	P20	bran
	P10	wheat, rye, rice (in husk)
	P7	barley, maize and oats
	P5	wholemeal flour (wheat, rye)
	P2	rice (hulled), wheat flour (white)
	P1	bread (wholemeal), rice (polished)
	P0.5	bread (white)
	*P0.05	meat, poultry, milk, eggs
Poloxalene	P2	meat — 3D
	*P0.5	milk
Promacyl	P4	milk and milk products
	P2	fat of meat of cattle — 24H
	P0.5	meat of cattle — 24H
Promecarb	1	citrus — 2W
	0.5	stone fruits — 2W, beans, onions and cucurbits — 4W
	0.2	grapes (woolly bud stage use)
Prometryn	*0.1	cottonseed, raw cereals, vegetables
Propachlor	P2.5	onions
	P0.6	cole crops
	*0.05	beetroot, raw cereals
Propargite	3	apples, bananas, cottonseed, hops, pears, stone fruits, vegetables — 7D, passionfruit — 7D
Propazine	*0.1	vegetables, lupins
Propham	50	potatoes
Propoxur	10	potatoes
Propyzamide	1	lettuce
Prynachlor	0.1	onions (pre-emergence use)
Pyrazon	*0.05	beetroot
Pyrazophos	0.2	cucurbits — 1D
+Pyrethrins	3	raw cereals
	1	fruit, vegetables, nuts, oil seeds, dried fruit, dried vegetables
Quintozene	10	mushrooms
	1	bananas (whole)
	0.3	lettuce, peanuts
	0.2	beans (navy), potatoes
	0.1	tomatoes
	0.03	cotton seed
	0.02	broccoli, cabbage
	0.01	beans and peppers, bananas (pulp)
+Rafoxanide	0.2	liver, kidney and fat of sheep and cattle — 4W
	0.1	meat of sheep and cattle — 4W
+Robenidene	2	meat of poultry
Schradan	0.1	fruits, raw cereals, vegetables
Simazine	*0.1	asparagus, fruits, nuts
Sodium fluoroacetate	Nil	all foods
Sodium pentachlorophenate	*0.01	citrus, grapes, potatoes, pineapples.
Sulfallate	*0.02	raw cereals, vegetables
Sulphadimidine	*0.01	meat of pigs — 7D
2, 4, 5-T	0.02	water
+Tartar emetic	1.5 (as Sb)	fruits, tomatoes
Temephos	P2	fat of meat of cattle — 10D
	*P0.01	rice
TEPP	*0.002	all foods
Terbacil	*0.04	pome fruit, stone fruit
Terbuthylazine	*0.1	peas — 4W, potatoes, beans

Substance	Maximum residue limits (mg/kg)	Food
Terbutryn	*0.1	wheat, barley, peas, potatoes, beans
2-(p-Tert-butoxyphenoxy) isopropyl-2-chloroethyl sulphite	*0.01	all foods
Tetrachlorvinphos	2	leafy vegetables
Tetradifen	5	cottonseed, hops, fruits, vegetables
Thiabendazole	10	apples and pears (post harvest), citrus fruit
	3	bananas (whole fruit)
	0.4	bananas (pulp)
	0.2	meat
	0.05	milk
Thiometon	1	fruits, raw cereals, vegetables
Thiophanate	0.2	meat of cattle and sheep — 2W
	*0.1	milk and goat milk
Thiophanate-methyl	10	stone fruit (post harvest) citrus fruit (post harvest)
	P10	rockmelons
	5	pome fruit (post harvest)
	2	berry vegetables
	P1	bananas (post harvest), grapes — 7D, peanuts — 2W
Thiram	7	fruits, vegetables
Tri-allate	*0.05	raw cereals
Tributyl phospho-rotrithiolate	*0.1	cottonseed
Trichloroethylene	*0.1	raw cereals
Trichlorfon	2	fruits, dried fruits, vegetables
	0.2	raw cereals, grain legumes
	0.1	oil seeds, meat, fat and offal of cattle and pigs, nuts, soya beans, peanuts
	0.05	milk, sugar beet
	*0.05	sugar cane
Trifluralin	0.5	carrots (pre-emergence use)
	*0.05	all other vegetables, raw cereals, oil seeds, sugar cane (pre-emergence use)
+Triforine	P10	stone fruit
+Vernolate	*0.1	soya beans, peanuts
Zineb	7	fruits, hops, vegetables
Ziram	7	fruits, vegetables

Appendix I

Where a combination of compounds in a specified group is present, the sum of the fractions obtained by dividing the quantity of compound present by the maximum quantity of each substance permitted to be present if used alone, shall not exceed unity.

Group A
Aldrin
Chlordane
Chlordecone
Dieldrin
Endosulfan
Endrin
Heptachlor
Isobenzan

Group B
BHC and its isomers
DDT (including DDD & DDE)
1, 1-Dichloro-2, 2-bis (p-ethyl-phenyl) ethane
Dicofol
Lindane
Methoxychlor
Quintozene

Group C
Camphechlor
Chlorinated terpene isomers

Group D
Azinphos-ethyl
Azinphos-methyl
Bromophos-ethyl
Carbophenothion
Chlorfenvinphos
Chlorpyriphos
Coumaphos
Crotoxyphos
Demeton
Diazinon
Dichlorvos
Dimethoate
Dioxathion
Disulfoton
Dithianon
Ethion
Ethoprophos
Famphur
Fenamiphos
Fenchlorphos
Fenitrothion
Fenthion
Fensulfothion
Formetanate
Formothion
Isocarbophos
Leptophos
Maldison
Menazon
Methamidophos
Methidathion
Mevinphos
Monocrotophos
Naled
Napthalophos
Omethoate
Parathion
Parathion-methyl
Phenkapton
Phorate
Phosalone
Phosmet
Phosphamidon
Pirimiphos-ethyl
Pirimiphos-methyl
Pyrazophos
Schradan
Temephos
Tetrachlorvinphos
Thiometon
Tributylphosphorotrithioate
Trichlorfon

Group E
1, 2-bis (Dimethyldithiocarbamoyl-dithio (thiocarbonyl) amino) ethylene
Ferbam
Mancozeb
Maneb
Metiram
Thiram
Zineb
Ziram

Group F
4-CPA
2, 4-D
MCPA
MCPB
Picloram

Group G
Aminocarb
Butacarb
Carbaryl
Methomyl
Promacyl
Promecarb
Propham
Propoxur

Group H
Chloroxuron
Diuron
Fluometuron
Linuron
Methabenzthiazuron
Metobromuron
Metoxuron
Monuron
Noruron

Group I
Cambendazole
Parbendazole
Thiabendazole

Group J
Benomyl
Carbendazim
Thiophanate
Thiophanate-methyl

Group K
Dinoseb
DNOC

Group L
Ametryn
Atrazine
Aziprotryne
Cyanazine
Desmetryn
Metribuzin
Prometryn
Propazine
Simazine
Terbuthylazine
Terbutryn

Group M
Alachlor
Butachlor
Fluchloralin
Propachlor
Prynachlor

Group N
Chlormequat
Diquat
Paraquat

Group O
Captafol
Captan

Group P
Carbon tetrachloride
1, 2-Dibromo-3-chloropropane
Ethylene dibromide
Ethylene dichloride
Methyl bromide
Trichloroethylene

Group Q
Cyhexatin
Fenbutatin-oxide

Appendix 2

Substances which are exempted from the requirements of a maximum residue limit

Part I

Substances which are deemed unlikely to produce residues in food when used in accordance with good agricultural practice and when used as directed, however any residues which may result from such use are not regarded as a hazard to human health.

Acrolein	— aquatic weed control
Alachlor	— herbicide on lupins, rape
Aldrin	— timber treatment
Allyl Alcohol	— pre-planting treatment of vegetable seed beds
Alum	— molluscicide or mollusc repellant
Aluminium silicates	— insect desiccant for stored seeds
Ametryn	— herbicide on pastures
Amitrole	— herbicide on pastures
Ammonia	— treatment of citrus fruit
Ammonium thiocyanate	— herbicide on pastures, orchards, plantations of pineapples, bananas, sugar cane and paw-paws, preplanting soil treatment for cereal crops
AMS	— herbicide on pastures
Anthraquinone	— seed dressing
Asulam	— herbicide on apple orchards, hop fields and pastures
Atrazine	— herbicide on pastures
Azinphos-ethyl	— insecticide on pastures
Azinphos-methyl	— insecticide on pastures
Benomyl	— treatment of seed barley, seed oats and seed wheat — fungicide on clover
Benquinox	— seed dressing
Bromacil	— herbicide on pastures
Bromoxynil octanoate	— herbicide on lucerne and pastures
Calcium polysulphides	— fungicide, miticide, dormant spray
Captan	— treatment of seed rice and vegetable seeds
Carbaryl	— insecticide on lucerne, pastures
Carbendazim	— fungicide on sugar cane sets, clover, treatment of ginger sets
Carbetamide	— herbicide on lucerne
Carbophenothion	— insecticide on pastures
Chlordane	— timber treatment
Chlorfenac	— herbicide on pastures
Chlorfenvinphos	— insecticide on pastures
Chlorflurenol	— growth regulator on pineapples
Chlorpropham	— herbicide on lucerne, orchards
Chlorpyrifos	— insecticide on pastures and forage crops
Cloprostenol	— induction of oestrus in cattle
Creosote	— timber treatment, treatment for tree trunks and poultry houses
Cresylic acid	— dormant spray, timber treatment, treatment for tree trunks and poultry houses
Cyanatryn	— aquatic herbicide in drainage ditches
2, 4-D	— herbicide on pastures
Dazomet	— soil fumigant
2, 4-DB	— herbicide on pastures

D.D.T.	— insecticide in linseed, treatment of seed rice
Demeton (including demeton-O, demeton-S, demeton-O-methyl, demeton-S-methyl and oxydemeton-S-methyl)	— insecticide on pastures
Derris	— insecticide, sheep dip
Desmetryn	— herbicide on pastures, forage crops
Dexamethasone	— advancing paturition in cows
Diazinon	— insecticide on pastures, forage crops
Dicamba	— herbicide on pastures
p-Dichlorobenzene	— insecticide on fruit trees
Dichloro-diethyl ether	— wood preservative
1, 2-Dichloropropane	— soil fumigant
Dieldrin	— timber treatment
Dimethoate	— insecticide on pastures, forage crops, lucerne
Dinoprost	— induction of oestrus in cattle
Diquat	— herbicide on pastures
DNOC	— dormant spray on fruit trees
2, 2-DPA	— herbicide on pastures
Endosulfan	— insecticide on pastures, forage crops
EPTC	— herbicide on lucerne
Ethylene	— ripening of fruit
Ethylene dibromide	— soil fumigant
Fenaminosulf	— treatment of seed wheat
Fenitrothion	— insecticide on pastures
Fenoprop	— herbicide on pastures
Fenthion	— insecticide on pastures
Fenuron	— herbicide on pastures
Ferrous sulphate	— trace element, herbicide
Formalin	— soil fumigant, foot rot treatment
Formic acid	— treatment of silage
Formothion	— insecticide on pastures
Gibberellic acid	— treatment of pastures
Glyphosate	— herbicide on pastures
Heptachlor	— timber treatment
Hexaflurate	— herbicide on pastures
8-Hydroxyquinoline	— treatment of cuttings and grafts
Indol-3-yl butyric acid	— treatment of cuttings
Iron galactan	— anaemia in piglets
+Lime sulphur	— fungicide, insecticide
Lindane	— locust control on pastures
Lysol	— disinfectant
Maldison	— insecticide on pastures
Mancozeb	— treatment of seed barley, seed wheat, seed oats
MCPA	— herbicide on pastures
MCPB	— herbicide on pastures
Menazon	— insecticide on pastures, forage crops
Methidathion	— insecticide on pastures, forage crops
Methiocarb	— in bait for the control of slugs and snails
Methomyl	— insecticide on forage crops
Methyl isothiocyanate	— soil fumigant
Metribuzin	— herbicide on forage crops
Mevinphos	— insecticide on lucerne
Mineral oil	— insecticide
Monocrotophos	— insecticide on pastures and forage crops for the control of spur throated locusts
Monuron	— herbicide on pastures
Naled	— insecticide on pastures, forage crops, cereal crops and sugar cane for locust control
Nitralin	— herbicide on legume seed crops
Omethoate	— insecticide on pastures, forage crops
Paraquat	— herbicide on pastures
Parathion	— insecticide on pastures
Parathion-methyl	— insecticide on pastures
Phenmedipham	— herbicide on fodder beet
Phorate	— insecticide on pastures
Phosmet	— insecticide on pastures
Potassium cyanate	— herbicide on onions
Propazine	— herbicide on lupins
Propham	— herbicide on pastures and legume seed crops
Propionic acid	— fungistat on stored grain for animal use
Quassia infusion	— insecticide
Rotenone	— insecticide, sheep dip
Secbumeton	— herbicide on lucerne
Simazine	— herbicide on pastures, lupins
Sodium carbonate	— scale treatment
Sodium chlorate	— herbicide on pastures
Sodium trichloroacetate	— herbicide on pastures
Spectinomycin	— treatment of CRD in broilers
Sulphur	— fungicide, insecticide, miticide, soil conditioner
2, 4, 5-T	— herbicide on pastures
+tar acids	— dormant spray, timber and tree trunk treatment
+tar distillates	— dormant spray, timber and tree trunk treatment
+tar oils	— dormant spray, timber and tree trunk treatment
Thiabendazole	— treatment on seed wheat, seed barley seed oats
Thiophanate-methyl	— ginger sets
Trichlorfon	— insecticide on pastures and forage crops
Trifluralin	— herbicide on lupins, clover, medics.

Part II

Any residues of the following compounds which may result from their use in pesticide and agricultural chemical formulations are not regarded as a hazard. On this basis the compounds are exempted from the requirements of a maximum residue limit when used for the purpose and within the limits stated below.

Those which are used in formulations for both raw agricultural commodities after harvest and on growing crops are indicated by A. Those used for growing crops only are indicated by B.

Inert ingredients	*Limits*	*Uses*
Acetic acid	A	Catalyst
Acetic anhydride	A	Solvent
Acetone	A	Solvent
Acetonitrile	B	Solvent for blended emulsifiers in formulations used before crop emerges from soil
Aliphatic hydrocarbon petroleum fractions	A	Solvent
alpha-Alkyl (C12-C15) *omega*-hydroxypoly (oxyethylene) sulfosuccinate, isopropylamine and N-hydroxyethyl isopropylamine salts of; the poly (oxyethylene) Content av. 3-12 moles	B Not more than 0.2% in the final solutions	Emulsifiers in pesticide concentrates applied with liquid fertilizer solutions before crop emerges from soil or not later than 4 weeks after planting
Aluminium 2-ethyl-hexanoate	A Not more than 0.25% of pesticide formulation	Gelling Agent
Aluminium stearate	B	
Ammonium bicarbonate	A	Surfactant, suspending agent, dispersing agent
Ammonium carbamate	A	Synergist in aluminium phosphide formulations
Ammonium chloride	A	Intensifier when used with ammonium nitrate as desiccant or defoliant
Ammonium hydroxide	A	Solvent, neutralizer, solubilizing agent
Ammonium stearate	A	Surfactant
Ammonium sulphate	A	Solid diluent, carrier
Ammonium thiosulphate	A	Intensifier when used with ammonium nitrate as desiccant or defoliant
Amyl acetate	A	Solvent, attractant
Animal glue	A	Surfactant, adhesive
Apple pomace	A	Solid diluent, carrier
Attapulgite-type clay	A	Solid diluent, carrier, thickener
Bentonite	B	Solid diluent, carrier
Benzene	B	Solvent
Benzoic acid	A	Preservative for formulation
Boric acid	B	Sequestrant
2-Butoxyethanol	B	Solvent
Butoxytriethylene-glycol phosphate	A	Surfactant for arsenical herbicide formulations only
n-Butyl alcohol	A	Solvent
Butyl glycidyl ether	A	Stabilizer for formulations
Butyl stearate	B	Defoamer
gamma-Butyrolactone	B	Solvent
Calcareous shale	A	Solid diluent, carrier
Calcite	A	Solid diluent, carrier
Calcium carbonate	A	Solid diluent, carrier
Calcium citrate	A	Solid diluent, carrier
Calcium hydroxide	A	Solid diluent, carrier
Calcium oxide	A	Solid diluent, carrier
Calcium phosphate	A	Solid diluent, carrier
Calcium silicate	A	Solid diluent, carrier
Calcium stearate	A	Solid diluent, carrier
Casein	A	Surfactant, emulsifier, wetting agent
alpha-Cellulose	A	Solid diluent, carrier
Cetyl alcohol	A	Diluent
Cetylpyridinium bromide	A	Surfactant
Cetyl trimethyl ammonium bromide	A	Surfactant
Chloroform	B	Solvent
Citric acid	A	Sequestrant
Citrus meal	A	Solid diluent, carrier
Cocoa shells	A	Solid diluent, carrier

Inert ingredients	*Limits*	*Uses*
Coconut oil	A	Surfactant, emulsifier wetting agent
Cod liver oil	A	Solvent
Coffee grounds	A	Solid diluent, carrier
Corn	B	Attractant
Corn cobs	A	Solid diluent, carrier
Corn meal	A	Solid diluent, carrier
Corn oil	A	Solvent
Cornstarch	A	Solid diluent, carrier
Cottonseed oil	A	Safener
Cyclohexane	B	Solvent
Cyclohexanol	A	Solvent
Cyclohexanone	B	Solvent
n-Decyl alcohol	B	Solvent
Dextrin	A	Surfactant, suspending agent, dispersing agent
Dextrose	A	Solid diluent, carrier
Diacetone alcohol	B	Deactivator, solvent for formulations used before crop emerges from soil
Dialkyl (C8-C18) dimethyl ammonium chloride	A Not more than 0.2% silica, hydrated silica	Flocculating agent in the manufacture of silica, for use as a solid diluent carrier
Diatomite (diatomaceous earth)	A	Solid diluent, carrier
Dichloro-difluoromethane	A	Propellant
Dichloro-tetrafluoroethane	A	Propellant
Diethanolamine	B	Stabilizer inhibitor for formulations used before crop emerges from soil
Diethylene glycol	B	Deactivator for formulations used before crop emerges from soil
3,6-Dimethyl-4-octyne-3,6 -diol	A Not more than 2.5% of pesticide formulation	Surfactants, related adjuvants of surfactants
Dimethylpolysiloxane	A	Defoaming agent
Dipotassium hydrogen phosphate	B	Buffering agent
Dipropylene glycol	A	Solvent
Disodium phosphate	A	Anticaking agent, conditioning agent
Dodecylphenol	A Not more than 0.6% of pesticide formulation	Coupling agent in emulsifiers
Dolomite	A	Solid diluent, carrier
Epichlorohydrin	A Not more than 4% pesticide formulation	Stabilizer for formulations
Epoxidised linseed oil	A	Surfactant and adjuvant
Epoxidised soybean oil	A	Surfactant and adjuvant
Ethanol	B	Solvent
Ethyl acetate	A	Solvent
Ethylenediamine-tetraacetic acid	A Not more than 3% of pesticide formulation	Sequestrant
Ethylenediamine - tetracetic acid, disodium salt	B Not more than 5% of pesticide formulation	Sequestrant
Ethylenediamine-tetraacetic acid, tetrasodium salt	A Not more than 5% of pesticide formulation	Sequestrant
Ethylene dichloride	A	Solvent
Ethylene glycol	B	Antifreeze, deactivator for formulations used before crop emerges from soil
Ethylene glycol monobutyl ether	A	Solvent
Ethylene glycol monomethyl ether	B	Solvent for formulations used before crop emerges from soil
2-Ethylhexanol	B	Cosolvent, defoamer, solvent formulations used before crop emerges from soil
Ethyl methacrylate	A	
Fatty acid ethylene oxide condensates	A	Surfactants
Ferric sulphate	A	Solid diluent, carrier
Fish meal	A	Solid diluent, carrier
Fish oil	A	Solvent, cosolvent

Inert ingredients	*Limits*	*Uses*
Formaldehyde	B Not more than 1% of pesticide formulation	Preservative for formulation
Furfural by-product (a granular steam-acid sterilised lignocellulosic residium)	B	Solid diluent, carrier
Fumaric acid	B	Acidulant
Gluconic acid (and sodium salt)	B	Sequestrant
Glycerol	A	Solvent
Glycerol-mono, di and trioleates	A	Surfactants, emulsifiers
Granite	A	Solid diluent, carrier
Guargum	A	
Gum arabic (acacia)	A	Surfactant, suspending agent, dispersing agent
Gypsum	A	Solid diluent, carrier
Hexamethylene tetramine	B	Stabilizer for carriers in solid pesticide formulations
Hexane (including isomeric hexanes)	B	Solvent
n-Hexyl alcohol	B	Solvent
Hydrocarbons, light odourless	A	Solvent, diluent
Hydrochloric acid	A	Solvent, neutralizer
alpha-Hydro-omega-hydroxypoly (oxy-propylene) (mol. wt. 2000)	B	Component of defoamers
Hydroxypropyl cellulose	B	Thickener
Hydroxypropyl methyl-cellulose	A	Thickener
Iron oxide	A	Solid diluent, carrier
Isoamyl acetate	B Not more than 0.5% of pesticide formulation	Odour-masking agent
Isobornyl acetate	B	Solvent
Isoparaffinic hydrocarbons	A	Solvent, diluent
Isopropyl alcohol	B	Solvent, stabilizer, inhibitor
Kaolinite-type clay	A	Solid diluent, carrier
Lard	A	

Inert ingredients	*Limits*	*Uses*
(3- Lauramidopropyl) trimethyl ammonium methyl sulphate	B Not more than 26% in the formulation	Antistatic agent. Not to be applied within 7 days before harvest
Lauryl alcohol	A	Surfactant
Liquorice root	A	
Lithium hydroxide	B	
Locust bean gum	B	Component of defoamers
Magnesium carbonate	A	Anticaking agent, conditioning agent
Magnesium chloride	A	Safener
Magnesium lime	A	Solid diluent, carrier
Magnesium silicate	A	Solid diluent, carrier
Magnesium stearate	A	Surfactant
Magnesium sulphate	A	Solid diluent, carrier
Maleic acid and maleic anhydride	A For pesticide formulations applied to apples with a minimum pre-harvest interval of 21 days	Stabilizer
Maleic anhydride diisobutylene copolymer, sodium salt	B Not more than 3% of formulation	Suspending agent, dispersing agent
Mesityl oxide	B	Solvent for formulations used before crop emerges from soil
Methyl alcohol	B	Solvent
Methyl cellulose	A	Thickener
Methyl chloride	B	Propellant
Methylene blue	B	Dye for formulations used on cotton
Methylene chloride	A	Solvent
Methyl ester of rosin, partially hydrogenated	A	Surfactants, related adjuvants of surfactants
Methyl esters of higher fatty acids	A	Antidusting agent
Methyl ethyl ketone	B	Solvent
Methyl p-hydroxy-benzoate	B	Preservative for formulations
Methyl isoamyl ketone	B	Solvent
Methyl isobutyl ketone	B	Solvent
Methyl oleate	B	Surfactant

Inert ingredients	*Limits*	*Uses*
2-Methyl-2, 4-pentanediol	B	Solvent for formulations used before crop emerges from soil
Methyl violet 2B	B Not more than 0.1% of pesticide formulation	Dye for formulations used before crop emerges from soil
Mica	A	Solid diluent, carrier
Molasses	A	Attractant
Montmorillonite-type clay	A	Solid diluent, carrier
alpha-(p-Nonylphenyl)-*omega*-hydroxypoly (oxyethylene) sulfosuccinate, isopropylamine and N-hydroxyethyl isopropylamine salts of; poly (oxyethylene) content av. 4 moles	B Not more than 0.2% in final solution	Emulsifiers in pesticide concentrates applied with liquid fertiliser solution before crop emerges from soil or not later than 4 weeks after planting
Oatmeal	A	Solid diluent, carrier
Oats	A	Solid diluent, carrier
n-Octyl alcohol	B	Solvent
Olefinic alcohols condensed with ethylene oxide	A	Surfactants, dispersants
Olefinic hydrocarbon petroleum fractions	B	Solvents
Oleic acid	A	Diluent, emulsifier
Oleoyl-omega-(oleoyloxy) poly (oxyethylene) derived from -hydro-omega-hydroxypoly (oxyethylene) (mol. wt. 600)	B	Component of defoamers
Orange pomace	A	Solid diluent, carrier
Palmitic acid	A	Diluent
Paraformaldehyde	B Not more than 1% pesticide formulation as formaldehyde	Preservative for formulation
Peanut shells	A	Solid diluent, carrier
Phenol	A	Solvent
Phenyl glycidyl ether	A	Stabilizer for formulations
Phosphoric acid	A	Buffer
Phosphorus oxychloride	A	Catalyst
beta-Pinene polymers	B	Surfactants, related adjuvants of surfactants
Polyethylene glycols	A	Thickeners
Polyethylene, oxidised	B	Surfactants, related adjuvants of surfactants
Polymerized sodium methacrylate	A	pH control
Poly (oxypropylene) block polymer with poly (oxyethylene); molecular weight 1800-9000	A	Surfactant, related adjuvants of surfactants
Polypropylene glycols	A	Thickeners
Polyvinyl acetate	B	Adhesive
Polyvinyl alcohol	A Not more than 17% of pesticide of formulation	Binder; water soluble bag-container or film tape for encapsulating seeds
Poly (vinylpyrrolidone); mol. weight 40,000 or over	A	Surfactant, related adjuvants of surfactants
Potassium aluminium silicate	A	Solid diluent carrier
Potassium carbonate	A	Neutralizer
Potassium chloride	A	Solid diluent, carrier
Potassium dihydrogen phosphate	B	Buffering agent
Potassium hydroxide	A	Neutralizer
Potassium phosphate	A	Buffer
n-Propanol	B	Solvent for blended emulsifiers
Propionic acid	A	Catalyst
Propylene glycol	A	Cosolvent
Propylene glycol alginate	A	Defoaming agent
Propyl p-hydroxy-benzoate	B	Preservative for formulations
Propylene dichloride	B	Solvent for formulations used before crop emerges from soil
Propylene oxide	B Not more than 0.2% of pesticide formulation	Stabilizer
Prophyllite	A	Solid diluent, carrier
Pyridine bases 95/180	B Not more than 1% m/v of herbicide formulation	Odorant in liquid paraquat formulation

Inert ingredients	*Limits*	*Uses*
Rice bran	A	Solid diluent, carrier
Rock phosphate (low fluoride)	A	Phosphate source, diluent
Rosin, dark wood	B	Surfactants, related adjuvants of surfactants
Rosin, gum	B	Surfactants, related adjuvants of surfactants
Rosin, partially dimerised	A	Surfactant, related adjuvants of surfactants
Rosin, tall oil	B	Surfactant, related adjuvants of surfactants
Sand	A	Solid diluent, carrier
Silica, hydrated silica	A	Solid diluent, carrier
Soap (sodium or potassium salts of fatty acids)	A	Surfactant, emulsifier wetting agent
Soap bark (quillaja)	A	Dispersing agent, wetting agent
Sodium acetate	A	Buffer
Sodium acid pyrophosphate	A	Surfactant, suspending agent, dispersing agent, buffer
Sodium aluminium silicate	A	Solid diluent carrier
Sodium benzoate	A	Anticaking agent
Sodium bicarbonate	A	Neutraliser
Sodium carboxymethyl-cellulose	A	Surfactants, related adjuvants of surfactants
Sodium chloride	A	Solid diluent, carrier
Sodium dihydrogen phosphate	B	Buffering agent
Sodium hexametaphosphate	A	Surfactant, emulsifier, wetting agent, suspending agent, dispersing agent, buffer
Sodium hydroxide	A	Neutralizer
Sodium metaborate	B	Sequestrant
Sodium metasilicate	B	
Sodium nitrate	B	Solid diluent
Sodium nitrite	B Not more than 3% of pesticide formulation	Stabilizer, inhibitor
Sodium propionate	A	Prevervative for formulation
Sodium sesquicarbonate	B	
Sodium silicate	A	Surfactant, emulsifier, wetting agent, stabilizer, inhibitor
Sodium sulphate	A	Solid diluent, carrier
Sodium tripolyphosphate	A	Buffer, surfactant, suspending agent, dispersing agent
Sorbic acid (and potassium salt)	B	Preservative for formulations
Sorbitol	A	Antidusting agent
Soybean Flour	A	Surfactant
Soybean oil	A	Solvent
Starch (potato and tapioca)	A	Solid diluent, carrier
Stearic acid	A	Diluent
Sucrose	A	Solid diluent, carrier, safener
Sulfo-succinic acid, ester with N-(2-hydroxypropyl) oleamide, ammonia and isopropylamine salts of	B Not more than 0.2% in final solution	Emulsifiers in pesticide concentrates applied with liquid fertiliser solution before crop emerges from soil or not later than 4 weeks after planting
Superphosphate	B	Diluent
Surfactants — anionic and nonionic N.E.S.	A	Surfactant
Talc	A	Solid diluent, carrier
Tannin	B	Dispersing agent
Tetradecylpyridinium bromide	A	Surfactant
N, N, N', N'-Tetrakis-(2-hydroxypropyl) ethylene-diamine	B	Stabilizer for formulation used before crop emerges from soil
2, 4, 7, 9-Tetramethyl-5 decyne-4, 7-diol	A Not more than 25% of pesticide formulation	Surfactants, related adjuvants of surfactants
Tetrasodium pyrophosphate	A	Anticaking agent, conditioning agent
Toluene	B	Solvent
Tricalcium phosphate	A	Surfactant, suspending agent, anticaking agent, conditioning agent
1, 1, 1-Trichloroethane	A	Solvent
Trichloroethylene	A	Solvent
Trichlorofluoro-methane	A	Propellant
Triethanolamine	B	Stabilizer, inhibitor for formulations used before crop emerges from soil
Triethylene glycol	B	Deactivator
Triethyl phosphate	B	Stabilizer for formulation used before crop emerges from soil

Inert ingredients	*Limits*	*Uses*
Trisodium phosphate	A	Surfactant, emulsifier, wetting agent
Tri-*tert*-butylphenol polyglycol ether (molecular wt. 746)	B	Surfactant for formulations used before crop emerges from the soil
Urea	A	Stabilizer, inhibitor
Vermiculite	A	Solid diluent, carrier
Vinyl chloride-vinyl acetate copolymers	B Not more than 2% of pesticide formulation	Inert binding agent for formulations applied only to soil
Walnut shells	A	Solid diluent, carrier
Wheat	B	Attractant
Wheat bran	A	Solid diluent, carrier
Wheat flour	B	Attractant
Xantham gum	A	Thickener
Xylene	A	Solvent

Appendix 3

DEFINITIONS

Residue means the residues of a pesticide, veterinary medicine or feed additive from known or unknown sources in or on a food or other agricultural product including any food given to animals which produce food for consumption by man, together with all its derivatives and metabolites which are of toxicological significance in or on plants and animals.

Pesticide means any substance or agent which is used or intended for use to destroy or control any form of unwanted plant or animal life.

It does not include plant nutrients such as fertilizers, or agents such as veterinary medicines and feed additives administered to food producing animals.

It includes products used for destroying any pest which may destroy, damage or retard any form of plant or animal life, before or after harvesting and at any stage during the production, storage, transport, marketing or processing of food, animal feeding stuffs and other agricultural products; for attracting, repelling, sterilising, stupefying, inhibiting the feeding of or otherwise controlling the activity of any harmful plant or animal life: acting as defoliant, desiccant, fruit thinning agent or agent preventing premature fall of fruit.

Veterinary medicine means:

(i) Any substance or agent used or intended for use to destroy or control any parasites, disease or conditions of farm animals including poultry;

(ii) Preparations which purport to cure, alleviate or diagnose disease or injury of stock or improve the capacity of stock for progeny production or work.

Feed additive means any substance or agent added to the basic feed mix for continuous long-term administration to livestock for specific purposes: for example enhancing production or maintenance of health above the levels obtained from the basic feed, improvement or storage qualities and/or the palatability of the basic feed mix.

Appendix 4

Raw cereals
Barley
Maize
Millet
Oats
Rice
Rye
Sorghum
Wheat

Oil seeds
Cotton
Linseed
Rape
Safflower
Sunflower

Seed and pod vegetables
Green beans
Sugar peas
Garden peas
Broad beans
Soya beans
Dried bean seeds
Dried pea seeds
Lentils

Alliums
Onions
Garlic
Shallots
Leeks
Chives

Cole crops
Broccoli
Brussel sprouts
Cabbages
Cauliflowers
Kale
Kohlrabi

Stalk vegetables
Celery
Rhubarb
Bamboo shoots
Asparagus
Fennel

Root vegetables
Beetroot
Carrots
Celeriac
Chicory root
Artichokes
Parsnips
Potatoes
Sweet Potatoes
Radishes
Salsify
Scorzonera
Swede turnips
Turnips
Horseradish

Cucurbits
Cucumbers
Marrows
Melons
Pumpkins
Squash
Chokos

Berry vegetables
Capsicums
Eggplant
Okra
Tomatoes
Cape gooseberry

Leafy vegetables
Lettuces
Endive

Cress
Spinach
Swiss chard
Turnip tops
Chinese cabbage
Cole crops

Nuts
Almonds
Brazil
Cashew
Chestnuts
Hazel
Litchi
Macadamia
Pecan
Pistachio
Walnuts

Berry fruits
Blackberries
Boysenberries
Currants
Gooseberries
Loganberries
Raspberries
Strawberries
Elderberries
Rosehips
Vaccinium berries
Mulberries

Pome fruits
Apples
Crabapples
Loquats
Medlars
Pears
Pomegranite
Quinces

Citrus fruits
Citrons
Grapefruits
Kumquats
Limes
Mandarins
Oranges
Pomeloes
Tangeloes
Tangors

Meat
Cattle
Buffaloes
Goats
Pigs
Sheep

Poultry
Domestic fowls
Ducks
Geese
Turkeys
Guinea fowls
Quail
Pheasants
Pigeons

Fish
Freshwaterfish
Seafish
Shellfish
Crustaceans

Fruit
Berryfruits
Pome fruits
Citrus fruits
Stone fruits
Grapes
Bananas
Pineapples
Pawpaws
Passionfruit
Avocados
Custard apples
Monstera
Mangoes
Figs
Guavas
Persimmons

Stone fruits
Apricots
Cherries
Nectarines
Peaches
Plums

Vegetables
Seed and pod vegetables
Alliums
Stalk vegetables
Root vegetables
Cucurbits
Berry vegetables
Leafy vegetables

NOTE: Many plant commodities cannot be grouped together or included with other commodities owing to wide variations in ecology and pesticidal protection required. Commodities not specifically listed in the above groups should be listed individually in respect of maximum residue limits.

Appendix VIII — Amendments to Recommendations on Immunisation with Rubella Virus Vaccines

Introduction — second paragraph, line 4 — delete 'practicable' and insert 'justifiable'

second paragraph, point (i) becomes point (iii) point (ii) becomes point (i) and point (iii) becomes point (ii)

Recommendations for Vaccine Use — delete second and third paragraphs and replace with:

'Between the ages 10 and 12 years the risk of pregnancy in minimal, and during the 13th and 14th years is low. Unless there is reason to believe that girls in the latter age group might be pregnant, girls aged between 10 and 14 (inclusive) should be vaccinated as a routine procedure — preferably in the earlier years.

For those in the older age groups and particularly married women, precautions are considered necessary to establish conclusively the absence of pregnancy.

The recommendations for immunisation may be summarised as follows:

(a) routine immunisation of girls in the last year of primary school or first year of high school; administration of rubella vaccine in mass immunisation campaigns should not be carried out in younger than 10 or those who have attained the age of 15 years.

(i) vaccine virus does pass placental barrier and therefore only women who are known not to be pregnant should be vaccinated.

(ii) It is desirable but not essential to screen all pregnant women for rubella antibodies. However immunisation should be offered in the immediate post partum period in women where the immune states is unknown or has been proven unsatisfactory by serological testing.

(iii) for those who are not pregnant, vaccination might be best performed during normal menstruation.

(iv) all woman of child-bearing age and at risk of pregnancy who are vaccinated against rubella should be advised that they must avoid pregnancy for at least two months following vaccination.

Appendix IX — Recommendations on immunisation with rubella virus vaccines

Introduction

Rubella virus vaccine is prepared from the live attenuated virus and is a highly effective immunising agent. Rubella is generally regarded as a mild illness causing minimal constitutional upset, nevertheless, if acquired by a woman during the early months of pregnancy, there is a high risk of damage to the foetus. The clinical stigmata of congenital rebella which have been observed in newborns following maternal rubella during pregnancy have included cataract, glaucoma, retinopathy, deafness, congenital heart diseases and brain damage. Whilst some of these defects may be apparent at birth others may not be recognised for several years.

The principal value of this vaccine is not that its use may eliminate the disease from the community but that adequate immunity in girls and women may be established so that they may be relieved of the risk of infection during pregnancy. The National Health and Medical Research Council does not at the present time consider it justifiable to direct immunisation campaigns at the elimination of the disease from the whole community. This decision is based on the following:

(i) the elimination of the disease from the community would not remove the risk of re-importation from other countries and, since rubella is in itself a minor illness, complacency about vaccination might not lead to a highly susceptible population.

(ii) second infections with rubella virus may occur, but there is no evidence that on such occasions there is risk to the foetus.

(iii) the disease is unimportant in males.

Recommendations for vaccine use

Bearing in mind that the the aim is to establish adequate immunity in all females during their reproductive years the vaccines recommended for use are those which may be administered to persons over the age of 10 years with the production of minimal side-effects. At present the Cendehill strain is preferred as the incidence of transient arthralgia is low, but other strains will be kept under review.

Between the ages of 10 and 12 years the risk of pregnancy is minimal, and during the 13th and 14th years is low. Unless there is reason to believe that girls in the latter age group might be pregnant, girls aged between 10 and 14 (inclusive) should be vaccinated as a routine procedure — preferably in the earlier years.

For those in the older age groups and particularly married women, precautions are considered necessary to establish conclusively the absence of pregnancy.

The recommendations for immunisation may be summarised as follows:

(a) routine immunisation of girls in the last year of primary school or first year of high school; administration of rubella vaccine in mass immunisation campaigns should not be carried out in girls younger than 10 or those who have attained the age of 15 years.

(b) immunisation by their private practitioners after due consideration of the circumstances, in other females of child-bearing years not previously vaccinated against rubella.

(i) vaccine virus does not pass the placental barrier and therefore only women who are known not to be pregnant should be vaccinated.

(ii) It is desirable but not essential to screen all pregnant women for rubella antibodies. However immunisation should be offered in the immediate post partum period in women where the immune status is unknown or has been proven unsatisfactory by serological testing.

(iii) for those who are not pregnant, vaccination might be best performed during normal menstruation.

(iv) all women of child-bearing age and at risk of pregnancy who are vaccinated against rubella should be advised that they must avoid pregnancy for at least two months following vaccination.

Adverse reactions

Slight swelling of lymph nodes in the region of the head and neck, slight temperature rise and a mild rash have all been experienced. Arthralgia and more rarely arthritis have occurred following administration to adults. These effects have in the vast majority of cases been transient. The reactions generally occur one to four weeks following vaccination. Allergic reactions occurring within 72 hours of administration have been rare. The incidence of side-effects with the Cendehill strain is minimal.

Precautions and contraindications

Administration during pregnancy is strongly contraindicated. Following administration adequate measures must be taken to ensure against conception for at least two menstrual cycles. As with other vaccines administration is contraindicated in the presence of acute febrile illnesses or chronic debilitating diseases. In view of the possible potentiation of the attenuated rubella virus infection, immunisation should not be performed on persons suffering from leukaemia, lymphoma or generalised malignancy or when resistance has been lowered by therapy with steroids, alkylating drugs, antimetabolitics or radiation.

Rubella vaccine is produced in cell culture. Care should be exercised in administering vaccine to persons with known sensitivity to the species from which the cells were derived. In the case of Cendehill vaccine sensitivity to rabbits and to neomycin would constitite a contraindication.

In view of the possible interference from persisting material rubella antibodies, administration to infants less than one year old is not advised and indeed may be ineffective.

Simultaneous administration of live rubella virus vaccine and other live virus vaccines.

Until greater knowledge has been acquired it is recommended that rubella vaccination should be separated by at least one month from administration of other live virus vaccines.

Use of vaccine after exposure to natural infection

There is no evidence that the early administration of rubella vaccine after exposure to infection will prevent or modify the subsequent course of the disease. There is however no added contraindication to the administration of vaccine at this time.

Storage and administration

Precautions advised by manufacturers should be strictly observed. These apply particularly to storage temperatures, protection from light and promptness of administration following reconstitution.

Appendix X — Sexually transmitted diseases in Australia — A handbook

Production of the handbook was undertaken because sexually transmitted diseases are among the most common infections occurring throughout the world today. About forty million new cases of syphilis and 200 million cases of gonorrhoea are estimated to occur each year. In addition, many other diseases are transmitted during sexual intercourse or by other close personal contact.

The use of penicillin at first led to a dramatic decline in syphilis and gonorrhoea and then to illusions that these two diseases had at last been conquered, with the result that the widespread complacency engendered resulted in insufficient training in the sexually transmitted diseases being given to medical students, nurses and other paramedical workers.

With the resurgence of gonorrhoea and the apparent increased incidence of non-specific urethritis and genital herpes, it was considered that there was a need for a practical handbook to give a ready understanding of sexually transmitted diseases.

The National Health and Medical Research Council therefore requested its ad hoc Committee on Venereal Diseases to prepare this handbook.

The handbook, *Sexually Transmitted Diseases in Australia,* prepared by the Committee and endorsed by the Council at its Eighty-third Session in April 1977, contains essential and practical information on the common sexually transmitted diseases. Its contents include:

Epidemiology and control
Gonorrhoea
Non-gonococcal genital infections
Syphilis
Serological tests for syphilis
Genital herpes
Genital candidosis
Trichomonosis
Genital warts
Donovanosis
Lymphogranuloma venereum
Chancroid
Sexually related conditions
Sexually acquired injuries
Other conditions
Appendix I: Treatment schedules

Copies of the handbook are available from Australian Government Publishing Service Bookshops in all capital cities.

Appendix XI — Summary of amendments to food standards

Standard for cocoa and chocolate

1. Insert new Clauses 11(d), (e) and (f) to read:

'11(d) Polyglycerol esters of interesterified ricinoleic acid may be added to chocolate, milk chocolate, compounded chocolate, confectioners' chocolate and chocolate coatings in an amount not exceeding 0.4%.

11(e) Chocolate confections may contain spirits, liqueurs or alcohol cordials as such, as set out in Clause 4 sections (a) to (c) of the Standard for Confectionery.

11(f) Chocolate confections may contain spirit, liqueur or alcohol cordial flavourings as set out in Clause 4(c) of the Standard for Confectionery.'

Standard for condensed milks

1. Insert new Clause 1 to read:

'1. UNSWEETENED CONDENSED MILK OR EVAPORATED MILK

Unsweetened condensed milk or evaporated milk is milk which has been condensed by the evaporation of a portion of its water content, and sterilized by heat and shall contain not less than 28% total milk solids. It may contain not more than 100 mg of prescribed carrageenan per kg provided that the presence of prescribed carrageenan is declared in the label'.

2. The amended Standard for Condensed Milks is in Appendix XII of this Report.

Standard for confectionery

1. (a) To Clause 1 add after 'Stearic acid B.P. . . . not exceeding 0.5%' the following: 'Alcohol not exceeding 1% unless specifically provided for in Clause 4 of this Standard'.

(b) In the last sentence of Clause 1 delete words — not more than 1% alcohol.

2. Renumber existing Clause 4 as Clause 5.

3. Insert new Clause 4 to read:

'4. Confectionery containing Spirits, Liqueurs or Alcohol Cordials

(a) Confectionery containing spirits, liqueurs, or alcohol cordials shall contain not less than 2% ethyl alcohol by weight.

(b) Such confectionery shall be labelled to clearly indicate the nature of the product by the use of an appropriate name such as:

'Liqueur Confectionery'
'Liqueur Chocolate'

(c) Such confectionery shall bear a label in which shall be written a statement of the alcohol content in % w/w in bold face sanserif capital letters with a letter height not less than 3 mm in the following form:

'ALCOHOL x% w/w MINIMUM'

(d) Such confectionery may be labelled as liqueur, brandy or similar expression as the case may be, provided the alcoholic type conforms with the definitions for the spirits, liqueurs and alcohol cordials as the case may be set out in the Standard for Spirits and Liqueurs approved by the NH & MRC.

(e) Notwithstanding Section 4(d) in the case of products containing flavourings which include the name of products defined in the Standard for Spirits and Liqueurs such names may be used provided it is clear that the name refers to the flavour and not to the spirits, liqueurs and alcohol cordials as the case may be, as defined in the Standard for Spirits and Liqueurs in a statement such as:

'Rum flavoured confectionery or Brandy flavoured chocolate or chocolate with brandy flavoured centre."

and provided that Section 4(c) is complied with'.

Standard for food additives

1. Delete from Clause 2, Group 1 (Vegetable Gums) 'Irish Moss' and insert:

'Prescribed Carrageenan'

2. Insert in alphabetical sequence under Clause 5, Second Schedule, Part (b) the following:

'Food	*Additive*
Baking tin grease emulsions	Polyglycerol esters of interesterified ricinoleic acid not exceeding 10% of vegetable oil.
Block chocolate	Polyglycerol esters of interesterified ricinoleic acid not exceeding 0.4%.
Fruit and vegetables	Diammonium hydrogen orthophosphate, 2-ethyl-hexyl sodium sulphate and sodium dodecyl benzene sulphonate, the combined residues not exceeding 0.7 mg/kg.'

Standard for labelling

1. Delete existing Clause 5(a)(ii).
2. Insert new Clause 7(i) to read:

"7(i) The label shall include a statement of the name of the country in which the food was made or produced.'

Standard for the specifications of identity and purity of food additives

1. Insert in alphabetical sequence under 'Additives with Standard for Purity Specified in the Food Chemicals Codex' the following:

'Additive	*Page No.*
Diammonium hydrogen orthophosphate	41

2. Delete from 'Additives with Standard for Purity Specified in the Food Chemicals Codex' the following:

'Additive	Page No.
Irish Moss	156'

3. Insert new section following "Additives with Standard for Purity Specified in 'Specifications for Identity and Purity of Food Additives', FAO Volume 2", to read:

'ADDITIVES WITH STANDARD FOR PURITY SPECIFIED IN 'SPECIFICATIONS FOR THE IDENTITY AND PURITY OF SOME FOOD COLOURS, EMULSIFIERS, STABILIZERS, ANTI-CAKING AGENTS AND CERTAIN OTHER SUBSTANCES' (FAO/WHO) FAO NUTRITION MEETINGS REPORT SERIES NO. 46B/1970.

Additive	Page No.
Polyglycerol esters of interesterified ricinoleic acid	55'

4. Insert new section following "Additives with Standard for Purity Specified in 'Specifications for the Identity and Purity of some Enzymes and Certain other Substances' WHO Food Additives Series, No. 2 (1972)" to read:

'ADDITIVES WITH STANDARD FOR PURITY SPECIFIED IN 'SPECIFICATIONS FOR THE IDENTITY AND PURITY OF SOME FOOD COLOURS, FLAVOUR ENHANCERS, THICKENING AGENTS AND CERTAIN OTHER FOOD ADDITIVES' WHO FOOD ADDITIVES SERIES, NO. 7 (1976)

'Additive	Page No.
Carrageenan	113'

Standard for special dietary foods

1. Delete Clause 2(a)(vi) and 2(a)(viii) and renumber existing Clause 2(a)(vii) as 2(a)(vi).
In new Clause 2(a)(vi) amend to read:

'2(a)(vi) a food which provides few kilojoules, or'

2. Clause 3(e) 1st line: Delete words 'energy value' and insert the word 'joule'.

4th line: Delete words 'Calorie' and 'Calories' and replace by words 'Joule' and 'Joules' respectively.

5th line: Delete word 'Calorie' and replace by word 'Joule'.

6th line: Insert after 'Low in Energy' the words 'Low Calorie Food'

3.(i) Insert new Clause 5(a) to read:

'(a) Special dietary gluten-free foods are foods whose special dietary value results from the omission or replacement of ingredients containing gluten. When such foods contain ingredients derived from wheat, rye, barley or oats the nitrogen content of such ingredients shall not exceed 0.05% calculated as nitrogen.'

(ii) Renumber existing Clause 5(b) to 5(c).

(iii) Insert new Clause 5(b) to read:

'(b) Gluten free breads may contain sodium carboxymethylcellulose in an amount not exceeding 2.0% calculated on the basis of total starch content of the product.'

(iv)Renumber existing Clause 5(c) to 5(d).

4. Delete existing Clauses 9 and 11 — renumber existing Clauses 10 and 12 to read 9 and 10.

5. In new Clause 9 replace title word 'ENERGY' by word 'JOULE'.

6. In new Clause 9(a) 1st, 3rd, 7th and 10th lines: Delete word 'energy' and replace by word 'joule'.

7. In new Clause 9(b)(i) 1st line: Delete word 'energy' and replace by word 'joule'.
   9(b)(ii) 1st line: Delete word 'energy' and replace by word 'joule'.

8. In new Clause 9(c)(i) 3rd line: Delete word 'energy' and replace by word 'joule'.
   6th line: Delete word 'ENERGY' and replace by word 'JOULE'.
   7th line: Insert after word 'food)', the words 'followed immediately by the words:
   'This food has a low energy content' and
   8th line: Insert after word 'Food' the word 'all'.

9. Insert new Clause 9(c)(ii): An explanatory statement consisting of the following words may be used until January 1978 —
   'This food is the equivalent of former low calorie food'.

10. Renumber existing Clause 10(c)(ii) to Clause 9(c)(iii).

11. After word 'OR' at end of new Clause 9(c)(iii) delete figure (iv).

12. In new Clause 9(c)(iii) 19th line: Delete word 'KILOJOULE' and replace by 'kJ'.

13. In new Clause 10, Schedule I 1st line: Delete word 'ENERGY' and replace by word 'Joule'.

Approved food standards and approved food additives

A manual of the Council's approved food standards and approved food additives can be purchased from the Australian Government Publishing Service.

Appendix XII — Standard for condensed milks

1. **Unsweetened condensed milk or evaporated milk**

Unsweetened condensed milk or evaporated milk is milk which has been condensed by the evaporation of a portion of its water content, and sterilised by heat and shall contain not less than 28% total milk solids. It may contain not more than 100 mg of prescribed carrageenan per kg provided that the presence of prescribed carrageenan is declared in the label.

2. **Sweetened condensed milk**

Sweetened condensed milk is milk which has been condensed by the evaporation of a portion of its water content and to which cane sugar has been added, and shall —

(i) contain not less than 31% total milk solids;

(ii) contain not less than 9% milk fat; and

(iii) be free from foreign substances, other than cane sugar.

3. **Unsweetened condensed skim or separated milk**

Unsweetened condensed skim or separated milk is skim or separated milk which has been condensed by the evaporation of a portion of its water content, and sterilised by heat, and shall —

(i) contain not less than 26.5% milk solids not fat; and

(ii) be free from foreign substances.

4. **Sweetened condensed skim or separated milk**

Sweetened condensed skim or separated milk is skim or separated milk which has been condensed by the evaporation of a portion of its water content, and to which cane sugar has been added, and shall —

(i) contain not less than 26.5% milk solids not fat; and

(ii) be free from foreign substances, other than cane sugar.

5. **Labelling**

There shall be written, in the label attached to every package which contains any unsweetened or sweetened condensed skim or separated milk, the words —

'UNSUITABLE FOR INFANTS EXCEPT ON MEDICAL ADVICE'

in bold face sanserif capital letters with a letter height not less than 3mm. The said words shall be the first words of the label and no other words shall be written in the same line or lines. Additionally, there shall be written across the face of the whole of the label the words —

'SKIM MILK'

in bold face sanserif capital letters with a letter height not less than 12mm.

6. **Normal milk**

For the purposes of these regulations, 'Normal Milk' shall be milk containing not less than 3.5% milk fat and 8.5% milk solids not fat.

7. **Labelling**

There shall be written in the label attached to every package which contains unsweetened condensed or evaporated milk, in bold face sanserif capital letters with a letter height not less than 1.5mm, directions for making, with its contents, milk of a composition at least equal to that of normal milk, as follows:

'TO MAKE A FLUID NOT BELOW THE COMPOSITION OF 'NORMAL MILK' ADD (here insert the number of parts) PARTS OF WATER BY VOLUME TO ONE PART BY VOLUME OF THIS MILK'

Appendix XIII — Standard for the processing, transport, handling, storage and sale of frozen foods

1. **Scope**

This standard shall apply to frozen foods and all persons engaged in the processing, transport, handling, storage and sale of frozen foods. It shall also apply to:

(a) Places in which frozen food for sale is prepared, processed, packaged, repacked or stored prior to transport or sale to all such places as set out in this Standard, and

(b) Vehicles used for the transportation of frozen food for sale or vehicles which are used for sale of frozen foods, and

(c) Food service establishments in which frozen food is used in the service of meals or refreshments for sale, either in the ready to eat frozen state or in a state which requires thawing and/or heating or cooking prior to service, and

(d) Places in which frozen food is sold, or displayed for sale as frozen food.

2. **Definitions**

(a) *Frozen food* is food processed by freezing and intended for transport, handling, storage and sale in a frozen state.

(b) *Product temperature* is the temperature of frozen food obtained by the reading of an accurate thermometer in the following manner:

(i) In the case of packaged frozen food packed in an outer container:

(a) By inserting the thermometer to the correct depth of immersion between the second and third packages of at least four packages, or

(b) By placing two packages on top of the one being measured and reading the temperature after a lapse of at least five minutes, and subsequently reading the thermometer at intervals of one minute until the difference between consecutive readings is less than 0.5°C. The product temperature is calculated from the temperature reading so obtained by applying the calibration correction of the thermometer; or

(ii) In the case of single packages:

By inserting the thermometer in the frozen food to the correct depth of immersion and by reading the temperature after a lapse of five minutes and then subsequently reading the thermometer at intervals of one minute until the difference between consecutive readings is less than 0.5°C. The product temperature is calculated from the temperature reading so obtained by applying the calibration correction of the thermometer.

(c) *Accurate thermometer* is one which is clearly graduated at intervals of 1°C and has been calibrated to an accuracy of not less than one degree Celsius (1°C).

(d) *Correct depth* of immersion is the depth of immersion which is marked on the thermometer.

(e) *Place* includes buildings, rooms, premises or parts thereof.

(f) *Food service establishments* include restaurants, cafes, cafeterias, coffee shops, dining premises, milk bars, sandwich shops, catering premises, hotels, motels, clubs, guest houses and all other public eating or drinking places, and hospitals.

(g) *Frozen food display unit* is any case, cabinet or other facility used for displaying frozen food for sale.

(h) *Frozen food store* or warehouse is a frozen food facility other than a frozen food display unit, in which frozen food is stored.

(i) *Falsely described frozen food* is frozen food for sale or display:

(i) which does not conform either wholly or in part with the provisions prescribed by this Standard, or

(ii) which is in packaged form and the package label or written matter attached thereto or enclosed therewith bears a statement, design or device regarding such frozen food which is false or misleading in any particular.

(j) *Product load limit line* is a distinctive permanent marking of the frozen food display unit readily discernible and identified once every 1.5 metres of its length by the words "load limit" which delineates the plane of the unconfined surface of the product load zone.

(k) *Product load zone* is that part of the frozen food display unit in which it is intended frozen food shall be stored.

3. **Frozen food temperature**

Frozen food shall be processed to a product temperature of −15°C or lower and subsequently handled and stored up to placement in the retail frozen food display unit so that the temperature of no part of the product

shall rise above −15°C except during frozen storage room and warehouse defrosting cycles as specified in Clause 4(b) and except during transfer from the delivery vehicle to the frozen food store or frozen food display unit as specified in Clause 5(a) of this Standard.

4. **Frozen food stores and warehouses**

(a) Whether located in the manufacturer's, the distributor's or the retailer's premises, frozen food stores and warehouses shall be operated to maintain a product temperature of −15°C or lower.

(b) During defrost the product temperature in the store shall not exceed −15°C for more than 2 hours in any 24 hour period, and in any case shall not exceed −12°C.

(c) No product described or labelled as frozen food shall be removed from a frozen food store or warehouse for transport to another frozen food store or warehouse, or to a frozen food display unit unless the product temperature is −15°C or lower.

5. **Transport of frozen foods**

(a) Food which is described or labelled as frozen food, shall not be carried or transported unless such food at all times during transport and at the time of delivery is held at a product temperature of −15°C or lower except that the maximum product temperature shall not exceed −12°C during transfer from the delivery vehicle to the frozen food store or frozen food display unit.

(b) Food, which is described or labelled as frozen food, shall be placed into a frozen food display unit or into a frozen food store immediately it is received at a food service establishment.

6. **Frozen food display units**

(a) Frozen food display units in retail premises shall conform to an appropriate standard.

(b) Every frozen food display unit shall be marked with product load limit lines.

(c) Frozen food shall not be displayed in any frozen food display unit other than within the product load zone.

7. **Retailing of frozen foods**

(a) Frozen foods when received at a retailer's premises, shall be placed immediately in a frozen food store or placed in a frozen food display unit.

(b) Frozen foods, when received at a retailer's premises, shall be stored in such a way that the products are sold on a 'first in first out' basis.

(c) Frozen food shall be handled and stored at a product temperature of −15°C or lower, except during:

(i) storage in a frozen food display unit complying with the requirements of Clause 6 of this Standard,

(ii) defrost cycles as specified in Clause 4(b) of this Standard,

(iii) transfer from the delivery vehicle to the frozen food store or frozen food display unit as specified in Clause 5(a) of this Standard.

(d) Foods which are not frozen foods shall not be placed in a frozen food display unit or frozen food store which contains or is intended to contain frozen foods.

8. **Labelling**

(a) Frozen food shall not be sold in a package unless, in addition to such information required by this Standard to be indicated upon such package, there is legibly and durably written thereon immediately above or contiguous with the designation of the article the word "FROZEN". Such word shall be uniformly written in bold face sanserif capital letters having a letter height not less than 4.5mm and in such colour or colours as to afford a distinct contrast to the background.

(b) There shall be written in the label on or attached to every package of frozen food for retail sale in bold face sanserif capital letters with a letter height not less than 3mm the words —

'STORE AT OR BELOW MINUS 15°C'

or

'STORE IN THE FREEZER COMPARTMENT OF THE REFRIGERATOR'

(c) Provided that ice cream and related products need not be labelled in accordance with Clauses 8(a) and 8(b).

9. **Prohibition**

(a) Falsely described frozen food shall not be sold or held in possession for sale as frozen food.

(b) No food shall be labelled or described as frozen food if it does not comply with the provisions of this Standard.

Appendix XIV — Summary report on the thiamine status of the Australian people

The National Health and Medical Research Council was concerned that the thiamine status of some groups in the Australian population may be unsatisfactory and appointed a Working Party constituted as follows:

Title

Working Party on the Thiamine Status of the Australian People

Terms of Reference

(a) To inquire into and report to the Nutrition Committee on the thiamine status of the Australian people,

(b) To indicate any information gaps relevant to (a) and to recommend ways in which these gaps might be closed,

(c) If the Working Party is satisfied that a 'thiamine problem' exists, to recommend remedial measures,

(d) To inquire into the status of the Australian people with regard to nutrients and dietary factors which tend to parallel thiamine in cereal foods, and if considered necessary, to recommend remedial measures of these also.

Members of the Working Party

Dr F. W. Clements (Chairman)	Roseville N.S.W.
Dr P. Heywood	School of Public Health and Tropical Medicine, University of Sydney, Sydney.
Dr E. Hipsley (Secretary)	retired August 1975 Commonwealth Department of Health, Canberra.
Dr P. F. Nixon	Medical Biochemistry, University of Queensland, Brisbane.
Dr Silvia Nobile	Vitamin Laboratory, Roche Products, Sydney.
Mrs Janice Plain (Acting Secretary) from June 1976	Commonwealth Department of Health, Canberra.
Mr M. Tracey	CSIRO Food Research, Sydney.
Miss Beverley Wood	St. Vincents Hospital, Melbourne.

Summary Report of the Working Party

INTRODUCTION

This inquiry had its origin in reports of a number of investigations which suggested that substantial numbers of Australians were consuming diets inadequate in thiamine. The authors of these reports had recommended that thiamine and perhaps other nutrients should be added to a staple food, e.g. flour.

Two schools of thought exist about satisfactory nutritional status; one considers that tissue saturation with nutrients is necessary for optimal health and the other that health can be achieved and maintained with levels below tissue saturation.

Three methods were selected for the assessment of thiamine status of Australians; thiamine intake, blood levels of thiamine or its metabolites and the clinical evidence of thiamine deficiency. The chemistry, food sources, metabolism and physiology of thiamine were reviewed. The relationship between alcohol consumption and thiamine metabolism was described. In Australia, most individuals, who have signs and symptoms of thiamine deficiency, are alcoholics and it would appear that in non-drinkers clinical thiamine deficiency is rare.

CRITERIA FOR ASSESSMENT OF THIAMINE STATUS

Methods to determine the dietary intake of thiamine were reviewed. Dietary Allowances for thiamine have been set by most authorities, including the National Health and Medical Research Council (Australia) at 0.4 mg/1000Kcal; the exception is the National Research Council of America which in 1974 raised the figure to 0.5mg/1000Kcal.

A number of biochemical techniques available for assessing thiamine status were reviewed. A test, which measures the level of tissue saturation with thiamine, in erythrocytes (the TPP test) was described in detail. Much of the biochemical evidence of thiamine nutritional status is based on the results of this test, which has been applied to several hundred individuals. Guidelines for the interpretation of the results of the TPP test which have been suggested and used by investigators both in Australia and overseas were summarised. (Table 1).

TABLE 1. Assessment of thiamine status from TPP effect adopted by different authors

Categories of thiamine nutritional status	*TPP% Effect (in Erythrocytes)*				
	Brin (1964)	*Sauberlich (1973, 1974)*	*Brubacher (1972)*	*Wood & Penington (1974)*	*Nobile (1975)*
Acceptable	0-14	0-15	0-15	0-24	0-14
Marginal	15-24	16-20	15-22		15-19
Low	–	–	–		20-24
Deficient	> 25	> 20	> 23	> 24	≥ 25

The majority of the members of the Working Party agreed that as the percentage of TPP Effect advances from zero, so does the probability of the individual developing clinical manifestations of thiamine deficiency. Tests on many alcoholics, who had not taken multivitamin preparations within the previous three months, showed values for TPP Effect of about 25% and in some they were greater than 40%. TPP Effect values between 0 and 14% are usually associated with saturation or near saturation of the tissues with thiamine. The members of the Working Party could not reach agreement on the interpretations to be placed on values between 15% and 25%. These difficulties arose because of the absence of independent parameters in the health-illness continuum with which the TPP Effect could be compared.

The signs and symptoms of clinical thiamine deficiency were described. In Australia these are almost always found in chronic alcoholics, which is indicative of the close relationship between the consumption of alcohol and clinical thiamine deficiency. Acute thiamine depletion studies in rats and man are accompanied by diminished urinary excretion of thiamine and a sharp rise in the TPP Effect. Few studies have reported relationships between the various parameters of thiamine status in free living man, mainly because thiamine deficiency is usually accompanied by other deficiencies or is associated with other disease processes.

AUSTRALIAN DATA AND RESULTS OF STUDIES

Food sources in the Australian diet

The main sources of thiamine in the Australian diet are fresh foods such as milk, fruit, vegetables, bread (both white and wholemeal), enriched, pre-cooked breakfast cereals, oatmeal. Foods which supply energy but contain little or no thiamine are sugar, fats, biscuits, cakes, snacks, cordials, soft drinks, alcoholic beverages. The relative amounts of foods consumed from these two groups determines the thiamine status of a diet. Alcohol can supply up to about 15% of the energy requirements in a day, providing that the intake is spread throughout the day. Thiamine for this use of alcohol must be provided from the body pool. Diets with a low thiamine content generally contain more than average amounts of sugar, and/or fat, and/or alcohol. Such diets are hazardous in respect of heart disease, diabetes and other degenerative diseases. It is possible that these hazards could be greater than the hazards of a low thiamine intake alone.

Thiamine intake as revealed by dietary survey

The mean per capita thiamine intake for the whole Australian population derived from "apparent consumption data" in 1972/73 was 0.49mg/1000Kcal (0.12mg/1000kJ). The mean per capita thiamine intake for individuals in some 400 households surveyed in Sydney in 1973 was 0.49mg/1000Kcal (0.12mg/1000kJ). The mean thiamine intake, derived from foods of individuals in a number of groups studied by Nobile et. alii. in Sydney was 0.45, 0.46, 0.45, 0.41, 0.38 mg/1000Kcal. The mean intake of children studied by the Melbourne Growth Unit was 0.48mg/1000Kcal. Despite the uniformity of these mean values, significant percentages of small selected groups had intakes less than 0.33mg/1000Kcal (0.08mg/1000kJ).

The application of a mathematical model, as developed by Beaton, to the Australian data suggested that at the lower estimates of mean intake approximately 20% of the population would have thiamine intakes less than their requirement and at the upper estimates of mean intake approximately 10% would have intakes less than requirements. There were no independent variables which could be used to interpret these figures in terms of health-illness status.

Results of functional biochemical tests on selected groups of Australians

The enzymatic functional test, the TPP Effect test, has been used in a number of surveys in Sydney and Melbourne. The results showed that approximately 80% of 'apparently healthy' subjects, and 53% of a group of patients suffering from a variety of diseases had a TPP Effect suggesting saturation or near saturation of tissues with thiamine. Small percentages (4% and 5%) of 'apparently healthy' individuals had a TPP Effect greater than 25%; whereas from 16% to 21% of patients with certain diseases had TPP Effect greater than 25%. In a group of 51 Aborigines only 6% were in the 0-14% category of the TPP test and 43% had a TPP Effect greater than 25%.

It was recognised that the TPP test was likely to be influenced by the recency and extent of vitamin supplementation. The results of the TPP test in alcoholics, some of whom had been given thiamine hydrochloride, ranged from apparent tissue saturation (0-14%) to greater than 50%. Clearly more work is needed to clarify the significance of the TPP test in alcoholics. It is possible that the enzymic function test measured erythrocyte transkelotase activity would more closely reflect the degree of thiamine depletion in alcoholics with clinical signs, than the TPP test.

Comparatively few community surveys have been made in other countries comparable to the comprehensive studies made in Sydney and Melbourne; however in two studies in the U.S.A. the percentages of people with a TPP Effect greater than 25% were of the same order as those found in Australia.

Association of dietary intake of thiamine and results of functional test (TPP Effect) Australian data

The results of the TPP test were correlated with the estimated thiamine intake of 142 subjects studied by Nobile and her colleagues in Sydney. Correlations of low magnitude ($r = +0.33$; $r = +0.27$; $r = 0.14$) were found; that is as thiamine intake decreased the TPP Effect increased.

Effect of additional intakes of thiamine from enriched flour in an Aboriginal group

The effects of the addition of thiamine and other nutrients to flour for bread making was tested, over a period of 6½ months, with a group of Aboriginals at Bourke in 1974. A comprehensive study of the group to determine thiamine status had been made in 1971, and included 91 Aboriginals; 66 of whom were included in the second survey in 1974. The enrichment of the flour was done after this first survey and ceased two months before the second survey. The enrichment raised the thiamine content of the bread from 0.09 mg to 0.43 mg per 100 g fresh bread. Data were not available on the total thiamine intake either before or after enrichment. An improvement in thiamine status, as measured by the TPP test, occurred in 44% of the subjects; 27% retained acceptable levels; 20% retained unchanged low levels and 9% deteriorated.

Prevalence of clinical thiamine deficiency in Australia

Clinical thiamine deficiency appears to be rare apart from an accompaniment of alcoholism. Studies in a Melbourne hospital revealed that 38.6% of patients admitted with alcoholism had one or more of the three clinical syndromes usually associated with thiamine deficiency. Most of these subjects had taken more than 200 gram ethanol daily and had been drinking alcohol excessively for more than 10 years.

DISCUSSION

Estimates of thiamine intake based on records of food consumption and tables of composition of food could only give crude approximations for individuals. Mean values for a group may be a more accurate measure. The fact that both requirements and intake are expressed as a rate (mg/1000kJ) introduces possible errors because of the wide ranges in the energy value of foods, depending upon the fat and water content. Most thiamine values for foodstuffs are "preferred values" based on older methods of analysis; more recent methods appear to give different values for some foods.

Diets low in thiamine usually have greater than average amounts of sugar, and/or fat, and/or alcohol. A diet low in thiamine in relation to its' energy value (e.g. 0.08mg/1000kJ) would necessitate a further intake of 200 μg thiamine per day for diets with an energy value of 8000kJ. To provide the thiamine, and not change the dietary pattern, would not remove the hazards associated with the imbalanced nature of these diets.

Applying a mathematical model developed by Beaton to the Australian consumption data, and assuming a mean thiamine intake of 0.12mg/1000kJ, it was shown that approximately 10% of the Australian population could have a thiamine intake less than requirement. Assuming a mean intake of 0.1mg/1000kJ, which was the mean intake of thiamine from food of the two groups who had the lowest mean intake of five groups, studied in detail by Nobile, then approximately 20% of the Australian population could have an intake less than requirement. Applying Beaton's model in another way, it was shown that to limit the prevalence of deficiency to 5% of the population a mean intake of 0.14mg/1000kJ would be necessary, assuming the overall pattern of the Australian diet remained unchanged.

The significance of results of the TPP test between 15% and 25% was discussed and the difficulties of interpretation emphasised. The results of the TPP test on 20 patients referred with symptoms of 'tiredness' and 'depression' were of interest, the results being between 15% and 25%. 'Tiredness' and 'depression' are among the symptoms of subjects in acute experimental thiamine depletion studies. The significance of the cause and effect relationship between health and the prevention of disease on the one hand and a TPP% Effect between 15% and 25% on the other hand remains to be determined.

The three methods used to assess thiamine status indicated that certain categories of individuals in the Australian population are 'at risk'. These are heavy drinkers, certain elderly people who regularly eat unbalanced meals, long-term inmates of institutions, persons suffering from some mental illnesses and many Aborigines not included in the above categories. There were segments of the populations surveyed, whose thiamine status presented

TABLE 2. Levels of flour enrichment in mg/100g flour related to bread intake and energy value of diet to increase the thiamine intake of individuals by (0.04mg/1000kJ)

Daily bread consumption slices/day	*Energy value of diet (kJ)*				
	4000	*6000*	*8000*	*10000*	*12000*
1	1.06	1.59	2.12	2.65	–
2	0.53	0.80	1.06	1.33	–
3	0.35	0.53	0.70	0.88	–
4	0.26	0.44	0.53	0.66	0.80
5	0.21	0.31	0.42	0.53	0.76
6	0.17	0.26	0.35	0.44	0.53

problems of interpretation for the Working Party. These have a single TPP test of between 15% and 25%. A minority opinion was that they are potential subjects to develop overt signs of thiamine deficiency, the majority opinion was that evidence to draw this conclusion was not available.

Assuming that the thiamine intake needed to be increased, and that this was attempted by the enrichment of flour for bread baking and that the additional amount was 0.04mg/1000kJ; calculations were made to determine the level of enrichment of flour needed for diets with various energy values and for specific daily intakes of bread. The results of these estimates were tabulated in Table 2 (p. 88).

Assuming the whole of additional thiamine is to be provided by enrichment of bread, then theoretically the level of enrichment should be related to the number of slices of bread eaten and to the energy value of the total food consumed.

RECOMMENDATIONS

The Working Party recommended that the Council adopt the following recommendations:

Nutrition education

Council noted available evidence suggesting that a percentage of the Australian population has a thiamine intake lower than desirable. This became more evident when the thiamine intake was expressed as milligrams per 1000 kilojoules (mg/1000kJ). It recognised that only a few subjects have been studied and the magnitude of the problem is unknown. However, amongst those studied, low intakes of thiamine were found to be the results of imbalanced diets. Diets which contain undesirably large amounts of sugar, and/or fat, and/or alcohol, present a hazard in respect of alcoholism, heart disease and other degenerative diseases.

Council therefore recommended that a carefully planned educational program, using modern concepts and techniques, be developed and implemented at all levels in the community, extending from early childhood, through the school years, adolescence and into all segments of the adult population.

The aims would be firstly to provide information about the hazards of the imbalanced diets described above, with explanations of the advantages of a balanced diet. The second component would be to stimulate changes in community attitudes and food patterns in line with this information.

An inbuilt process of evaluation should be an essential part of this program.

Management of groups at risk

Council noted that some groups, including Aborigines, were at greater risk of developing thiamine deficiency than others. Major causes include the consumption of grossly imbalanced diets, moderate to heavy drinking and alcoholism.

Council recommended that multivitamin tablets be administered in the first instance to members of such groups in order to remove them from the 'at risk' status. The long term management should aim to remove the cause of the 'at risk' status.

The management of certain chronically ill individuals

Council noted the fact that a higher percentage of individuals suffering from certain diseases were found to have a high result in the Transketolase Pyrophosphate test, (the TPP Effect), than among apparently healthy individuals. The diseases with a higher percentage of patients with a high TPP Effect include renal disease, schizophrenia and paraplegia. It was aware of the fact that there was no information which would enable it to decide whether these high values were a sequel to the specific disease processes or to the consumption of imbalanced diets.

Council also noted that this is a field in which a considerable amount of research is required.

Council recommended that the attention of the medical profession be drawn to these facts, with the suggestion that the management of patients, with these diseases, include the administration of multivitamin supplements.

Enrichment (restoration) of cereals with vitamins

Council was aware of the fact that much time had been spent in exploring all aspects of enrichment of cereals. It is recognized that enrichment has been standard practice, for many years in the U.S.A. and U.K. however, there was no evidence that in either country had there been any evaluation of the effects of enrichment. Council also noted that the results of the short term experiment with a group of Aborigines at Bourke had been reviewed and the reduction in the values for the TPP Effect in a significant percentage of the 31 subjects studied on both occasions had been observed. A significant feature of the Bourke study was the high percentage of the energy value of the diet contributed by bread (30-33%). This contrasted with the 12% for the "average" white Australian (Apparent Consumption Data — Australian Bureau of Statistics). Council noted that varying percentages of individuals in the three surveys of bread consumption in Australia reported that they do not eat bread.

Council recommended that until further information was available, steps should not be taken at present, to enrich cereals (bread and/or flour) or any other staple food with vitamins.

Classification of diseases

Council noted that the *Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death,* (W.H.O. Geneva 1967) presently includes Wernicke's encephalopathy under the classification of Nutritional deficiency 263.9 (unspecified).

Council recommended that an approach be made to W.H.O. for re-classification of Wernicke's encephalopathy (or alternatively, the Wernicke-Korsakoff syndrome) under Nutritional deficiency 261 (thiamine deficiency) to allow a

better appreciation of the incidence of Wernicke's encephalopathy in developed countries such as Australia, and to facilitate comparison of its incidence between countries.

Research

Council noted that there is a lack of information and research in the field of human nutrition and diet, and recognised the need for more specific data in the following areas:

1. Dietary studies to provide information on consumption of foods, including convenience foods, 'snack' foods, cordials, aerated soft drinks and alcoholic beverages in the community. The results of all dietary studies should be published in terms of foods and not only nutrients.
2. The relationship between patterns of food and alcohol consumption and thiamine intake to the various parameters of thiamine status.
3. Up to date information on composition of Australian food as consumed (this would include the effects of commercial processing and domestic cooking).
4. The vitamin and mineral content of the current extraction rates of flour including variations arising from different types of wheat.
5. Extensive application of vitamin function tests to a wide range of subjects for whom information about health states, vigor, disease pattern, stress patterns, and diet are also collected.
6. The effects of the regular intake of various amounts of alcohol upon functional tests for vitamin (thiamine) status.
7. The interrelationship of the TPP test and the Frythocyte Transkelotase Activity ETKA test in a variety of subjects.
8. Broad studies be carried out to assess people's understanding of nutrition, to determine the most effective techniques to use in nutrition education programs for the public, and to establish the effectiveness of such nutrition education programs.

Appendix XV — Amendments to the uniform poisons standard

Clause 1

Insert new sub-clause 1.7 as follows:

1.7 'General dealer in medicinal poisons', means a person or persons licensed to store and supply medicinal poisons in any district or area where accessibility in that district or area allows no other outlets for medicinal poisons, thereby creating a public hardship.

Renumber sub-clauses 1.7 to 1.15 to read 1.8 to 1.16.

Clause 2

SUB-CLAUSE 2.1

Delete reference to Schedule 2 and insert the following:

Schedule 2

Substances which are for therapeutic use and which require supervision of their distribution, such that their retail sale should be restricted to pharmacies, and, where there is no pharmacy service available, general dealers in medicinal poisons.

(i) Schedule 2 substances may not be supplied or sold except by, or under the control and supervision of a pharmacist or a medical, dental or veterinary practitioner in the lawful practice of his profession or by a general dealer in medicinal poisons; i.e. a person may apply for a licence to sell a prescribed range of Schedule 2 poisons if —

he keeps open shop for the sale of goods more than 25 kilometers by the shortest practicable road from the nearest pharmacy; and

he produces such evidence as may be required that he is a fit and proper person to be so licensed.

(ii) Any person who supplies or sells Schedule 2 poisons shall keep such substances in such a way that customers do not have unrestricted access to them.

Clause 2

SUB-CLAUSE 2.1

Delete reference to Schedule 3 and insert the following:

Schedule 3

Substances which are for therapeutic use and which are of a sufficiently dangerous nature to warrant their distribution to be restricted to pharmacists and medical, dental and veterinary practitioners.

(i) Schedule 3 substances may not be supplied or sold except by a pharmacist or pharmacy trainee under the direct personal supervision of the pharmacist or supplied by a medical, dental or veterinary practitioner in the lawful practice of his profession.

(ii) Any person who supplies or sells Schedule 3 poisons shall keep such substances in a separate part of the premises to which customers do not have access.

(iii) The person who supplies or sells Schedule 3 poisons shall make a record of the transaction, in a prescription book or other approved recording system, and shall label the container with his name and address and shall provide adequate instructions for use, either written or verbal, at the time of supply or sale.

Clause 2

SUB-CLAUSE 2.1

After the reference to Schedule 4 insert the following:

Emergency supply of Schedule 4 Substances:

Provision should be made for a pharmacist to supply without prescription any Schedule 4 substance, other than a substance controlled as a psychotropic substance, provided:

(i) The patient is under medical treatment with the substance and continuation of medication is essential; and

(ii) The quantity supplied does not exceed 3 days' medication;

(iii) The pharmacist has satisfied himself that an emergency does exist.

AMEND CLAUSE 14.1:4 of the Uniform Poisons Standard to read:

in respect of any other preparation, the portion of each poison or hazardous substance in the preparation shall be expressed as follows:

CLAUSES 14.2.1 to 14.2.7 to be re-numbered as follows:

14.1.4.1, 14.1.4.2, 14.1.4.3, 14.1.4.4, 14.1.4.5, 14.1.4.6, 14.1.4.7; and where the word 'unit' appears in these clauses it be replaced with the word 'stated'.

CLAUSES 14.3, 14.3.1, 14.3.2, be re-numbered as follows:

14.2, 14.2.1, 14.2.2

Where the term ppm appears in the Uniform Poisons Standard it be deleted and replaced with the term mg/kg.

Schedule 1

Amend the entries as shown hereunder:

ANTIMONY, compounds of, to read:

ANTIMONY,	compounds of, excet antimony chlorides in polishes.

BRUCINE to read:

BRUCINE,	except when used in concentrations of 0.02 per cent or less for the denaturation of alcohol.

CONIINE to read:

CONIINE	

Schedule 2

Delete the present entries and replace with the following:

ACETIC ACID	(excluding its salts and its derivatives) for therapeutic use except in preparations containing 80 per cent or less of acetic acid.
ACETYLDIHYDROCODEINE	when compounded with one or more other medicaments, in preparations containing 1 per cent or less of acetyldihydrocodeine.
AMMONIATED MERCURY	
ANTAZOLINE	in preparations labelled and packed as nasal preparations or eyedrops.
ATROPINE	except atropine methonitrate, in preparations containing 0.25 per cent or less of atropine and atropine sulphate, 0.5 mg tablets in packs of six, when labelled for treatment of organophosphorus poisoning.
BAMIPINE	in preparations labelled and packed as nasal preparations or eyedrops.
BELLADONNA HERB	in preparations containing 0.25 per cent or less of the alkaloids of belladonna, calculated as hyoscyamine.
BENZAMINE	when included in: (a) lozenges, pastilles, tablets and capsules containing 30 mg or less of benzamine in each; (b) suppositories or bougies containing 200 mg or less of benzamine in each; (c) preparations for external use, other than eyedrops, containing 10 per cent or less of benzamine.
BENZOCAINE	when included in: (a) lozenges, pastilles, tablets and capsules containing 30 mg or less of benzocaine in each; (b) suppositories or bougies containing 200 mg or less of benzocaine in each; (c) preparations for external use, other than eyedrops, containing 10 per cent or less of benzocaine.
BROMODIPHENHYDRAMINE	in preparations labelled and packed as nasal preparations or eyedrops.
BROMHEXINE	
BROMPHENIRAMINE	(a) in oral liquid cough preparations containing 0.3 per cent or less of brompheniramine; (b) in preparations labelled and packed as nasal preparations or eyedrops.
BUCLIZINE	(a) in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less; (b) in preparations labelled and packed as nasal preparations or eyedrops.
BUTYLAMINOBENZOATE	when included in: (a) lozenges, pastilles, tablets and capsules containing 30 mg or less of butylaminobenzoate in each; (b) suppositories or bougies containing 200 mg or less of butylaminobenzoate in each;

	(c) preparations for external use, other than eyedrops, containing 10 per cent or less of butylaminobenzoate.
CAMPHORATED OIL	
CANTHARIDIN	in preparations containing 0.01 per cent or less of cantharidin.
CARBETAPENTANE CITRATE	except in preparations containing 0.5 per cent or less of carbetapenate citrate
CARBINOXAMINE	(a) in oral liquid cough preparations containing 0.3 per cent or less of carbinoxamine; (b) in preparations labelled and packed as nasal preparations or eyedrops.
CHLORBUTOL	in oral preparations containing 250 mg or less of chlorbutol per adult dosage unit.
CHLOROFORM	(excluding its derivatives) except: (a) in preparations containing 10 per cent or less of chloroform; (b) when included in Schedule 4.
CHLOROPYRILENE	in preparations labelled and packed as nasal preparations or eyedrops.
CHLORPHENIRAMINE	(a) in oral liquid cough preparations containing 0.3 per cent or less of chlorpheniramine; (b) in preparations labelled and packed as nasal preparations or eyedrops.
CHLORPHENOXAMINE	in preparations labelled and packed as nasal preparations or eyedrops.
CINNAMEDRINE	
CINNARIZINE	(a) in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less; (b) in preparations labelled and packed as nasal preparations or eyedrops.
CLEMASTINE	in preparations labelled and packed as nasal preparations or eyedrops.
CLEMIZOLE	in preparations labelled and packed as nasal preparations or eyedrops.
CODEINE	when compounded with one or more other medicaments, in preparations containing 1 per cent or less of codeine.
CYPROHEPTADINE	in preparations labelled and packed as nasal preparations or eyedrops.
DEPTROPINE	in preparations labelled and packed as nasal preparations or eyedrops.
DEXBROMPHENIRAMINE	in preparations labelled and packed as nasal preparations or eyedrops.
DEXCHLORPHENIRAMINE	(a) in oral liquid cough preparations containing 0.3 per cent or less of dexchlorpheniramine; (b) in preparations labelled and packed as nasal preparations or eyedrops.
DEXTROMETHORPHAN	in preparations containing 1 per cent or less or dextromethorphan when compounded with one or more other medicaments in such a way that the dextromethorphan contained therein cannot readily be extracted.
DEXTROPROPOXYPHENE	in preparations containing 1 per cent or less of dextropropoxyphene.
DEXTRORPHAN	in preparations containing 1 per cent or less of dextrorphan.
DIAMINES	phenylene, toluene and all other alkylated benzene diamine derivatives, except when included in Schedule 6.
DICOPHANE (DDT)	in preparations for human therapeutic use.
DICYCLOMINE	in preparations containing 0.1 per cent or less of dicyclomine.
DIHYDROCODEINE	when compounded with one or more other medicaments, in preparations containing 1 per cent or less of dihydrocodeine.
DIMENHYDRINATE	(a) in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less; (b) in preparations labelled and packed as nasal preparations or eyedrops.
DIMETHINDENE	in preparations labelled and packed as nasal preparations or eyedrops.
DIMETHISOQUIN	in preparations for topical use.
DIMETHOTHIAZINE	in preparations labelled and packed as nasal preparations or eyedrops.
DIPHEMANIL METHYLSULPHATE	in preparations for topical use.
DIPHENHYDRAMINE	(a) in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less; (b) in oral liquid cough preparations containing 0.3 per cent or less of diphenhydramine; (c) in preparations labelled and packed as nasal preparations or eyedrops.
DIPHENYLPYRALINE	in preparations labelled and packed as nasal preparations or eyedrops.

DOXYLAMINE	(a) in oral liquid cough preparations containing 0.3 per cent or less of doxylamine; (b) in preparations labelled and packed as nasal preparations or eyedrops.
EMBRAMINE	in preparations labelled and packed as nasal preparations or eyedrops.
EPHEDRINE AND PSEUDOEPHEDRINE	except: (a) preparations containing 0.5 per cent or less of ephedrine and pseudoephedrine; (b) preparations for external use containing 1 per cent or less of ephedrine and pseudoephedrine.
ERYTHRITYL TETRANITRATE	and other nitric esters of polyhydric alcohols.
ETAFEDRINE	
ETHER	(excluding its derivatives) except: (a) in preparations containing 10 per cent or less of ether; (b) when included in Schedule 4, 5 or 6.
ETHOHEPTAZINE	in preparations containing 1 per cent or less of ethoheptazine.
ETHYLMORPHINE	when compounded with one or more other medicaments, in preparations containing 1 per cent or less of ethylmorphine.
FERROUS SULPHATE	and other iron preparations for human internal use, except in preparations containing 5 per cent or less of iron.
FLUORIDES	metallic, including ammonium fluorides, when intended for therapeutic purposes, except: (a) in dentifrices containing 0.5 per cent or less of fluoride ion; (b) in substances containing 15 ppm or less of fluoride ion.
GELSEMIUM	
GLYCERYL TRINITRATE	
GUAIPHENESIN	in preparations containing 120 mg or less of guaiphenesin per adult dosage unit.
HALOPYRAMINE	in preparations labelled and packed as nasal preparations or eyedrops.
HEXACHLOROPHANE	in preparations for skin cleansing purposes containing 3 per cent or less of hexachlorophane except: (a) in preparations for use on infants; (b) in preparations for the treatment of animals; (c) in preparations containing 0.1 per cent or less of hexachlorophane as a preservative.
HISTAPYRRODINE	in preparations labelled and packed as nasal preparations or eyedrops.
HOMATROPINE	in preparations containing 0.25 per cent or less of homatropine.
HYDROCYANIC ACID AND CYANIDES	in preparations containing the equivalent of 0.15 per cent or less of hydrocyanic acid.
8-HYDROXYQUINOLINE	and its derivatives, for human therapeutic use, except: (a) non-halogenated derivatives, containing 1 per cent or less for external use; (b) when included in Schedule 4.
HYOSCINE	in preparations containing 0.25 per cent or less of hyoscine, except hyoscine butylbromide.
HYOSCYAMINE	in preparations containing 0.25 per cent or less of hyoscyamine.
HYOSCYAMUS	in preparations containing 0.25 per cent or less of the alkaloids of hyoscyamus calculated as hyoscyamine.
IODINE	(excluding its salts and derivatives) except in preparations containing 2.5 per cent or less of iodine.
IODOPHORS	containing more than 2.5 per cent available iodine.
LEAD SALTS	and compounds of lead when prepared for medical or cosmetic use, except in preparations for hair dressing containing 1 per cent or less of lead.
LIGNOCAINE	when included in: (a) lozenges, pastilles, tablets and capsules containing 30 mg or less of lignocaine in each; (b) suppositories or bougies containing 200 mg or less of lignocaine in each; (c) preparations for external use, other than eyedrops, containing 10 per cent or less of lignocaine.
LOBELIA	in preparations containing 0.5 per cent or less of the alkaloids of lobelia, except preparations for smoking or burning.

MALDISON	in preparations for external human therapeutic use containing 2 per cent or less of maldison.
MEBENDAZOLE	for human therapeutic use.
MEBHYDROLIN	in preparations labelled and packed as nasal preparations or eyedrops.
MEPYRAMINE	(a) in oral liquid cough preparations containing 0.3 per cent or less of mepyramine; (b) in preparations labelled and packed as nasal preparations or eyedrops.
MERCURIC CHLORIDE	in preparations containing 0.5 per cent or less of mercuric chloride, except: (a) in batteries; (b) when included in Schedule 7.
MERCURIC IODIDE	in preparations containing 2 per cent or less of mercuric iodide, except when included in Schedule 6.
MERCURIC NITRATE	in preparations containing the equivalent of 3 per cent or less of mercury (Hg), in such form.
MERCURIC OXIDE	and all oxides of mercury.
MERCURIC-POTASSIUM IODIDE	in preparations containing the equivalent of 2 per cent or less of mercuric iodide, in such form.
MERCURY (METALLIC)	(excluding its salts and derivatives) except in scientific instruments.
MERCURY ORGANIC COMPOUNDS OF	in preparations containing the equivalent of 0.5 per cent or less of mercury (Hg) except: (a) when included in Schedule 6 or Schedule 7; (b) as a preservative in substances containing 0.01 per cent or less of mercury.
METHAPYRILENE	in preparations labelled and packed as nasal preparations or eyedrops.
METHDILAZINE	in preparations labelled and packed as nasal preparations or eyedrops.
METHOXAMINE	except: (a) preparations containing 0.5 per cent or less of methoxamine; (b) preparations for external use containing 1 per cent or less of methoxamine.
METHOXYPHENAMINE	
METHYLEPHEDRINE	
NAPHAZOLINE	
NICLOSAMIDE	for human therapeutic use.
NICOCODINE	when compounded with one or more other medicaments, in preparations containing 1 per cent or less of nicocodine.
NICODICODINE	when compounded with one or more other medicaments, in preparations containing 1 per cent or less of nicodicodine.
NORCODEINE	when compounded with one or more other medicaments, in preparations containing 1 per cent or less of norcodeine.
NOSCAPINE	
OCTYL NITRITE	
ORTHOCAINE	when included in: (a) lozenges, pastilles, tablets and capsules containing 30 mg or less of orthocaine in each; (b) suppositories or bougies containing 200 mg or less of orthocaine in each; (c) preparations for external use, other than eyedrops, containing 10 per cent or less orthocaine.
OXETHAZAINE	in preparations for internal use only.
OXYMETAZOLINE	
PAPAVERINE	
PHEDRAZINE	
PHENAMAZOLINE	
PHENAZONE	for external use.
PHENINDAMINE	in preparations labelled and packed as nasal preparations or eyedrops.
PHENIRAMINE	(a) in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less; (b) in oral liquid cough preparations containing 0.3 per cent or less of pheniramine; (c) in preparations labelled and packed as nasal preparations or eyedrops.

PHENOL	and any homologue of phenol boiling below 220 C, creosote, for therapeutic use except in preparations containing 3 per cent or less by weight of such substances or homologues.
PHENYLEPHRINE	except: (a) preparations containing 0.5 per cent or less of phenylephrine; (b) preparations for external use containing 1 per cent or less of phenylephrine.
PHENYLPROPANOLAMINE	in preparations for the relief of coughs or colds.
PHENYLTOLOXAMINE	(a) in oral liquid cough preparations containing 0.3 per cent or less of phenyltoloxamine; (b) in preparations labelled and packed as nasal preparations or eyedrops.
PHOLCODINE	when compounded with one or more other medicaments, in preparations containing 1 per cent or less of pholcodine.
POTASSIUM CHLORATE	except in preparations containing 10 per cent or less of potassium chlorate.
PROMETHAZINE	(a) in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less; (b) in oral liquid cough preparations containing 0.3 per cent or less of promethazine; (c) in preparations labelled and packed as nasal preparations or eyedrops.
PROPANTHELINE	in preparations for topical use.
PROPYLHEXEDRINE	in appliances for inhalation in which the substance is absorbed upon an inert solid material.
PROPYPHENAZONE	
PYRANTEL	for human therapeutic use.
PYRROBUTAMINE	in preparations labelled and packed as nasal preparations or eyedrops.
SILVER NITRATE	
SODIUM NITRITE	for therapeutic use.
STAPHISAGRIA	except in preparations containing 0.2 per cent or less of staphisagria.
STRAMONIUM	in preparations containing 0.25 per cent or less of the alkaloids calculated as hyoscyamine, except preparations for smoking or burning.
TETRAHYDROZOLINE	
THENALIDINE	in preparations labelled and packed as nasal preparations or eyedrops.
THENYLDIAMINE	(a) in oral liquid cough preparations containing 0.3 per cent or less of thenyldiamine; (b) in preparations labelled and packed as nasal preparations or eyedrops.
TOLPROPAMINE	in preparations labelled and packed as nasal preparations or eyedrops.
TRAMAZOLINE	
TRIMEPRAZINE	(a) in oral liquid cough preparations containing 0.3 per cent or less of trimeprazine; (b) in preparations labelled and packed as nasal preparations or eyedrops.
TRIMIZOLINE	
TRIMETHOBENZAMIDE	(a) in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less; (b) in preparations labelled and packed as nasal preparations or eyedrops.
TRIPELENNAMINE	in preparations labelled and packed as nasal preparations or eyedrops.
TRIPOLIDINE	(a) in oral liquid cough preparations containing 0.3 per cent or less of tripolidine; (b) in preparations labelled and packed as nasal preparations or eyedrops.
TYMAZOLINE	
VIPRYNIUM	
XYLOMETAZOLINE	
ZINC PYRITHIONE	except in preparations containing 2 per cent or less of zinc pyrithione.

Schedule 3

Delete the present entries and replace with the following:

ADRENALINE	in preparations containing 1 per cent or less of adrenaline except in preparations containing 0.01 per cent or less of adrenaline.

AMYL NITRITE	
ANTAZOLINE	except when included in Schedule 2 or Schedule 4.
BAMIPINE	except when included in Schedule 2 or Schedule 4.
BROMODIPHENHYDRAMINE	except when included in Schedule 2 or Schedule 4.
BROMPHENIRAMINE	except when included in Schedule 2 or Schedule 4.
BUCLIZINE	except when included in Schedule 2 or Schedule 4.
BUFEXAMAC	in preparations containing 5 per cent or less of bufexamac.
CARBINOXAMINE	except when included in Schedule 2 or Schedule 4.
CHLORAL HYDRATE	in preparations containing 5 per cent or less of chloral hydrate, when packed in containers of 100 ml or less.
CHLOROPYRILENE	except when included in Schedule 2 or Schedule 4.
CHLORPHENIRAMINE	except when included in Schedule 2 or Schedule 4.
CHLORPHENOXAMINE	except when included in Schedule 2 or Schedule 4.
CHOLESTYRAMINE	for human therapeutic use.
CINNARIZINE	except when included in Schedule 2 or Schedule 4.
CLEMASTINE	except when included in Schedule 2 or Schedule 4.
CLEMIZOLE	except when included in Schedule 2 or Schedule 4.
COLESTIPOL	for human therapeutic use.
CYCLIRAMINE	except when included in Schedule 2 or Schedule 4.
CYPROHEPTADINE	except when included in Schedule 2 or Schedule 4.
DEPTROPINE	except when included in Schedule 2 or Schedule 4.
DEXBROMPHENIRAMINE	except when included in Schedule 2 or Schedule 4.
DEXCHLORPHENIRAMINE	except when included in Schedule 2 or Schedule 4.
DIMENHYDRINATE	except when included in Schedule 2 or Schedule 4.
DIMETHINDENE	except when included in Schedule 2 or Schedule 4.
DIMETHOTHIAZINE	except when included in Schedule 2 or Schedule 4.
DIPHENHYDRAMINE	except when included in Schedule 2 or Schedule 4.
DIPHENYLPYRALINE	except when included in Schedule 2 or Schedule 4.
DOXYLAMINE	except when included in Schedule 2 or Schedule 4.
EMBRAMINE	except when included in Schedule 2 or Schedule 4.
FLAVOXATE	
HALOPYRAMINE	except when included in Schedule 2 or Schedule 4.
HISTAPYRRODINE	except when included in Schedule 2 or Schedule 4.
INSULIN	and preparations containing the specific hypoglycaemic principle of the pancreas.
ISOPRENALINE	in preparations containing 1 per cent or less of isoprenaline except when contained in metered aerosols delivering more than 80 micrograms per metered dose.
MEBHYDROLIN	except when included in Schedule 2 or Schedule 4.
MEPYRAMINE	except when included in Schedule 2 or Schedule 4.
MERCUROUS CHLORIDE	except when included in Schedule 4 or Schedule 6.
METHAPYRILENE	except when included in Schedule 2 or Schedule 4.
METHDILAZINE	except when included in Schedule 2 or Schedule 4.
NITRAZEPAM	when supplied in preparations of 5 mg or less per adult dosage unit in packs of 10 doses or less.
ORCIPRENALINE	in metered aerosols delivering 750 micrograms or less of orciprenaline per metered dose.
PHENINDAMINE	except when included in Schedule 2 or Schedule 4.
PHENIRAMINE	except when included in Schedule 2 or Schedule 4.
PHENYLPROPANOLAMINE	except when included in Schedule 2 or Schedule 4.
PHENYLTOLOXAMINE	except when included in Schedule 2 or Schedule 4.
PROMETHAZINE	except when included in Schedule 2 or Schedule 4.
PYRROBUTAMINE	except when included in Schedule 2 or Schedule 4.
SALBUTAMOL	in metered aerosols delivering 100 micrograms or less of salbutamol per metered dose.
SANTONIN	
TERBUTALINE	in metered aerosols delivering 250 micrograms or less of terbutaline per metered dose.
THENALIDINE	except when included in Schedule 2 or Schedule 4.
THENYLDIAMINE	except when included in Schedule 2 or Schedule 4.
TOLPROPAMINE	except when included in Schedule 2 or Schedule 4.
TRIMEPRAZINE	except when included in Schedule 2 or Schedule 4.
TRIMETHOBENZAMIDE	except when included in Schedule 2 or Schedule 4.
TRIPELENNAMINE	except when included in Schedule 2 or Schedule 4.
TRIPOLIDINE	except when included in Schedule 2 or Schedule 4.

Schedule 4

Delete the following entries:

ANTAZOLINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
BAMIPINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
BROMODIPHENHYDRAMINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
BROMHEXINE	
BROMPHENIRAMINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
BUCLIZINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
CARBINOXAMINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
CETOXIME	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
CHLOROPYRILENE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
CHLORPHENIRAMINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
CHLORPHENOXAMINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
CINNARIZINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
CLEMASTINE	
CLEMIZOLE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
CYCLIRAMINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
CYPROHEPTADINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
DEPTROPINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
DEXBROMPHENIRAMINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
DIMENHYDRINATE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
DIMETHINDENE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
DIMETHOTHIAZINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
DIPHENHYDRAMINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
DIPHENYL PYRALINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
DOXYLAMINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
EMBRAMINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
HALOPYRAMINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
HISTAPYRRODINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
HOMOCHLORCYCLIZINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
MEBHYDROLIN	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
MEPYRAMINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
METHAPEHNILENE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
METHAPYRILENE	except when included in Schedule 3.
METHDILAZINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
NITROSCANATE	
PHENINDAMINE	
PHENIRAMINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
PHENYLTOLOXAMINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.

PROMETHAZINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
PYRATHIAZINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
PYROXAMINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
PYRROBUTAMINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
QUINETOLATE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
THENALIDINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
THENYLDIAMINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
THONZYLAMINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
TOLPROPAMINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
TRIMEPRAZINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
TRIPELENNAMINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
TRIMETHOBENZAMIDE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.
TRIPOLIDINE	except in preparations labelled and packed for the treatment of motion sickness in packs of 10 doses or less.

Schedule 4

Amend the entries under:

ACETYLDIHYDROCODEINE to read:

ACETYLDIHYDROCODEINE when compounded with one or more other medicament:

(a) in divided preparations containing not more than 100 mg of acetyldihydrocodeine per dosage unit; or

(b) in undivided preparations with a concentration of not more than 2.5 per cent of acetyldihydrocodeine;

except when included in Schedule 2.

ANTIBIOTICS to read:

(b) animal feedstuffs for growth promotion containing bacitracin and its salts, erythromycin, flavophospholipol, oleandomycin and its salts, tylosin and its salts and virginiamycin and its salts in concentration of 50 ppm or less of the total active antibiotic principle;

(c) preparations containing 20 ppm or less of hygromcyin; and milk replacers for calves and starter rations for pigs containing bacitracin and its salts, erythromycin and tylosin and its salts in concentrations of 100 ppm or less of the total antibiotic principle;

(d) Avoparcin when intended for use as an animal feed additive.

BORON COMPOUNDS to read:

BORON COMPOUNDS for human therapeutic or cosmetic use except:

(a) in preparations for external use containing 1 per cent or less of boron;

(b) in unit dose preparations for periodontal disease containing 100 mg or less of boron.

CODEINE to read:

CODEINE when compounded with one or more other medicament:

(a) in divided preparations containing not more than 100 mg of codeine per dosage unit; or

(b) in undivided preparations with a concentration of not more than 2.5 per cent of codeine,

except when included in Schedule 2.

DIHYDROCODEINE to read:

DIHYDROCODEINE when compounded with one or more other medicament:

(a) in divided preparations containing not more than 100 mg of dihydrocodeine per dosage unit; or

(b) in undivided preparations with a concentration of not more than 2.5 per cent of dihydrocodeine;

except when included in Schedule 2.

ETHYLMORPHINE to read:

ETHYLMORPHINE when compounded with one or more other medicament:

(a) in divided preparations containing not more than 100 mg of ethylmorphine per dosage unit; or

(b) in undivided preparations with a concentration of not more than 2.5 per cent of ethylmorphine;

except when included in Schedule 2.

NICOCODINE to read:

NICOCODINE when compounded with one or more other medicament:

(a) in divided preparations containing not more than 100 mg of nicocodine per dosage unit; or

(b) in undivided preparations with a concentration of not more than 2.5 per cent of nicocodine;

except when included in Schedule 2.

NICODICODINE to read:

NICODICODINE when compounded with one or more other medicament:

(a) in divided preparations containing not more than 100 mg of nicodicodine per dosage unit; or

(b) in undivided preparations with a concentration of not more than 2.5 per cent of nicodicodine;

except when included in Schedule 2.

NITRAZEPAM to read:

NITRAZEPAM except when included in Schedule 3.

NORADRENALINE to read:

NORADRENALINE (excluding its derivatives)

NORCODEINE to read:

NORCODEINE when compounded with one or more other medicament:

(a) in divided preparations containing not more than 100 mg of norcodeine per dosage unit; or

(b) in unidivided preparations with a concentration of not more than 2.5 per cent of norcodeine;

except when included in Schedule 2.

ORCIPRENALINE by adding:

except when included in Schedule 3.

PHOLCODINE to read:

PHOLCODINE when compounded with one or more other medicament:

(a) in divided preparations containing not more than 100 mg of pholcodine per dosage unit; or

(b) in undivided preparations with a concentration of not more than 2.5 per cent of pholcodine;

except when included in Schedule 2.

PRINDOLOL to read:

PINDOLOL

SALBUTAMOL by adding:

except when included in Schedule 3.

TERBUTALINE by adding:

except when included in Schedule 3.

TRICLOFOS to read:

TRICLOFOS

Schedule 4

New entries:

ANTAZOLINE	in preparations for dermal or parenteral use.
APOMORPHINE	
BAMIPINE	in preparations for dermal or parenteral use.
BROMODIPHENHYDRAMINE	in preparations for dermal or parenteral use.
BROMPHENIRAMINE	in preparations for dermal or parenteral use.
BUCLIZINE	in preparations for dermal or parenteral use.
BUMETANIDE	
CARBINOXAMINE	in preparations for dermal or parenteral use.
CEPHRADINE	
CEPHAPIRIN	
CHLOROPYRILENE	in preparations for dermal or parenteral use.
CHLORPHENIRAMINE	in preparations for dermal or parenteral use.
CHLORPHENOXAMINE	in preparations for dermal or parenteral use.
CINNARIZINE	in preparations for dermal or parenteral use.
CLEMASTINE	in preparations for dermal or parenteral use.
CLEMIZOLE	in preparations for dermal or parenteral use.
COLCHICINE	
CYCLIRAMINE	in preparations for dermal or parenteral use.
CYPROHEPTADINE	in preparations for dermal or parenteral use.
DEPTROPINE	in preparations for dermal or parenteral use.
DESMOPRESSIN (D.D.A.V.P.)	

DEXBROMPHENIRAMINE	in preparations for dermal or parenteral use.
DEXCHLORPHENIRAMINE	in preparations for dermal or parenteral use.
DIMENHYDRINATE	in preparations for dermal or parenteral use.
DIMETHINDENE	in preparations for dermal or parenteral use.
DIMETHOTHIAZINE	in preparations for dermal or parenteral use.
DIPHENHYDRAMINE	in preparations for dermal or parenteral use.
DIPHENYLPYRALINE	in preparations for dermal or parenteral use.
DISOPYRAMIDE	
DOPAMINE	
DOTHIEPIN	
DOXYLAMINE	in preparations for dermal or parenteral use.
EMBRAMINE	in preparations for dermal or parenteral use.
HALOPYRAMINE	in preparations for dermal or parenteral use.
HISTAPYRRODINE	in preparations for dermal or parenteral use.
HYPOTHALMIC RELEASING FACTORS	when used for diagnostic purposes.
MEBHYDROLIN	in preparations for dermal or parenteral use.
MEPYRAMINE	in preparations for dermal or parenteral use.
METHAPYRILENE	in preparations for dermal or parenteral use.
METHDILAZINE	in preparations for dermal or parenteral use.
METOPROLOL	
D-PENICILLAMINE	
PHENINDAMINE	in preparations for dermal or parenteral use.
PHENIRAMINE	in preparations for dermal or parenteral use.
PHENYLTOLOXAMINE	in preparations for dermal or parenteral use.
PROMETHAZINE	in preparations for dermal or parenteral use.
PYRROBUTAMINE	in preparations for dermal or parenteral use.
SODIUM NITROPRUSSIDE	for human therapeutic use.
THENALIDINE	in preparations for dermal or parenteral use.
THENYLDIAMINE	in preparations for dermal or parenteral use.
TOLPROPAMINE	in preparations for dermal or parenteral use.
TRIMEPRAZINE	in preparations for dermal or parenteral use.
TRIMETHOBENZAMIDE	in preparations for dermal or parenteral use.
TRIPELENNAMINE	in preparations for dermal or parenteral use.
TRIPOLIDINE	in preparations for dermal or parenteral use.

Schedule 5.

New entries:

BENDIOCARB	in preparations containing 2 per cent or less of bendiocarb.
SODIUM CHLORATE	

Schedule 5

Amend the entry under BORON COMPOUNDS to read:

BORON COMPOUNDS except:

(a) in preparations containing 1 per cent or less of boron

(b) in soap powders, powder detergents and bleaches

(c) in unit dose preparations for periodontal disease containing 100mg or less of boron

(d) when included in Schedule 4

Schedule 6

New entries:

DICLOFOP-METHYL	
2-(2', 4'-DIMETHYL-PHENYLIMINO)- 3-METHYL-4-THIAZOLINE	
DIUREDOSAN	
NITROSCANATE	
NOVOBIOCIN	in preparations for intramammary infusion in animals when suitably coloured with Brilliant Blue FCF or other approved colour as a marker and when packed in applicator devices specially designed for the purpose.

OLAQUINDOX	when intended for use as a growth promotant in pigs.
PERFLUIDONE	
SULPHAQUINOXALINE	when packed and labelled for use as a coccidiostat in poultry except preparations containing 200 ppm or less of sulphaquinoxaline.
O-TOLIDINE	when packed and labelled in concentrations of 0.1 per cent or less of o-tolidine for the testing of water.

Schedule 6

Amend the entry under BENDIOCARB to read:

BENDIOCARB	in wettable powders containing 80 per cent or less of bendiocarb and when packed in containers or primary packs containing not less than 100 g of bendiocarb.

Amend the entry under BENZYL PENICILLIN:

by deleting paragraph (b).

Amend the entry under CHLORTETRACYCLINE:

by deleting paragraph (c).

Amend the entry under EPICHLOROHYDRIN to read:

EPICHLOROHYDRIN except in preparations containing 2 per cent or less of epichlorohydrin.

Amend the entry under OXYTETRACYCLINE:

by deleting paragraph (c).

Schedule 6

Delete the entries for:

BORON COMPOUNDS
CHLORAMPHENICOL
NICLOSAMIDE
SODIUM CHLORATE
SULPHANILAMIDE

Schedule 7

Amend the entry under BENDIOCARB to read:

BENDIOCARB except when included in Schedules 5 or 6. This substance should be available to licensed pest control operators, bonafide primary producers for approved pesticides purposes and approved research purposes.

Amend the entry under BENZENE (2) to read:

BENZENE (a) in preparations containing 1.5 per cent v/v or less of benzene.

Amend the entry under O-TOLIDINE by adding:

except when included in Schedule 6 and in solid state diagnostic therapeutic reagents.

Schedule 8

Amend the entries under:

ACETYLDIHYDROCODEINE to read:

ACETYLDIHYDROCODEINE except when included in Schedules 2 or 4.

CODEINE to read:

CODEINE except when included in Schedules 2 or 4.

ETHYLMORPHINE to read:

ETHYLMORPHINE except when included in Schedules 2 or 4.

DIHYDROCODEINE to read:

DIHYDROCODEINE except when included in Schedules 2 or 4.

NICOCODINE to read:

NICOCODINE except when included in Schedules 2 or 4.

NICODICODINE to read:

NICODICODINE except when included in Schedules 2 or 4.

NORCODEINE to read:

NORCODEINE except when included in Schedules 2 or 4.

PHOLCODINE to read:

PHOLCODINE except when included in Schedules 2 or 4.

Appendix A

New entries:

(t) 'Whenever liquid concentrate is handled, always wear an approved respirator, polyethylene gloves, rubber boots and goggles. During application always wear a respirator if exposed to vapour particularly when working in enclosed areas such as a glasshouse.'
1, 3-Dichloropropene

(u) 'An anticholinesterase compound' (to appear immediately below the approved name on the label)
Organophosphorous and carbamate compounds for pesticidal use.

New entry under warning statement (k):

Sulphaquinoxaline when packed and labelled for use as a coccidiostat in poultry except preparations containing 200 ppm or less of sulphaquinoxaline.

Delete the entries under warning statement (k) for:

Chloramphenicol
Sulphanilamide

Appendix B

First Aid Instructions

New entries:

Diclofop-methyl	a, b
2-(2', 4'-Dimethyl-phenylimino)-3-methyl-4-thiazoline	a, b, f
Diuredosan	a, b
Olaquindox	a, b
Perfluidone	a, b

Appendix XVI — Plan for the eradication of rabies

1. **Introduction**

1.1 If rabies occurs in Australia it will most likely follow the illegal entry by sea or air vessel of a dog, cat or other animal.

1.2 It could be introduced by legally imported animals in which event it might be expected to occur during the quarantine period although a case with an unusually long incubation period or a silent case may pass through quarantine and cause an outbreak.

1.3 Bats have not been incriminated in the Pacific area but should not be overlooked as a possible source of introduction of the virus since fruit eating species at least, move between Australia and the countries to the north.

1.4 The disease in animals might not be recognised initially and the first indication of its presence may be a suspected or confirmed human case.

1.5 Veterinarians in particular should be constantly on the alert for the disease. Rabies should always be considered in the differential diagnosis when any syndrome referable to the central nervous system is encountered in any species. Early in the disease changed behaviour may be seen in dogs and cats — normally docile animals may become vicious and vice versa: they may try to hide under furniture, etc. In horses and cattle furious signs are common early, leading to paralysis. In cattle the latter may be confused with hypocalcaemia, post-parturient paralysis, spinal fracture, etc. Feral and native species may appear tame perhaps wandering into human habitation and nocturnal species may be found at large during the day.

1.6 Each year specimens from a number of animals are examined at the reference laboratory, Commonwealth Serum Laboratories, Parkville, Melbourne, and care should be taken that the disease is not overlooked because of failure to have specimens checked as a precaution.

2. **Procedure when rabies is suspected**

2.1 When an animal is suspected of having rabies every effort should be made to capture and confine* it for further clinical observation. This may be in a strong cage, a locked room or garage, a secure pen or in the case of large animals, a secure yard, pen or shed.

2.2 Animals with rabies require stronger and more secure means of restraint than normal ones. Horses in the furious phase may, for example, kick a shed to pieces unless very strongly built.

2.3 If a suspected case is first presented at a veterinary clinic it should be hospitalised well away from other animals.

2.4 If it is confined on other premises, e.g., if locked in a room or garage, the owner or responsible person should be instructed that no animals are to be allowed to leave the premises and he should be warned of the risks involved.

2.5 If the animal cannot be safely confined and therefore constitutes a risk to people or other animals it should be destroyed immediately in such a manner that the brain will not be damaged. Shooting through the heart is the best method.

2.6 In any of these situations the nearest official Veterinary Officer or the Chief Veterinary Officer for the State/Territory must be contacted and advised regarding the circumstances and the action taken. This having been done the responsibility for further action lies with the State/Territory veterinary authorities.

2.7 Rabies is an alarming disease in the public mind and its possible presence may give rise to considerable apprehension or even panic amongst people involved. Therefore considerable discretion should be used in conversations with lay persons before a positive diagnosis has been obtained. Specific mention of the possibility of rabies should be avoided unless it becomes essential to obtain compliance with instructions.

2.8 Rabies is almost always a fatal disease in man. When humans are bitten or suspected of having been bitten in suspicious circumstances it is most important that the animal concerned be traced and captured so that a conclusive diagnosis can be made, whether positive or negative.

3. **Precautions against exposure**

3.1 Full safety precautions should be taken when handling live or dead potentially rabid animals. Nets and loops should be used for small animals and ropes or other restraint for large species. When the risk is judged to be too great to justify handling or escape is likely, destruction should be resorted to at once.

*An appropriate warning notice of confinement to be prominently displayed.

3.2 Necropsy of rabid animals presents a risk so the animals head should be fixed with a vice or other suitable equipment heavy gloves should be worn and the eyes and face protected with goggles or a face shield. (See Exotic Diseases of Animals – A Manual for Diagnosis. P77).

3.3 Virus is released during trituration and centrifugation of rabies infected tissues. Rubber teats should be used on pipettes and syringes and trituration apparatus should be checked for leaks before use.

3.4 Should accidental exposure occur as when a person is bitten, saliva is splashed on the hands or face or suspensions containing virus are spilled or splashed, first aid should be applied immediately and medical attention sought as set out in W.H.O. TECHNICAL REPORT SERIES No. 523 9.ii.

3.5 Because of the likelihood of involvement of humans as patients in an outbreak a close working relationship must be maintained with the medical profession at all levels but especially in the field where the veterinarian has a responsibility to ensure that all relevant information in his possession is brought to their notice so that people judged to be at risk can be given attention as necessary. Accuracy of history and particulars of identification and speed are of utmost importance in this situation.

3.6 Persons who work with rabies or rabies virus should be vaccinated and should be checked serologically to ensure they have satisfactory antibody titres.

4. Circumstances in which rabies will be suspected

4.1 Rabies may be suspected and subsequently brought to notice in any of the following circumstances:

(a) When humans are bitten by dogs or other animals. Reports in these cases will come from a medical practitioner, the owner of the animal concerned or other persons.

(b) When syndromes referable to the nervous system or other suggestive signs in any of the species of domestic animals are observed by veterinarians.

(c) When clinical disease or death of animals occurs in quarantine.

(d) When clinical disease or death of animals occurs on board sea or air craft.

(e) When sickness or death associated with nervous symptoms is seen in feral or native animals. Foxes, dingoes and feral cats are the ones most likely to be involved.

(f) When histological lesions of an unidentifiable encephalitis are seen at laboratory examination of specimens submitted for routine diagnosis.

5. Field action following a report

5.1 When a suspected case is reported by a veterinary or medical practitioner or other person to a Veterinary Officer he will make an investigation immediately.

5.2 If the animal is at large every effort should be made to capture and confine it. If this is not possible it should be destroyed by shooting through the heart.

5.3 If captured and confined the next decision to take is whether it should be held for observation or destroyed for confirmatory tests. There are three circumstances in which decision might be taken to destroy the animal at once, namely:

(a) When a person is known or believed to have been exposed.

(b) When transmission to another animal, not under confinement, is believed to have occurred.

(c) When for safety or security reasons keeping the animal alive is considered unwise.

5.4 In (a) and (b) any advantage to be gained by further observation is overridden by the urgency of diagnostic tests so that if positive, vaccination can be commenced at once in the former event and control and eradication in the latter, whilst in regard to (c) the important considerations are ensuring the animal does not escape or that people or other animals are not unnecessarily exposed. Nevertheless, medical opinion should be taken into consideration in deciding the course to follow in regard to (a).

N.B. The reliability of the fluorescent antibody test is such that it is no longer imperative that the disease run its full course for an accurate diagnosis to be made and in the circumstances above, immediate destruction is the preferred course.

5.5 If the animal is to be kept alive the next consideration is where it might be held most securely.* As a general rule approval would only be given to retaining it for observation at the local site if it is securely held in a veterinary hospital or quarantine station or where in the case of dogs or cats the animal is already in a room from which attempts to remove it would present a considerable risk. In the latter case, exists should be securely locked and the animal left where it is.

As a general rule large animals will not be moved and if they cannot be securely confined they should be destroyed.

5.6 If it is possible the animal should be conveyed to the State/Territory diagnostic station or other suitable institution. During transfer it should be escorted by trained personnel.

*An appropriate warning notice of confinement to be prominently displayed.

5.7 The decision as to which course of action is to be taken will generally be made after consultation between the field Veterinary Officer and the Divisional Veterinary Officer and/or the Chief Veterinary Officer.

6. **Destruction and necropsy**

6.1 If death occurs or the animal has been destroyed for one or other reason in the field, the Veterinary Officer will collect the brain and salivary glands for laboratory examination. This should be done in accordance with the procedure laid down in the Manual for Diagnosis of Exotic Diseases of Animals. Note that the brain may be forwarded to the laboratory in the cranium, thus reducing the work (and risk) involved on the part of the field veterinarian.

6.2 If in the process of destruction the brain has been damaged (as when shot through the head) available brain tissue should be forwarded together with the salivary glands. Even though the preferred portions of the brain cannot be retrieved, brain tissue is still the most important material for diagnostic purposes.

6.3 Should a diagnosis of rabies not be confirmed it is important that the cause of sickness and death be established. Therefore, when specimens for rabies have been collected a complete necropsy should be done and specimens collected for this purpose. These will include:

(a) Portions of liver and kidney for toxicological examination. Brain tissue not used for other purposes is also suitable for toxicology.

(b) Pipettes of liver, kidney, lung and brain for microbiological examination.

(c) Pieces of liver, kidney and lung in 10% formol saline and brain in acetic acid and alcohol for histological examination.

6.4 The remainder of the carcass should be burnt or buried.

7. **Submission of specimens**

7.1 All specimens together with completed specimen advice sheets must be forwarded to the official State/Territory diagnostic laboratory by the fastest possible route.

7.2 The officer-in-charge should be advised by telephone or telegram of details of despatch including the specimens sent, packaging, flight number and estimated time of arrival if sent by air or appropriate details in respect of trains or other form of transport by which the material is sent.

8. **Advice to Chief Veterinary Officer**

8.1 On satisfying himself that all necessary action to this point has been completed the Veterinary Officer should advise the Divisional Veterinary Officer or the State Chief Veterinary Officer to this effect and seek further instructions. If he has not already done so he must ensure that the following information is transmitted:

(a) Name and address of the owner or occupier of the premises on which the case was detected.

(b) The precise action taken, i.e. whether the animal was destroyed, is being held at the point of detection or some other local site or is being transferred elsewhere.

(c) Circumstances surrounding the matter, e.g. whether humans have been exposed or are at risk; whether only one animal is affected and if others may have been exposed and/or moved.

(d) Information as to the origin of the outbreak and previous movements of the animal.

(e) Whether the matter has been discussed with the local medical officer or other persons in responsible positions.

(f) Accidental exposure sustained by himself or associates.

9. **Action by the State/Territory diagnostic laboratory**

9.1 If the suspected animal is to be held at the laboratory the officer-in-charge will arrange for its reception and secure confinement in isolation.

9.2 He will have it kept under observation and should death be imminent have a necropsy performed and specimens collected and processed in accordance with the Manual for Diagnosis of Exotic Diseases of Animals.

9.3 Specimens for differential diagnosis will be collected and held at the laboratory pending a diagnosis in regard to rabies. Should this be negative he will arrange for examination of other specimens with a view to establishing a diagnosis.

9.4 If specimens are despatched from the field he will arrange for their collection and processing as above.

9.5 In either case he will forward specimens to the reference laboratory and notify the officer-in-charge by telephone or telegram of details of specimens sent, packaging and flight numbers and times of air craft or appropriate details of such other transport as is used.

9.6 He will advise the Chief Veterinary Officer of receipt of animals or specimens and the action taken in regard to them and on completion of examination for rabies will advise immediately whether it is positive or negative.

9.7 He will advise the outcome of diagnostic procedures applied for other diseases as soon as possible.

10. **Action by the reference laboratory**

10.1 The Officer-in-charge will arrange for specimens to be received and processed in accordance with the Manual for Diagnosis of Exotic Diseases of Animals.

10.2 He will advise the Chief Veterinary Officer of the State/Territory of origin of the specimens immediately a diagnosis is made in respect of rabies whether it be negative or positive.

10.3 In the event the diagnosis is negative he will examine the specimens for distemper and infectious hepatitis with a view to establishing the cause of sickness and/or death.

10.4 He will transmit his results of this examination to the Chief Veterinary Officer of the State/Territory concerned as soon as possible.

11. **Action by the Chief Veterinary Officer**

11.1 He will decide in discussion with the field Veterinary Officer and/or the Divisional Veterinary Officer what action is to be taken at field level initially, i.e. whether to confine the suspected animal locally, move it to some other place or destroy it at once.

11.2 If there is a history of known or suspected human exposure he will advise the Chief Medical Officer of the State/Territory concerned.

11.3 If either laboratory provides a presumptive diagnosis of rabies he will advise the Commonwealth Minister for Health, the Director-General of Health and the Assistant Director-General (Animal Quarantine), Commonwealth Department of Health; all other Chief Veterinary Officers; the Chief, Division of Animal Health, CSIRO; and the State/Territory Chief Medical Officer.

11.4 Action by the State medical authorities may now become more urgent and he should ensure that ample liaison is developed with them.

11.5 He will then arrange for the appropriate responsible Veterinary Officer in the area:

(a) To site and set up an outbreak head-quarters and holding area. (This may not be necessary if the outbreak is at a quarantine station.)

(b) To commence the control programme, i.e. tracing dangerous contacts, determining the extent of spread, arranging movement controls within and in and out of the area and deployment of staff necessary to effect these activities.

(c) To arrange publicity and public relations activities.

(d) To collaborate with the medical profession, Local Government and other organisations in the area.

11.6 He will take steps to have put into effect such legislative measures as are necessary.

11.7 He will discuss with the Assistant Director-General (Animal Quarantine) of Health, arrangements and venue for a meeting of the Consultative Sub-Committee of the Animal Health Committee.

12. **Action by the Assistant Director-General (Animal Quarantine) of Health**

12.1 He will bring the outbreak to the notice of the Director-General of Health who may arrange for a meeting of the Veterinary Public Health Committee.

12.2 He will arrange a meeting of the Consultative Sub-Committee.

13. **Control and eradication**

Action taken will vary according to whether the outbreak occurs in quarantine premises, in an urban area or in a rural or sylvatic situation.

An outbreak in a quarantine premises presents the simplest situation since the animals are already confined (unless recently released animals are involved). In the latter event the areas in which they had lived may have to be treated as outbreak areas and action taken accordingly.

In urban rabies, dogs and cats are principally involved. In this situation the primary objectives are to eliminate all dangerous contacts, prevent further spread by confinement, strict movement controls and destruction of strays. Preventing the disease from reaching feral and native species, especially around the outskirts of smaller towns, is most important and may call for a trapping, poisoning and shooting campaign.

When the disease occurs in country areas, permanent establishment of the disease in feral and native species is the greatest danger to overcome. An essential in this situation therefore is to set up a buffer zone in which an intensive programme is instituted around the quarantine area to reduce their numbers.

13.1 RABIES IN QUARANTINE PREMISES

13.1.1 All animals will be confined to their respective quarters until dangerous contacts have been dealt with and areas contaminated by the infected animal have been cleansed and disinfected.

13.1.2 All animals in direct contact with the case, i.e. animals which have had access to the same cage, pen or yard or which have been separated only by a single wire fence within 14 days prior to the disease being detected, will be destroyed after appropriate advice to the owners.

13.1.3 Movements within the station must be carefully checked to ensure that any animal which might have been in direct contact for any part of the 14 day period is not overlooked.

13.1.4 All animals released from the quarantine station within the 14 days prior to the disease being detected will be recalled. These and all other animals in quarantine at the time will remain under restriction until nine months after the last case of rabies on the premises.

13.1.5 This period may be extended at the discretion of the Consultative Sub-Committee.

13.1.6 Should the disease develop within 14 days in an animal which has been recalled, the area in which it had previously been kept will be declared an outbreak area and action taken accordingly.

13.1.7 The entire area to which the affected animal had access will be thoroughly sprayed first with 5% v/v/aqueous commercial formaldehyde solution and then cleansed and finally disinfected.

13.1.8 All animals which die in quarantine will be submitted for necropsy and collection of specimens for examination for rabies and to establish the cause of death.

13.1.9 Animals other than those returning after release will not be admitted to the quarantine station until quarantine is lifted.

13.1.10 At the discretion of the Consultative Sub-Committee quarantine restrictions will be lifted nine months after the last case of the disease on the premises.

13.2 RABIES IN URBAN AREAS

13.2.1 An outbreak head-quarters and holding area(s) for impounding dogs and cats will be set up at sites selected by the officer nominated by the Chief Veterinary Officer to take charge of the outbreak.

13.2.2 Animals known or suspected of having been in direct contact with the affected animal will be traced and destroyed.

13.2.3 Quarantine will be applied over an area deemed appropriate by the officer-in-charge of outbreak headquarters in consultation with the Chief Veterinary Officer. An area with a radius of about 1.5 km beyond the limits of the affected animal's movements within 14 days prior to the onset of the disease should be sufficient.

13.2.4 Its actual extent will be determined by local topography, (e.g. rivers), and size of town or city, (e.g. in a small provincial town the entire town and the surrounding area might be included whilst in a large city one suburb or part thereof may be sufficient). It should be borne in mind, however, that a river may not represent an impassable barrier to a dog during the wandering phase of the disease.

13.2.5 A standstill order will be imposed on dogs and cats and other pets throughout the area until the extent of the outbreak has been determined. If deemed necessary, all points of ingress and egress will be controlled.

13.2.6 Thereafter these animals will not be permitted to move out of the area except as determined by the officer-in-charge, outbreak head-quarters.

13.2.7 Every household in the area will be visited and the number of cats, dogs and other pets and the degree of control over them recorded.

13.2.8 Dogs and cats of acknowledged ownership will be identified and confined. Dogs, cats and other pet animals may be exercised if restrained on leashes and in the case of dogs, muzzled.

13.2.9 Owners who are unwilling or unable to comply with 13.2.8 will be directed to place their animals in a nominated kennel in the quarantine area or other approved place and there be retained at their cost. Alternatively, animals will be destroyed.

13.2.10 Any animal found free will be caught, if possible, and impounded in the quarantine area where they may be destroyed at the discretion of the Chief Veterinary Officer.

13.2.11 Animals which cannot be captured will be destroyed.

13.2.12 Cats and dogs and other pets will be allowed entry to the area only if they can be confined by the owner.

13.2.13 Food animals may enter for sale and slaughter at abattoirs in the area. The use of dogs at yards and abattoirs will be permitted provided they are muzzled.

13.2.14 Race horses and ponies may leave the area for racing or other competitions and return.

13.2.15 Movement of animals through the area will be permitted provided they are transported in vehicles in such a way as to prevent escape.

13.2.16 Congregation of animals in the area, (e.g. at shows) will be permitted at the discretion of the Chief Veterinary Officer.

13.2.17 Pet shops will be kept under continuing surveillance and owners will be required to maintain a record of animal movements and sales.

13.2.18 Movement of animals in and out of zoos in the area will not be permitted.

13.2.19 Should the quarantine extend into peripheral parts of a town or city where feral or native animals are present, a trapping, poisoning or shooting campaign, or a combination of these, will be conducted to reduce their number to as low a level as possible.

13.2.20 The officer-in-charge, outbreak head-quarters will arrange for investigation and follow up of all reported suspected human exposures in liaison with the local medical officer(s).

13.2.21 He will keep the local public informed of requirements in relation to the campaign, progress made and events of public interest by meetings or through the media.

13.2.22 He will seek the co-operation of owners and practising veterinary surgeons in reporting animals with suggestive symptoms.

13.2.23 He will urge that all animals found dead within the area during the period of quarantine be submitted to the official diagnostic laboratory for necropsy and examination for rabies unless the cause of death can be otherwise established, having in mind that rabies may be responsible indirectly for death, e.g. it may cause an animal to be run down by a vehicle.

13.2.24 Specimens should be submitted for examination for rabies even though considerable postmortem degeneration has occurred.

13.2.25 If tracing activities show the disease to be established over a considerable area the Consultative Sub-Committee will make a decision as to whether eradication seems feasible. If it decides in the affirmative the quarantine area may need to be adjusted and further plans for eradication developed; if not guidelines for dealing with rabies as an enzootic disease will be necessary.

13.2.26 In the event that eradication is proceeded with and no further cases occur over a 9 month period the Consultative Sub-Committee will consider removal of the quarantine. Restrictions on animal movement may nevertheless be continued for a further period by the Sub-Committee if deemed necessary.

13.3 RABIES IN RURAL AREAS

13.3.1 An outbreak head-quarters and holding area(s) for impounding and quarantining dogs and cats will be set up at a site chosen by the Veterinary Officer nominated by the Chief Veterinary Officer to take charge of the outbreak.

13.3.2 Animals known or suspected of having been in contact with the affected animal will be traced and destroyed.

13.3.3 All animals remaining on the affected property(s) and others which may be involved by virtue of dangerous contacts will be kept under daily surveillance.

13.3.4 Dogs and cats will be confined to ensure that no contact occurs with wandering animals. Working dogs will be released as necessary but will be muzzled.

13.3.5 A standstill order will be declared over an area considered large enough to embrace the outbreak and will remain in force until its actual extent is determined.

13.3.6 An area up to 20 km in radius (the actual extent will be determined by the size of holdings in the area, the range of movements of likely hosts in the area and the terrain) from the actual outbreak will be declared a quarantine area.

13.3.7 A buffer area will be declared around the quarantine area up to 80 km wide depending on the factors mentioned in 13.3.6.

13.3.8 Intensive checking property by property will be undertaken to determine the distribution of likely contacts or actual disease and the boundaries of the quarantine and buffer areas will be adjusted in the light of findings therefrom.

13.3.9 Elsewhere in the quarantine area unclaimed and stray dogs and cats will be caught if possible and impounded in the quarantine area where they may be destroyed at the discretion of the Chief Veterinary Officer. Animals which cannot be captured will be destroyed.

13.3.10 An intensive campaign to reduce the number of feral and native animals to acceptable levels by poisoning, shooting and trapping will be mounted. To achieve the quickest possible

separation of those more likely to be involved from others one party should work from the boundary of the quarantine area inwards and another from the boundary outwards. Fencing may be used to assist in this exercise. The most likely reservoirs, namely foxes, feral dogs, dingoes, and feral cats should be given highest priority.

13.3.11 Movement of animals within, into or out of the areas, will not be permitted except in accordance with directions of the Chief Veterinary Officer.

13.3.12 Food animals will be permitted to move to slaughter or sale for slaughter.

13.3.13 Congregation of animals such as at shows, rodeos, etc., will be permitted at the discretion of the Chief Veterinary Officer.

13.3.14 The Officer-in-Charge, Outbreak Headquarters, will arrange for investigations and follow up of all reported human exposures in liaison with the local medical officer(s).

13.3.15 The Officer-in-Charge, Outbreak Headquarters, will keep the local public informed of requirements in relation to the campaign, progress made and events of public interest by meetings or through the media.

13.3.16 The Officer-in-Charge, Outbreak Headquarters, will seek the co-operation of owners and practising veterinary surgeons in relation to reporting animals with suggestive symptoms.

13.3.17 The Officer-in-Charge, Outbreak Headquarters, will require owners to report the findings of any sick or dead, domestic, feral or native animals. This will be continued for at least 18 months after the last case of rabies. Any such report should be investigated with a view to collecting specimens and establishing the cause.

13.3.18 At an appropriate time the Consultative Sub-Committee will take a decision as to whether the disease can be eradicated and further action will be determined in the light of this.

14. **Vaccines and vaccination**

14.1 Effective vaccines, both live and inactivated, to protect animals against rabies are now available. The decisions as to whether vaccine will be used and when, will be one for the Consultative Sub-Committee.

14.2 The choice as to the particular vaccine or vaccines will be a matter for the Sub-Committee.

14.3 The Officer in Charge, Outbreak Headquarters, will organise vaccination teams to operate from designated centres at which dogs and cats will be presented at prescribed times.

14.4 Vaccination will be compulsory and carried out free to owners with appropriate certification being provided.

14.5 Vaccinated animals will be identified and a register containing details of identification, ownership and vaccination history will be set up.

14.6 Vaccine will not be used in a post-exposure situation.

Annexure A

Vaccination for people travelling abroad to work in areas where rabies is endemic

The National Health and Medical Research Council, at its Seventy-fifth Session, November 1972, had issued a statement on rabies vaccine immunisation for persons travelling abroad to work in areas where rabies is endemic.

In view of recent developments, in particular the WHO recommendation related to the use of duck embryo vaccine in post-exposure treatment, this statement is being revised by the Council.

Prophylactic and therapeutic regimes being considered by the Council include the use of the 'Merieux' human diploid vaccine and 'Hyperab' Rabies Immune Globulin (Human).

Annexure B

Guide for post-exposure treatment

1. The sixth report of the World Health Organisation Technical Report Series No. 523, 1973 states:

> The recommendations given here are intended only as a guide. It is recognized that in special situations modifications of the procedures laid down may be warranted. Such special situations include exposure of young children and other circumstances where a reliable history cannot be obtained, particularly in areas where rabies is known to be endemic, even though the animal is considered to be healthy at the time of exposure. Such cases justify immediate treatment, but of a modified nature, for example, local treatment of the wound as described below followed by administration of a single dose of serum or 3 doses of vaccine daily; provided that the animal stays healthy for 10 days following exposure, no further vaccine need be given. Modification of the recommended procedures would also be indicated in a rabies-free area where animal bites are frequently encountered. In areas where rabies is endemic, adequate laboratory and field experience indicating no infection in the species involved may justify local health authorities in recommending no specific antirabies treatment.

Practice varies concerning the volume of vaccine per dose and the number of doses recommended in a given situation. In general, the equivalent of 2 ml of a 5% brain-tissue vaccine, or the dose recommended by the producer of a particular vaccine, should be given daily for 14 consecutive days. To ensure the production and maintenance of high levels of serum-neutralizing anti-bodies, booster doses should be given at 10, 20, and 90 days following the last daily dose of vaccine in all cases.

Combined serum-vaccine treatment is considered by the Committee as the best specific treatment available for the post-exposure prophylaxis of rabies in man. Experience indicates that vaccine alone is sufficient for minor exposures. Serum should be given in a single dose of 40 IU per kg of body weight for heterologous serum and 20 IU per kg of body weight for human antirabies immunoglobulin; the first dose of vaccine is inoculated at the same time as the serum but at another site*. Sensitivity to hererologous serum must be determined before its administration.

Treatment should be started as early as possible after exposure but in no case should it be denied to exposed persons whatever time interval has elapsed.

In areas where antirabies serum is not available full vaccine therapy including 3 booster inoculations should be administered.

2. Local treatment of wounds involving possible exposure to rabies:—

A. RECOMMENDED IN ALL EXPOSURES

(i) *First-aid treatment*

Since elimination of rabies virus at the site of infection by chemical or physical means is the most effective mechanism of protection, immediate washing and flushing with soap and water, detergent, or water alone is imperative (recommended procedure in all bite wounds including those unrelated to possible exposure to rabies). Then apply either 40-70% alcohol, tincture or aqueous solutions of iodine, or 0.1% quaternary ammonium compounds.

(ii) *Treatment by or under direction of a physician*

(a) Treat as (i) above and then:

(b) apply antirabies serum by careful instillation in the depth of the wound and by infiltration around the wound;

(c) postpone suturing of wound; if suturing is necessary use antiserum locally as stated above;

(d) where indicated, institute antitetanus procedures and administer antibiotics and drugs to control infections other than rabies.

B. SPECIFIC SYSTEMIC TREATMENT

Nature of exposure	*Status of biting animal irrespective of previous vaccination*			*Recommended treatment*
		At time of exposure	*During 10 days*	
I. Contact, but no lesions; indirect contact; no contact	Rabid		–	None
II. Licks of the skin; scratches or abrasions;	(i)	Suspected as rabid (b)	Healthy	Start vaccine. Stop treatment if animal remains healthy for 5 days (a), (c)
minor bites (covered areas of arms, trunk and legs)			Rabid	Start vaccine; adm. serum upon positive diagnosis complete the course of vaccine.
	(ii)	Rabid; wild animal or animal unavailable for observations		Serum + vaccine
III. Licks of mucosa; major bites (multiple or on faces, head, finger or neck)	Suspect or rabid domestic or wild animal, unavailable for observation			Serum + vaccine Stop treatment if animal remains healthy for 5 days (a), (c)

(a) Observation period in this chart applies only to dogs and cats.

(b) All unprovoked bites in endemic areas should be considered suspect unless proved negative by laboratory examination (brain FA).

(c) Or if its brain is found negative by FA examination.

NOTE: Where soap has been used to clean wounds, all traces of it should be removed before the application of quaternary ammonium compounds because soap neutralizes the activity of such compounds.

*21 doses, plus 2 boosters, one 10 days after the 21st dose and one at least 20 days after the 21st (i.e. at least 10 days after the 1st booster).

Annexure C

Explanation of terms in the document

CHIEF VETERINARY OFFICERS

The Chief Veterinary Officer for each State and the Northern Territory is located as follows:

South Australia
Chief Veterinary Officer,
Department of Agriculture and Fisheries,
G.P.O. Box 1671,
Adelaide, S.A. 5001

Victoria
Chief Veterinary Officer,
Division of Animal Health,
Department of Agriculture,
G.P.O. Box 4041,
Melbourne, Vic. 3001

Northern Territory
Chief Veterinary Officer,
Animal Industry and Agriculture Branch,
Department of the Northern Territory,
P.O. Box 291,
Alice Springs, N.T. 5750

New South Wales
Chief,
Division of Animal Industry,
Department of Agriculture,
State Office Block,
Phillip Street,
Sydney, N.S.W. 2000

Tasmania
Chief Veterinary Officer,
Department of Agriculture,
G.P.O. Box 192B,
Hobart, Tas. 7001

Queensland
Director,
Division of Animal Industry,
Department of Primary Industries,
Comalco House,
Cnr. George and Ann Streets,
Brisbane, Qld. 4000

Western Australia
Chief,
Animal Division,
Department of Agriculture,
Jarrah Road,
South Perth, W.A. 6151

CHIEF HEALTH OFFICERS

Western Australia
Commissioner of Public Health,
60 Beaufort Street,
Perth, W.A. 6000

South Australia
Director-General of Public Health,
50 Pirie Street,
Adelaide, S.A. 5000

Victoria
Chief Health Officer,
Department of Health,
555 Collins Street,
Melbourne, Vic. 3000

New South Wales
Chairman,
Health Commission of New South Wales,
9-13 Young Street,
Sydney, N.S.W. 2000

Queensland
Director-General of Health and Medical Services,
Department of Health,
Administration Building,
George Street,
Brisbane, Qld. 4000

Tasmania
Director-General of Health Services,
Public Buildings,
34 Davey Street,
Hobart, Tas. 7000

Northern Territory
Director,
Department of Health,
M.L.C. Building,
Smith Street,
Darwin, N.T. 5790

Australian Capital Territory
Director-General of Health,
Commonwealth Department of Health,
P.O. Box 100,
Woden, A.C.T. 2606
Assistant Director-General,
(Animal Quarantine),
Commonwealth Department of Health,
P.O. Box 100,
Woden, A.C.T. 2606

RABIES REFERENCE LABORATORY

Director,
Commonwealth Serum Laboratories,
45 Poplar Road,
Parkville, Vic. 3052

COMMITTEES

Veterinary Public Health (Standing) Committee,
National Health and Medical Research Council,
P.O. Box 100,
Woden, A.C.T. 2606
Consultative Subcommittee of the Animal Health Committee,
Australian Agricultural Council,
The Bureau of Animal Health,
Department of Primary Industry,
Barton, A.C.T. 2600

PUBLICATION

Exotic Diseases of Animals — A Manual for Diagnosis
Commonwealth Department of Health, Service Publication (Animal Quarantine) Number 11;
Ed. D. T. Oxer, D.V.Sc., F.A. C.V.Sc., Australian Government Publishing Service 1972

Appendix XVII – Occupational health aspects of brucellosis

1. Identification of hazard

Since the introduction of pasteurisation of domestic milk supplies and reduction of brucella in dairy herds, human brucellosis has come to be recognised, for the most part, as an occupational disease, largely among veterinarians, farmers and abattoir workers engaged in the handling and processing of cattle from endemic areas of Australia. For practical purposes, occupational risks stop at the abattoir. Cases of human brucellosis are notifiable and, on a national level, data on the incidence of the disease is available in the Annual Reports of the Australian Director-General of Health. This data could be considered an under-estimate because of the incomplete notification of cases and the difficulties in diagnosis. The disease tends to be mis-diagnosed and un-diagnosed.

Human brucellosis may present in acute, sub-acute or chronic forms and, in each case, the clinical picture may vary considerably. In the chronic form symptomatology can be vague and mimic other systemic diseases and psychiatric disorders.

2. Prevention and control

The expeditious eradication of bovine brucellosis from cattle herds, in those parts of Australia where the disease is still endemic is the best form of prevention. As it may be some years, before the National Eradication Program has achieved its objectives (the present target being eradication in 8 years), other preventive programmes will be required in the meantime. Such programs involve segregation of cattle for bovine brucellosis at the processing plant, good occupational hygiene practices and personal protection.

The present system, which provides for the segregation of reactor cattle of tested herds from those of untested herds in holding pens and at processing times, should be strictly maintained and, where necessary improved. However this system should not be allowed to obscure the fact that infected animals may remain in the untested group. The continued use of segregation is therefore endorsed on the understanding that a greater risk of human infection rests in the reactor group than in the untested group. It also should be noted that tests for bovine brucellosis do not clearly indicate the infective status of the animal. Reactors may or may not be infectious. Since a potential occupational health hazard rests in both reactor and untested groups, preventive programs should be recommended for both groups.

Brucellosis reactor cattle should be slaughtered at the end of the day's kill. This provides an additional safeguard in that worker can be alerted to the fact that they are brucellosis reactors, and can then make sure that they take full personal hygiene precautions.

The principal modes of transmission are contact, inhalation, and ingestion of infected material from sources such as placentas, aborted and still born foetuses, udders, vaginal discharge, faeces, urine, contaminated utensils, machinery and floors of work areas. The prevention of human infection should therefore be focused on modes of transmission. Elementary hygiene precautions are more effective in preventing human brucellosis, especially washing of hands.

At all times dressing techniques, and particularly the handling of the uterus and udder, should be so as to minimise the dissemination of possible infective material.

At the best possible frequency, all utensils, instruments, machinery, chutes, floors and other areas of potential contamination should be made clean by the use of agents approved by the Department of Primary Industry and then sanitized with water at temperatures above that required to kill brucella. For general sanitising purposes, the Department of Primary Industry, requires the use of water at a minimum temperature of 82°C.

The efficacy of even full protective clothing is often illusory and can increase the risk of infection if worn without adequate education in its purpose. However, when this is provided at the request of employees, it should be practical, suitable to their physical comfort and appropriate instructions should be provided for its use and maintenance. Remembering that full personal hygiene is the best protection.

3. Diagnostic criteria and immunisation

DIAGNOSTIC GUIDELINES

(i) Diagnosis of brucellosis can be substantiated where a positive blood culture is obtained or where clinical signs of brucellosis are supported by a fourfold increase in brucella antibody as determined by approved serological tests. The diagnosis of chronic brucellosis may not be assisted by serological studies and rests on clinical manifestations and other investigations. Serological tests for brucellosis alone are not enough and it is necessary to exclude other diseases, in particular leptospirosis and Q fever.

(ii) Serological tests for brucellosis should be standardised and for this reason there is a need to designate approved laboratories and/or give directions to laboratories specifying tests and techniques. Standardisation of such tests is practised by veterinary laboratories involved in the National Brucella

Eradication Campaign. Serological examination of a specimen should include at least three tests, agglutination, complement fixation and anti-human globulin test (Coombs) on each of paired or multiple samples.

(iii) In chronic brucellosis, blood culture may be helpful and multiple specimens should always be taken, whenever practicable.

IMMUNISATION

A vaccine suitable for human beings is not at present available.

Appendix XVIII – Constitution, functions and membership of the Council

The National Health and Medical Research Council was constituted by the Governor-General by Order in September 1936. This original Order has been amended on a number of occasions to either alter the membership of the Council or to revise the Council's functions. The existing order which constitutes the National Health and Medical Research Council was made on 30 April 1975.

Functions of the Council

(a) To inquire into, advise and make recommendations to Australia and the States on matters of public health legislation and administration and on any other matters relating to health, medical and dental care and medical research;

(b) To advise the Minister on the application, and matters connected with the application, of the Medical Research Endowment Fund for the purposes of the Medical Research Endowment Act 1937;

(c) To advise and make recommendations to Australia on the expenditure of money on medical research and in connection with projects of medical research generally; and

(d) To inquire into and advise Australia and the States on the merits of reputed cures or methods of treatment that are from time to time brought forward for recognition.

Constitution

The Council shall consist of:

(a) the person for the time being occupying, or performing the duties of, the office of Director-General of Health, who shall be chairman;

(b) two officers of the Department of Health appointed from time to time by the Minister;

(c) a representative of the Commonwealth Serum Laboratories Commission appointed from time to time by the Minister;

(d) the person for the time being occupying, or performing the duties of, the office of Chairman of the Health Commission of New South Wales;

(e) the person for the time being occupying, or performing the duties of, the office of Chief Health Officer of the State of Victoria;

(f) the person for the time being occupying, or performing the duties of, the office of Director-General of Health and Medical Services of the State of Queensland;

(g) the person for the time being occupying, or performing the duties of, the office of Director-General of Public Health of the State of South Australia;

(h) the person for the time being occupying, or performing the duties of, the office of Commissioner of Public Health of the State of Western Australia;

(i) the person for the time being occupying, or performing the duties of, the office of Director-General of Health Services of the State of Tasmania; and

(j) fourteen other members appointed by the Minister. These persons shall be appointed for three years from the date of their appointments;

- (i) a person nominated by the Federal Council of the Australian Medical Association;
- (ii) a person nominated by the Royal Australasian College of Surgeons;
- (iii) a person nominated by the Royal Australasian College of Physicians;
- (iv) a person nominated by the Australian Council of the Royal College of Obstetricians and Gynaecologists;
- (v) a person nominated by the Council of the Royal Australian College of General Practitioners;
- (vi) a person nominated by the Royal College of Pathologists of Australia;
- (vii) a person nominated by the Australian Dental Association;
- (viii) a person nominated by the Australian Paediatric Association;
- (ix) a person nominated by the Royal Australasian College of Radiologists;
- (x) a person nominated by the Australian and New Zealand College of Psychiatrists;
- (xi) a person nominated by the Australian Federation of Consumer Organisations;
- (xii) a person jointly nominated by the Universities in Australia that have medical schools;
- (xiii) an eminent man who is not a medical practitioner or a dental practitioner; and
- (xiv) an eminent woman who is not a medical practitioner or a dental practitioner.

Membership

Dr Gwyn Howells, Director-General of Health, Canberra (Chairman).
Dr W. A. Langsford, representing the Department of Health.
Another representative of the Department of Health.
Dr N. J. McCarthy, representing the Commonwealth Serum Laboratories Commission.

Dr R. G. McEwin, Chairman, Health Commission of New South Wales.
Dr B. P. McCloskey, Chief Health Officer, Victoria.
Dr P. R. Patrick, Director-General of Health and Medical Services, Queensland.
Dr P. S. Woodruff, Director-General of Public Health, South Australia.
Dr J. C. McNulty, Commissioner of Public Health, Western Australia.
Dr G. Mackay-Smith, Director-General of Health Services, Tasmania.
Dr T. H. Hurley, representing the Federal Council of the Australian Medical Association.
Professor J. Ludbrook, representing the Royal Australasian College of Surgeons.
Professor P. I. Korner, representing the Royal Australasian College of Physicians.
Professor L. W. Cox, representing the Australian Council of the Royal College of Obstetricians and Gynaecologists.
Dr N. A. Andersen, representing the Royal Australian College of General Practitioners.
Dr R. G. Edwards, representing the Royal College of Pathologists of Australia.
Mr A. J. Bloomfield, representing the Australian Dental Association.
Dr B. W. Neal, representing the Australian Paediatric Association.
Dr B. Kynaston, representing the Royal Australasian College of Radiologists.
Dr G. L. Lipton, representing the Australian and New Zealand College of Psychiatrists.
Professor R. H. Thorp, representing the Australian Federation of Consumer Organisations.
Professor W. J. Simmonds, representing the Australian Universities having Medical Schools.
Mr J. A. Hancock, an eminent layman appointed by the Government.
Mrs D. E. H. Cavaye, an eminent laywoman appointed by the Government.
Dr K. W. Edmondson (Secretary).

Part 1: General organisation and administration of the council and its committees

(i) The Council should continue to meet regularly twice a year.

(ii) Each regular meeting of the Council should be preceded by meetings of the three Advisory Committees (Medical Research, Medicine and Public Health).

(iii) There shall be an Executive Committee of the Council which shall meet as frequently as the Chairman of the Council deems necessary or as requested by members of the Executive Committee.

(iv) In accordance with Section 10 of the Order in Council of 30 April 1975 the Council may set up such committees, constituted as the Council determines, as the Council considers necessary to assist in the exercise of any of its functions.

(v) A member of the Council, or of a committee of the Council, other than a public servant, service officer, or Member of Parliament, is entitled to be paid such allowances or expenses in respect of attendances at meetings of the Council or of a committee set up under Section 10 or the Order in Council as the case may be, as the Minister determines.

(vi) All committees of Council may, with the prior approval of the Chairman of the Council, set up subcommittees as they consider necessary to assist them in the fulfilment of their functions. The suggested terms of reference and membership of such subcommittees will be subject to further discussion and endorsement by the Executive Committee.

(vii) All committees and subcommittees of Council may, with the approval of the Chairman of the Council or the Executive Committee, set up working parties as deemed necessary to advance the work of committees and subcommittees. The membership of each working party shall always include one member of the parent committee or subcommittee who is designated leader of the working party. Members of working parties shall be eligible for fees and allowances at the rate ordinarily paid to members of committees and subcommittees.

(viii) Each standing committee and standing subcommittee should meet at least once in each calendar year.

(ix) The chairman or conveners of meetings of committees and subcommittees should make written requests to the Secretary of the Council for approval to hold such meetings, setting out the agenda, dates and places of the intended meetings, the members, co-opted members (if any) and observers (if any) who will be attending.

(x) The Chairman and Secretary of the Council are to be ex officio members of all committees and subcommittees of the Council.

(xi) The chairman of all committees of the Council should be appointed by the Council (Exception — see (xvi) below).

(xii) The chairmen of all committees and subcommittees may co-opt members and invite observers to attend specific meetings of their committees and subcommittees, providing that the prior permission of the Chairman of the Council is obtained (see (ix) above). Such co-opted members should be eligible for the fees and allowances payable to regular members, and may take part in but may not vote on the business of the meetings. Observers invited to attend meetings of committees and subcommittees may not take part in the business of meetings except on the invitation of the chairmen. They may not vote and will not be eligible for members' fees and allowances.

(xiii) With the exception of co-opted members and members appointed by the Chairman of the Council under clause (xvi), all other members of committees of the Council should be appointed by the Council or by the Executive Committee.

(xiv) Members of committees and subcommittees are normally appointed for a period of three years with the possibility of re-appointment for a further three years. Upon retirement, a period of three years shall elapse before a member becomes eligible for re-appointment.

(xv) The members of committees and subcommittees of Council should be elected on the basis of their value to committees or subcommittees as individuals and not as representatives of particular groups or organisations, except in the case of those committees and subcommittees approved by the Council to require State, group or organisation representation.

(xvi) Notwithstanding clause (xi) the Chairman of the Council (Director-General of Health of the Commonwealth Department of Health) may terminate the appointment of members of staff of the Commonwealth Department of Health to committees and subcommittees and replace them by other members as necessary.

(xvii) Notwithstanding the normal terms of appointment of members of committees and subcommittees, the Council may terminate the appointment of any member at any time.

(xviii) The functions and membership of the committees and subcommittees of Council should be formally reviewed every three years.

(xix) As soon as practicable after each meeting of a committee or subcommittee a report of matters dealt with at the meeting should be forwarded to the Secretary of the Council.

(xx) Whenever possible, the dates of committee and sub-committee meetings should be arranged to allow reports of the meetings (45 copies desirable) to reach the Secretary at least six weeks prior to the subsequent Council meetings (Exception — see (ii) above).

(xxi) Chairmen of committees of Council should present their reports to the relevant Advisory Committees whenever it is convenient to do so.

(xxii) The meetings and reports of all committees and subcommittees of Council are confidential (Exceptions — see (xxiii) and (xxiv) below).

(xxiii) All material from unpublished proceedings or reports of the Council, its committees and subcommittees shall be approved by the Council, or by the Chairman of the Council in consultation with the Chairman of the relevant Advisory Committee of the Council, before being submitted for publication.

(xxiv) When urgency requires it, a committee or subcommittee recommendation may, at the request of the Chairman, be forwarded to State Health or other appropriate authorities providing permission is obtained from both the Chairman of the Council and the Chairman of the relevant Advisory Committee of the Council.

(xxv) The Executive Committee shall be empowered to set up, in a situation which requires it, ad hoc working parties to investigate and report on matters of special importance, where no appropriate committee of the Council is in existence. Members of such working parties shall be eligible for fees and allowances payable to members of committees and subcommittees of the Council.

(xxvi) If the Executive Committee believes that the situation demands it, special reports of committees, sub-committees or working parties may be reproduced and made public, or forwarded to appropriate bodies or authorities, always providing that it is clear that such reports are issued without the endorsement of the Council.

(xxvii) Persons attending meetings of the Council, its committees and subcommittees or working parties, as members appointed by or on the nomination or with the approval of the Chairman of Council, shall be regarded as persons to whom the Compensation (Commonwealth Government Employees) Act applies.

Part 2: Interrelationship of the Council and its Committees (a) Guidelines

The following guidelines were adopted by the Council at its Eighty-first Session.

STATUS OF COMMITTEES

(i) *Standing Committees*

Broadly based committees covering a general field of expertise which provide, for the Council, advice on matters of concern and proposals for action within the field embraced by their terms of reference. In other words, they are expected to generate their own tasks taking into account priorities as they perceive them.

Normally, but not always, Standing Committees will report to the Council through an Advisory Committee.

(ii) *Reference Committees*

Report to the Council through an Advisory Committee on matters which have been specifically referred, in accordance with their terms of reference. Such committees are likely to be formed from members with more specific expertise.

(iii) *Ad hoc Committees*

Committees set up by the Council or an Advisory Committee to undertake a defined task within a set time limit.

(iv) *Subcommittees*

May be designated 'Standing', 'Reference' or 'Ad hoc'.

These are set up as sub-groups of Council committees with appropriate terms of reference. They are to be regarded as small, more expert groups contributing to the work of a committee.

Committees should only have subcommittees reporting to them upon the continuing areas of their tasks, or where there is a very special need. Short-term well defined tasks shall be undertaken by ad hoc subcommittees where it is necessary to draw expertise from a wide geographical area and where expenses may otherwise be substantial.

The chairman of a subcommittee should, if possible, be a member of the committee to which it reports in order to ensure proper interpretation of its reports.

The approval of the Council or the Chairman of the Council is required for the establishment of a Subcommittee.

(v) *Working Parties*

Where a detailed report is required on a well delineated topic and this can be undertaken by a group working in the same geographical area, then a working party shall be set up. Such a working party can meet as readily and frequently as required in order to complete its work with minimum delay and avoid travelling expenses.

The Chairman of the Council's approval will be required in order to provide sitting fees or other expenses for members. In setting up working parties, a committee should specify a time limit for completion of the referred task.

The use of working parties to prepare detailed draft reports will lessen the work of committees and therefore the frequency of their meetings.

TERMS OF REFERENCE AND THEIR INTERPRETATION

Unless a committee's authority has been carefully defined, the members may not know whether they are responsible for a decision, a recommendation, or merely inconclusive deliberation from which the Council may gain some insight. The members should also know the exact scope of subjects the group is expected to consider. If subjects that are beyond the committee's scope are introduced into the discussion, or avenues peripheral to the main problem allowed to open, then the committee business becomes inefficient. With authority and scope clear, committee members are better able to gauge whether they are meeting their responsibilities.

The Council often does not have sufficient time to properly consider the terms of reference of each new committee. Accordingly, matters relating to the establishment of committees are referred to the Executive Committee of the Council where the terms of reference are fully interpreted. Guidelines are made available to the new committee detailing the task ahead, and the time within which it is anticipated the task can be accomplished. At the same time the Executive Committee is in a position to determine whether the necessity exists for the formation of a full committee or whether an alternative system might be of more value.

ASSESSMENT OF EFFECTIVENESS OF COMMITTEES

Efforts are made to assess committee work, dissolving those no longer justified.

The authority to continually monitor the effectiveness with which committees fulfil their terms of reference lies within the functions of the Executive Committee.

MEMBERSHIP OF COMMITTEES

A further role of the Executive Committee in considering the establishment of committees is to select appropriate membership. Members of a committee are selected on the basis of the special skills and knowledge they possess and which are in accordance with the needs of that committee.

Size of committees

Membership of a committee should not ordinarily exceed six.

It may be necessary, however, for a committee to have all interested parties participate in its deliberations. This must be balanced against the danger of the group becoming too large or its members' views becoming incompatible.

The need for representation can, however, be overstressed. The true purpose of a committee may be accomplished by the prior scrutinising, as mentioned above, of the various facets of the committee's task, and by limiting the membership to individuals who can look at the problem as a whole rather than regard their membership as a means of protecting a narrow interest.

However, where a committee's work may be subject to criticism if all interested groups are not represented, the membership may be enlarged.

Length of appointment

On appointment members are advised that membership of NH & MRC committees is for a three year period only.

Continuation of membership is limited to a maximum of two three-year terms, with a fixed minimum period of three years before retiring members are eligible for reappointment. When appointments are confirmed it is made clear that reappointment is not automatic, but will depend on the future requirements of the committee.

In certain situations it may be desirable to reappoint a member who possesses unique skills. These circumstances are to be regarded as exceptional. In such an eventuality the provision relating to length of appointment may be waived. It may also be necessary to waive this rule in relation to members of the Council who serve as members of committees.

RECOMMENDATIONS OF COMMITTEES TO THE COUNCIL

Although Standing and Reference Committees are established to advise the Council, the recommendations they formulate may be amended by the Advisory Committees to which they report and the original recommendations although forwarded to the Council in the reports of committees may not therefore be closely considered by the Council.

When an amended committee recommendation is submitted to the Council, the original recommendation is shown in the Advisory Committee's report together with an accompanying explanation for the changes made. This ensures that due consideration is given to the committee's deliberations.

Part 4: Terms of reference and membership of Committees

Triennium 1 January 1976 to 31 December 1978

Section (a) Executive Committee and Publications Committee

Section (b) Medical Research Advisory Committee and associated Committees

Section (c) Medicine Advisory Committee and associated Committees

Section (d) Public Health Advisory Committee and associated Committees

Section (a): Executive Committee and Publications Committee

EXECUTIVE COMMITTEE

Terms of reference

(i) To act as the executive organ of the Council.

(ii) To advise the Council on the priorities and organization of the work of the Council and its committees.

(iii) To take action on behalf of the Council in situations where urgent advice is required on matters within the competence of the Council, in situations where the normal processes of the Council are inappropriate.

(iv) To keep under regular review the functions, work and composition of the Council's committees and subcommittees.

(v) To consider for approval requests by committees and subcommittees to set up expert groups as deemed necessary to advance their work.

(vi) Where the situation demands, to approve for production and distribution to appropriate bodies or to make public, special reports of committees, subcommittees or expert working parties always providing that it is clear that such reports are issued without the endorsement of the Council.

(vii) To perform any other functions as the Council may from time to time determine.

Composition and Constitution

Chairman of the Council or his nominee (Chairman)

Chairman of the Medical Research Advisory Committee or his nominee

Chairman of the Medicine Advisory Committee or his nominee

Chairman of the Public Health Advisory Committee or his nominee

A lay member of the Council

Up to three other members of the Council

The Secretary of the Council

Meetings of the Committee shall be held at such intervals as the Chairman of the Council deems necessary or as requested by members.

Reports of the Committee will be presented at each meeting of the Council and will precede all other reports presented to the Council.

PUBLICATIONS COMMITTEE

Terms of reference

To enquire into and report to the Council on the preparation, printing and distribution of NH & MRC publications.

Membership

Principal Executive Officer, NH & MRC Division, Commonwealth Department of Health (Chairman and Convener).

An officer of the Public Relations Branch, Commonwealth Department of Health.

An officer of the Management Services Division, Commonwealth Department of Health.

Senior Medical Officer, NH & MRC Division, Commonwealth Department of Health.

An officer of the Commonwealth Department of Health (Secretary)

Committee membership and constitution

The following recommendations were approved by the Council.

REGIONAL GRANTS SUBCOMMITTEES 1977

Six Regional Grants Subcommittees for 1977, and dates for their visits to interview recipients and/or applicants of NH & MRC grants, prior to the Eighty-fourth Session of the Council, were approved.

Melbourne Regional Grants 27 June — 1 July

Three Subcommittees are to be formed from the following members:

Dr R. Doherty, Dr W. Levick, Professor W. J. O'Sullivan, Professor J. Paterson, Professor J. McLeod, Dr M. Denborough, Professor S. Leeder, Dr A. S. Henderson, Professor J. Ludbrook, Professor J. Llewellyn-Jones, Professor M. Berry, Professor D. Cameron, Professor J. Lawrence.

Secretaries: Mr. K. O'Brien, Mr J. Shaw, Mr G. Noonan.

Sydney Regional Grants 11-15 July

Three Subcommittees are to be formed from the following members:

Professor R. Porter, Professor F. Gibson, Dr C. Jenkin, Professor J. Waterson, Professor R. Lovell, Professor C. I. Johnston, Dr B. Armstrong, Professor W. Ironside, Dr R. Edwards, Professor R. C. Bennett, Dr R. Seamark, Professor M. D. Attwood.

Secretaries: Dr K. W. Edmondson, Mr G. Williams, Mr G. Noonan.

Adelaide Regional Grants 18-21 July

Dr J. D. Harley, Dr J. Coghlan, Professor G. Ada, Dr G. Ryan, Professor W. Louis.

Secretary: Mr J. Shaw.

Perth Regional Grants 18-21 July

Professor C. Kidson, Professor W. E. Glover, Dr I. Marshall, Dr J. V. Hurley, Professor J. Lance.

Secretary: Mr K. O'Brien.

Brisbane Regional Grants 25-28 July

Professor G. Schofield, Dr R. G. H. Morgan, Dr H. D. Niall, Professor A. Basten, Dr J. Colebatch, Professor D. Tracey.

Secretary: Dr K. W. Edmondson.

Hobart Regional Grants 7-8 July

Dr B. Hudson, Dr S. Skinner, Associate Professor M. G. McCall.

Secretary: Dr K. W. Edmondson.

SPECIAL RESEARCH FELLOWSHIPS (STANDING) COMMITTEE

Statement (iii) of the terms of reference is amended to read:

To advise the successful applicants and others, where necessary, on their continuing education and careers.

RESEARCH FELLOWSHIPS COMMITTEE

The above Committee was established with the following terms of reference and membership:

Terms of reference

To advise the Medical Research Advisory Committee on matters relating to the award of NH & MRC Research Fellowships associated with:

(1) Project grants.
(2) Grants to Institutes receiving NH & MRC institutional support.
(3) Areas of special need determined from time to time by the Council.

To ensure uniformity of standards and practice in the areas of Research Fellowships nominated above.

To make recommendations on the method of appointment, review of progress, promotion and tenure of appointment of Research Fellows.

Membership

The Chairman of the Medical Research Advisory Committee or his nominee from the Medical Research Advisory Committee. (Chairman)

The Secretary of the Council.

A person representing the Appointments and Promotions Committees of the institutes receiving NH & MRC institutional support.

Three persons nominated by the Medical Research Advisory Committee.

For 1977 the following members for the Research Fellowships Committee were appointed:

Dr T. H. Hurley, Consultant Physician, Melbourne, Chairman of the Medical Research Advisory Committee (Chairman)

Dr K. W. Edmondson, Secretary of the National Health and Medical Research Council

Dr D. A. Denton, Director, Howard Florey Institute of Experimental Physiology and Medicine, Melbourne

Professor D. R. Curtis, Department of Pharmacology, Australian National University, Canberra

Dr R. L. Doherty, Director, Queensland Institute of Medical Research, Brisbane

Assoc. Professor L. Lazarus, Director, Garvan Institute of Medical Research, St. Vincent's Hospital, Darlinghurst, N.S.W.

Medicine Advisory Committee

THERAPEUTIC METHODS SUBCOMMITTEE ON HYPNOSIS, HYPNOTHERAPY AND PARAENERGY

The terms of reference of the Therapeutic Methods Subcommittee on Hypnosis and Hypotherapy are amended to read:

To investigate and report to the Medicine Advisory Committee on the place of hypnosis and hypnotherapy in current medical practice, to evaluate the claims made for paraenergy, and advise on the establishment of guidelines for training medical and paramedical personnel in the use of these techniques.

Public health advisory committee

The following changes in membership were approved:

FOOD STANDARDS COMMITTEE

Deletion of:

Mr W. C. K. Hammer

Mr I. S. Ogle

Addition of:

Mr D. R. Barnes, Department of Primary Industry, Canberra

Dr C. Hudson, Council of Australian Food Technology Associations.

POISONS SCHEDULE COMMITTEE

Deletion of:

Mr R. Dash

Addition of :

Mr B. M. Graham, Secretary, N.S.W. Poisons Advisory Committee, Health Commission of New South Wales.

AIR POLLUTION CONTROL SUBCOMMITTEE

Addition of:

a medically qualified Representative of the Health Commission of New South Wales.

FOOD SCIENCE AND TECHNOLOGY SUBCOMMITTEE

An additional toxicologist.

OCCUPATIONAL HYGIENE SUBCOMMITTEE

Deletion of:

Nominee of the Commissioner of Public Health, W.A.

Addition of:

Mr G. V. Coles, Department of Public Health, W.A.

WATER QUALITY CRITERIA SUBCOMMITTEE

Deletion of:

Dr D. Kelly

Dr J. Hancock

Nominee of the Capital Territory Health Commission

Addition of:

Dr J. Quinn, Assistant Director, Department of Health, N.T.

Dr S. D. MacLeod, Medical Adviser, Capital Territory Health Commission, A.C.T.

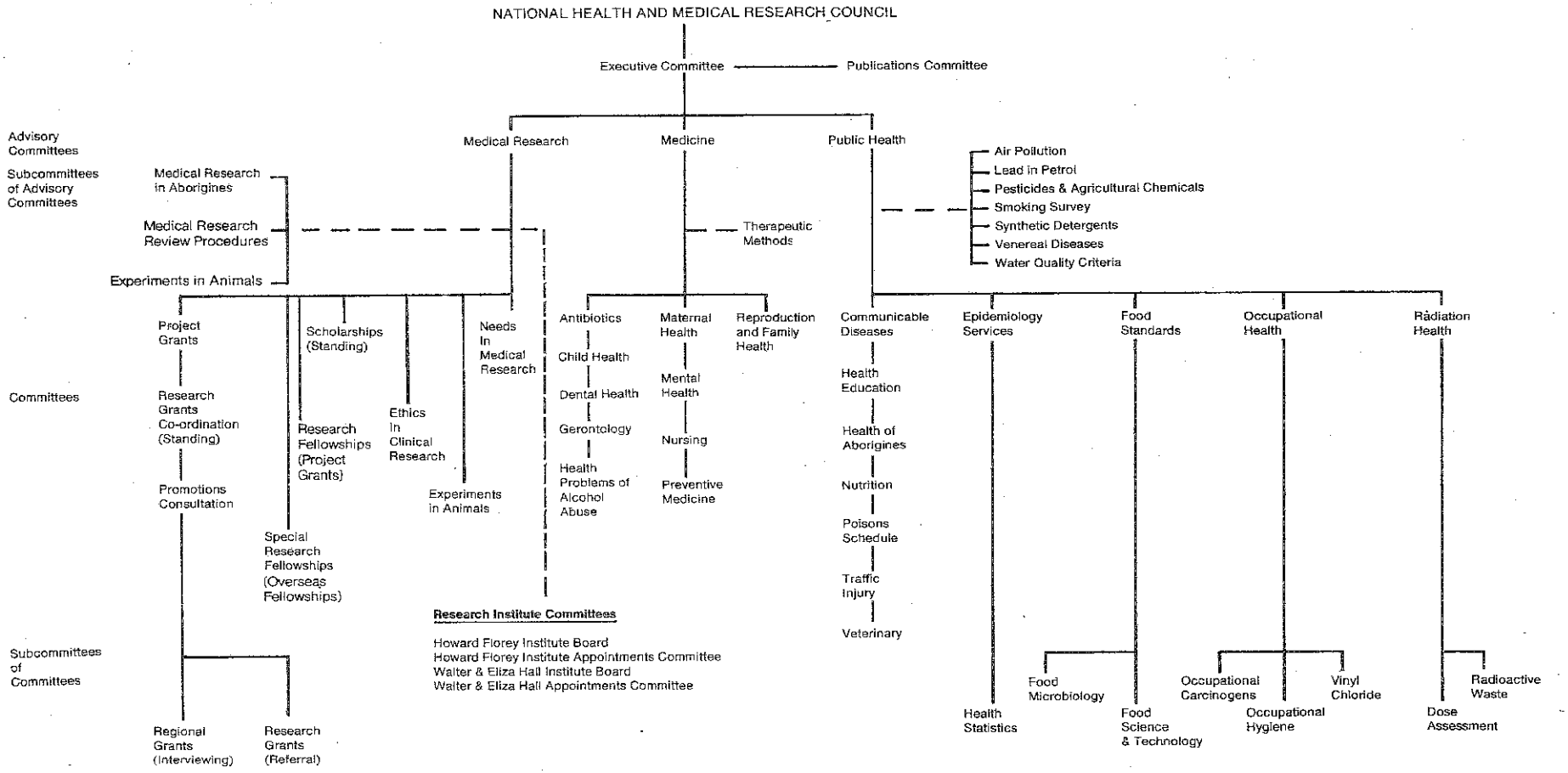
Dr R. Roger, Department of Health, Queensland.

TIME AND PLACE OF NEXT MEETING

It was agreed that the Eighty-fourth Session of the Council would take place in Canberra on 24-25 November, 1977 preceded by meetings of the Medical Research Advisory Committee, the Medicine Advisory Committee and the Public Health Advisory Committee.

APPRECIATION TO DEPARTMENT OF MAIN ROADS

The Chairman, on behalf of members of the Council, expressed appreciation to Mr G. E. C. McKercher, Director of the Department of Main Roads, for the use of the Auditorium of the State Offices, 10 Murray Street, Hobart.


NATIONAL HEALTH AND MEDICAL RESEARCH COUNCIL
Executive Committee
Publications Committee
Advisory Committees
Subcommittees of Advisory Committees
Medical Research
Medicine
Public Health
Medical Research in Aborigines
Medical Research Review Procedures
Experiments in Animals
Therapeutic Methods
Air Pollution
Lead in Petrol
Pesticides & Agricultural Chemicals
Smoking Survey
Synthetic Detergents
Venereal Diseases
Water Quality Criteria
Committees
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Promotions Consultation
Scholarships (Standing)
Research Fellowships (Project Grants)
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Ethics In Clinical Research
Experiments in Animals
Needs In Medical Research
Antibiotics
Child Health
Dental Health
Gerontology
Health Problems of Alcohol Abuse
Maternal Health
Mental Health
Nursing
Preventive Medicine
Reproduction and Family Health
Communicable Diseases
Health Education
Health of Aborigines
Nutrition
Poisons Schedule
Traffic Injury
Veterinary
Epidemiology Services
Food Standards
Occupational Health
Radiation Health
Research Institute Committees
Howard Florey Institute Board
Howard Florey Institute Appointments Committee
Walter & Eliza Hall Institute Board
Walter & Eliza Hall Appointments Committee
Subcommittees of Committees
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Research Grants (Referral)
Health Statistics
Food Microbiology
Food Science & Technology
Occupational Carcinogens
Occupational Hygiene
Vinyl Chloride
Dose Assessment
Radioactive Waste

Part 3: Index of Committees

MEDICAL RESEARCH ADVISORY COMMITTEE

Terms of Reference

(i) To advise the Council on all matters connected with the application of the Medical Research Endowment Fund for the purposes of the Medical Research Endowment Act 1937, and to make recommendations to the Council in the form of budget proposals for the distribution of grants the following year between the various disciplines of medical and dental research.

(ii) To receive and consider all applications for National Health and Medical Research Council research grants, scholarships, and fellowships and to make recommendations in respect of such grants, scholarships and fellowships (except Public Health Travelling Fellowships) to the Council, or, if the Council so delegates, to make recommendations to the Minister through the Chairman of the Council.

(iii) To review and report to the Council upon medical, including dental research in Australia, and at least every three years to determine trends and developments and direct support where most needed.

Composition

(i) The Committee shall consist of the Secretary of the Council and not less than eight and not more than fourteen members appointed by the Council.

(ii) The Chairman, Deputy Chairman and at least three other members of the Committee shall be selected from members of the Council.

(iii) Except in the case of the Secretary of the Council and members of the Council, appointment of members to the Committee shall be for three years with the possibility of reappointment for a further three years. Upon retirement, a period of three years shall elapse before a member becomes eligible for reappointment.

(iv) Only one-half of the members of the Committee shall retire at the end of each triennium in order to ensure some continuity of membership.

Membership

Dr T. H. Hurley, Consultant Physician, Melbourne (Chairman).

Professor G. N. Cooper, School of Microbiology, University of New South Wales.

Professor D. R. Curtis, Department of Pharmacology, John Curtin School of Medical Research, Australian National University.

Dr D. A. Denton, Director, Howard Florey Institute of Experimental Physiology and Medicine, Melbourne.

Dr R. L. Doherty, Director, Queensland Institute of Medical Research, Brisbane.

Mr J. A. Hancock, Layman on Council.

Dr J. D. Harley, Director, Children's Medical Research Foundation, Royal Alexandra Hospital for Children, Camperdown, New South Wales.

Professor W. Ironside, Department of Psychological Medicine, Monash University.

Professor J. Ludbrook, Department of Surgery, University of Adelaide.

Dr P. R. Patrick, Director-General of Health and Medical Services, Queensland.

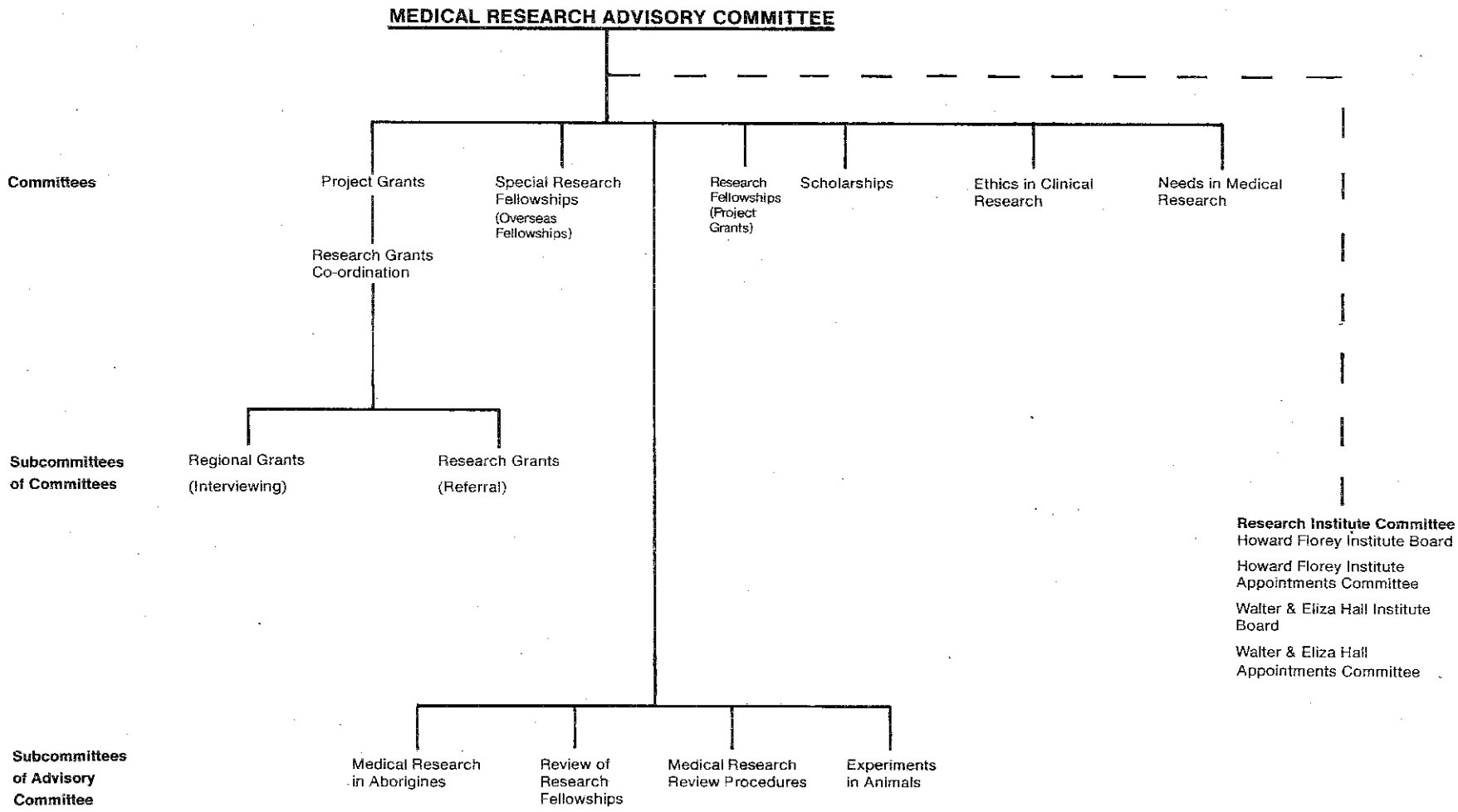
Professor E. G. Saint, Dean, Faculty of Medicine, University of Queensland.

Professor W. F. Simmonds, Department of Physiology, University of Western Australia.

Professor E. C. Webb, Vice-Chancellor Macquarie University.

Professor D. L. Wilhelm, School of Pathology, University of New South Wales.

Dr K. W. Edmondson, Secretary of the Council (Convener).


MEDICAL RESEARCH ADVISORY COMMITTEE
Committees
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Special Research Fellowships (Overseas Fellowships)
Research Fellowships (Project Grants)
Scholarships
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Needs in Medical Research
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Howard Florey Institute Appointments Committee
Walter & Eliza Hall Institute Board
Walter & Eliza Hall Appointments Committee
Subcommittees of Advisory Committee
Medical Research in Aborigines
Review of Research Fellowships
Medical Research Review Procedures
Experiments in Animals

PROJECT GRANTS COMMITTEE

Terms of Reference

To receive and consider all applications for National Health and Medical Research Council project grants referred by the Regional Grants Subcommittees and to make recommendations in respect thereof to the Medical Research Advisory Committee.

Membership

Professor E. C. Webb, Vice-Chancellor, Macquarie University (Chairman).

Professor G. N. Cooper, School of Microbiology, University of New South Wales.

Dr R. L. Doherty, Director, Queensland Institute of Medical Research.

Professor R. R. H. Lovell, Department of Medicine, University of Melbourne.

Professor J. G. McLeod, Department of Medicine, University of Sydney.

Professor R. Porter, Department of Physiology, Monash University

Professor G. C. Schofield, Department of Anatomy, Monash University.

Professor D. L. Wilhelm, School of Pathology, University of New South Wales.

RESEARCH GRANTS CO-ORDINATION (STANDING) COMMITTEE

Terms of Reference

To consider grant applications which do not fall easily into one or other of the Australian Research Grants Committee or National Health and Medical Research Council fields of interest and to channel these applications to the appropriate organisation.

Membership

Chairman, Australian Research Grants Committee.

Chairman, Medical Research Advisory Committee

Another MRAC member to be appointed.

Principal Executive Officer, NH & MRC Division, Commonwealth Department of Health*

Secretary, Australian Research Grants Committee*

REGIONAL GRANTS (INTERVIEWING) AD HOC SUBCOMMITTEES

Terms of reference

(i) To visit persons and institutions making applications for NH & MRC grants for medical research, and to interview persons working with the support of and/or applying for these grants.

(ii) In the assessment of each application, to take into consideration the following:
   (a) the scientific merit of the application in the light of the assessor's reports and the needs and priorities in medical research, as stated by the Medical Research Advisory Committee.
   (b) assessor and referee reports on the applicants
   (c) the justification of the funds requested in each application.

(iii) In light of (ii) above, to recommend on support for all NH & MRC grant applications and provide a rating for each application to the Project Grants Committee.

Membership

Members are appointed annually upon the advice of the Medical Research Advisory Committee.

RESEARCH GRANTS (REFERRAL) SUBCOMMITTEE

Terms of reference

To receive and consider applications for NH & MRC project grants and to refer applications as necessary for review by independent assessors.

Membership

Members are appointed annually upon the advice of the Medical Research Advisory Committee.

SPECIAL RESEARCH FELLOWSHIPS (STANDING) COMMITTEE

Terms of reference

(i) To receive and consider applications for NH & MRC Special Fellowships for research training.

(ii) To advise the Medical Research Advisory Committee on the merits of the applicants and the proposed training programs submitted.

(iii) To advise the successful applicants and others, where necessary, on their continuing education and careers.

Membership

Dr D. A. Denton, Director, Howard Florey Institute of Experimental Physiology and Medicine, Melbourne (Chairman).

*Joint secretaries

Professor W. Ironside, Department of Psychological Medicine, Monash University.

Dr M. L. Mashford, Reader in Clinical Pharmacology, Department of Pharmacology, University of Melbourne.

Dr G. C. Scott, School of Public Health and Tropical Medicine, University of Sydney.

Professor D. N. Wade, Professor of Clinical Pharmacology, University of New South Wales.

Dr K. W. Edmondson, Secretary of the Council.

RESEARCH FELLOWSHIPS COMMITTEE

Terms of reference

To advise the Medical Research Advisory Committee on matters relating to the award of NH & MRC Research Fellowships associated with:

(1) Project grants.

(2) Grants to Institutes receiving NH & MRC institutional support.

(3) Areas of special need determined from time to time by the Council.

To ensure uniformity of standards and practice in the areas of Research Fellowships nominated above.

To make recommendations on the method of appointment, review of progress, promotion and tenure of appointment of Research Fellows.

Composition

The Chairman of the Medical Research Advisory Committee or his nominee from the Medical Research Advisory Committee (Chairman).

A person representing the Appointments and Promotions Committees of the institutes receiving NH & MRC institutional support.

Three persons nominated by the Medical Research Advisory Committee.

The Secretary of the Council.

Membership

Dr T. H. Hurley, Consultant Physician, Melbourne and Chairman of the Medical Research Advisory Committee (Chairman).

Professor D. R. Curtis, Department of Pharmacology, John Curtin School of Medical Research, Australian National University, Canberra.

Dr D. A. Denton, Director, Howard Florey Institute of Experimental Physiology and Medicine, Melbourne.

Dr R. L. Doherty, Director, Queensland Institute of Medical Research, Brisbane

Assoc. Professor L. Lazarus, Director, Garvan Institute of Medical Research, St. Vincent's Hospital, Darlinghurst, N.S.W.

Dr K. W. Edmondson, Secretary of the Council.

SCHOLARSHIPS (STANDING) COMMITTEE

Terms of reference

To consider matters relating to the award of Medical and Dental Postgraduate Scholarships, to assess applications for these scholarships, and to make recommendations on these and undergraduate scholarships, to the Medical Research Advisory Committee.

Membership

Professor E. C. Webb, Vice-Chancellor, Macquarie University.

Professor D. R. Curtis, Department of Pharmacology, John Curtin School of Medical Research, Australian National University.

Professor J. Ludbrook, Department of Surgery, University of Adelaide.

Professor D. L. Wilhelm, School of Pathology, University of New South Wales.

Dr K. W. Edmondson, Secretary of the Council (Convener).

An officer of the Commonwealth Department of Health (Secretary).

ETHICS IN CLINICAL RESEARCH (REFERENCE) COMMITTEE

Terms of reference

(i) To review guidelines laid down by the Council relating to the involvement of human volunteers in medical research.

(ii) To review means by which the Council could give advice on projects which involve human volunteers when such advice is sought in relation to the ethical aspects of such projects.

Membership

To be appointed by the Executive Committee when required.

NEEDS IN MEDICAL RESEARCH (STANDING) COMMITTEE

Terms of reference

To investigate and report to the Medical Research Advisory Committee on the needs in medical research in Australia and the areas where support is specially needed.

Membership

Professor E. G. Saint, Dean, Faculty of Medicine, University of Queensland (Chairman).

Professor G. N. Cooper, School of Microbiology, University of New South Wales.

Dr D. A. Denton, Director, Howard Florey Institute of Experimental Physiology and Medicine, Melbourne.

Mr J. A. Hancock, Layman of the Council.

Professor W. Ironside, Department of Psychological Medicine, Monash University.

Dr O. W. Powell, Principal Medical Officer, Health Services Planning and Development Unit, Department of Health, Queensland (representative of the Hospital and Allied Services Advisory Council).

MEDICAL RESEARCH IN ABORIGINES SUBCOMMITTEE

Terms of reference

To consider proposals for medical research projects in Aborigines and, taking into account the research value and justification of projects and effects on the people being studied.

(i) to advise the Medical Research Advisory Committee through the Aboriginal Health Committee on applications for support by the NH & MRC; and

(ii) to advise the Department of Aboriginal Affairs on projects related to medical research in Aborigines.

Membership

Dr W. A. Langsford, Commonwealth Department of Health (Chairman).

Professor R. H. Black, School of Public Health and Tropical Medicine, Sydney.

Dr R. L. Doherty, Director, Queensland Institute of Medical Research.

Dr R. L. Kirk, Department of Human Biology, John Curtin School of Medical Research, Australian National University.

Mr J. P. M. Long, Deputy Secretary, Department of Aboriginal Affairs, Canberra.

Dr P. S. Woodruff, Director-General of Public Health, South Australia.

An officer of the Commonwealth Department of Health (Convener and Secretary).

AD HOC SUBCOMMITTEE ON MEDICAL RESEARCH REVIEW PROCEDURES

Terms of reference

To prepare guidelines and advise the Medical Research Advisory Committee on the reviewing procedures necessary for the assessment and evaluation of NH & MRC research projects block grants, fellowships, scholarships, and other awards.

Membership

Professor E. C. Webb, Vice-Chancellor, Macquarie University (Chairman).

Dr T. H. Hurley, Consultant Physician, Melbourne.

Professor W. F. Simmonds, Department of Physiology, University of Western Australia.

Professor D. L. Wilhelm, School of Pathology, University of New South Wales.

Dr K. W. Edmondson, Secretary of the Council (Convener).

An officer of the Commonwealth Department of Health (Secretary).

AD HOC SUBCOMMITTEE TO REVIEW THE NH & MRC DOCUMENT 'CODE OF PRACTICE FOR CONTROL OF EXPERIMENTS IN ANIMALS'

Terms of reference

To revise the NH & MRC document 'Code of Practice for Control of Experiments in Animals', especially the sections dealing with anaethesia and neuromuscular blockade in Part I, and report to the Medical Research Advisory Committee.

Membership

Professor D. R. Curtis, Department of Pharmacology, John Curtin School of Medical Research, Australian National University, Canberra (Chairman).

Dr M. Holmes, Walter & Eliza Hall Institute of Medical Research, Melbourne.

Dr P. F. Lewis, Principal Veterinary Officer, Commonwealth Serum Laboratories, Melbourne.

Professor R. Porter, Department of Physiology, Monash University, Melbourne.

HOWARD FLOREY AND WALTER & ELIZA HALL RESEARCH INSTITUTE COMMITTEES

Terms of reference

The conditions relating to NH & MRC support of research institutes on a long term basis require that two NH & MRC representatives be appointed annually to the board and to the appointments committee of each institute. The NH & MRC representatives shall be preferably members of the Council and/or one of its medical research committee.

Membership

(a) Howard Florey Institute Board, Howard Florey Institute Appointments Committee.

Professor D. R. Curtis, Department of Pharmacology, John Curtin School of Medical Research, Australian National University.

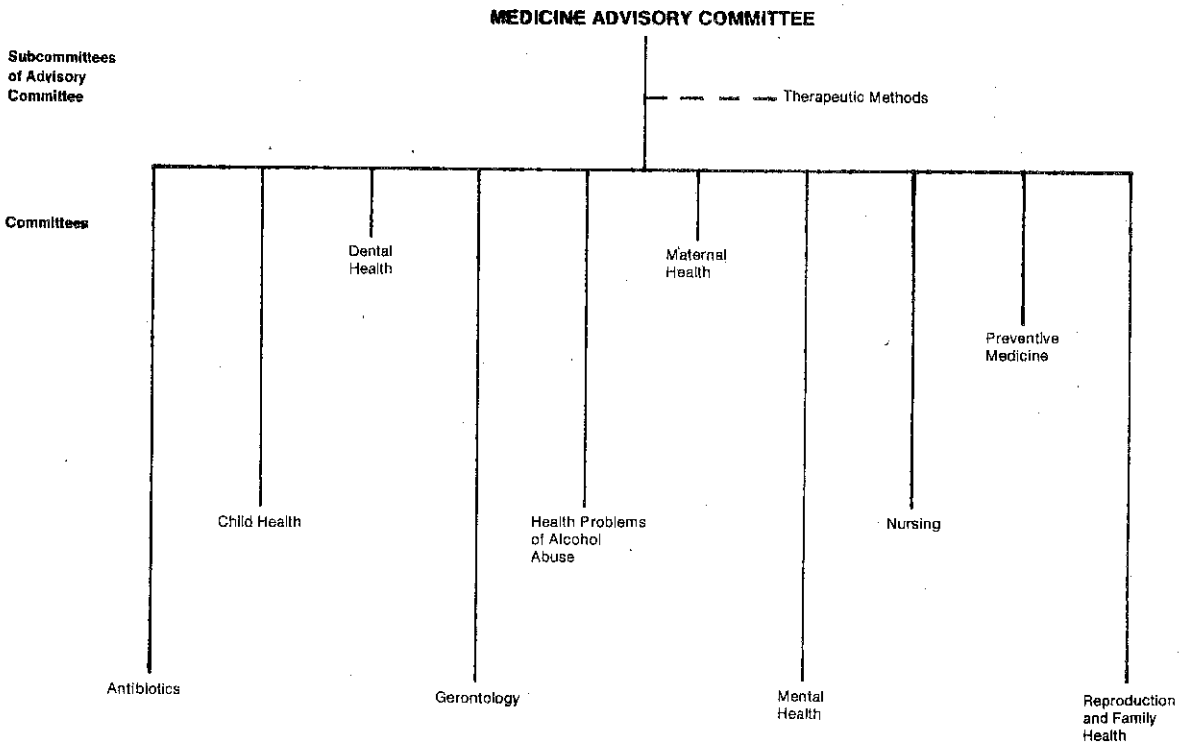
Dr K. W. Edmondson, Secretary of the Council.

(b) Walter and Eliza Hall Institute Board; and Walter and Eliza Hall Institute Appointments Committee.

Professor E. C. Webb, Vice-Chancellor, Macquarie University.

Dr K. W. Edmondson, Secretary of the Council.

Section (c): Medicine Advisory Committee and associated Committees



MEDICINE ADVISORY COMMITTEE

Terms of reference

(i) to enquire into and advise the Council on matters relating to medical, including dental care;

(ii) to enquire into and advise the Council upon the merits of reputed cures or methods of treatment which are from time to time brought forward for recognition;

(iii) to receive, consider and transmit to the Council the reports, and its recommendations thereon, of the following Committees:

(a) Antibiotics (Reference) Committee.
(b) Child Health (Standing) Committee.
(c) Dental Health (Standing) Committee.
(d) Gerontology (Standing) Committee.
(e) Health Problems of Alcohol (Reference) Committee.
(f) Maternal Health (Standing) Committee.
(g) Mental Health (Standing) Committee.
(h) Nursing (Standing) Committee.
(i) Preventive Medicine in Community and General Practice (Standing) Committee.
(j) Reproduction and Family Health (Standing) Committee.
(k) Therapeutic Methods ad hoc Committees.

Composition

(a) The representative on council of the Australian Medical Association;

(b) The representative on Council of the Royal Australasian College of Surgeons;

(c) The representative on Council of the Royal Australasian College of Physicians;

(d) The representative on Council of the Australian Council of the Royal College of Obstetricians and Gynaecologists;

(e) The representative on Council of the Royal Australian College of General Practitioners;
(f) The representative on Council of the Royal College of Pathologists of Australia;
(g) The representative on Council of the Australian Dental Association;
(h) The representative on Council of the Australian College of Paediatrics;
(i) The representative on Council of the Royal Australasian College of Radiologists;
(j) The representative on Council of the Australian and New Zealand College of Psychiatrists;
(k) The representative on Council of the Australian Universities having Medical Schools;
(l) A lay member on the Council;
(m) The representative on Council of the Commonwealth Serum Laboratories Commission;
(n) The Chairman of the Nursing Committee;
(o) The Chief Director (Medical Services), Department of Repatriation and Compensation; and
(p) The Secretary of the Council.

Membership

Dr B. W. Neal, representative on Council of the Australian College of Paediatrics (Chairman).

Dr T. H. Hurley, representative on Council of the Australian Medical Association.

Professor J. Ludbrook, representative on Council of the Royal Australasian College of Surgeons.

Professor P. I. Korner, representative on Council of the Royal Australasian College of Physicians.

Professor L. W. Cox, representative on Council of the Australian Council of the Royal College of Obstetricians and Gynaecologists.

Dr N. A. Andersen, representative on Council of the Royal Australian College of General Practitioners.

Dr R. G. Edwards, representative on Council of the Royal College of Pathologists of Australia.

Mr A. J. Bloomfield, representative on Council of the Australian Dental Association.

Dr B. Kynaston, representative on Council of the Royal Australasian College of Radiologists.

Dr G. L. Lipton, representative on Council of the Australian and New Zealand College of Psychiatrists.

Professor W. J. Simmonds, representative on Council of the Australian Universities having Medical Schools.

Mrs D. E. H. Cavaye, laywoman on the Council.

Dr N. J. McCarthy, representative on Council of the Commonwealth Serum Laboratories Commission.

Miss O. E. Anstey, Chairman of the Nursing Committee.

Dr J. Boxall, Chief Director (Medical Services), Department of Veterans' Affairs.

Dr K. W. Edmondson, Secretary of the Council.

ANTIBIOTICS (REFERENCE) COMMITTEE

Terms of reference

To enquire into and advise the Council through the Medicine Advisory Committee on all matters concerning antibiotics referred to it by the Council and/or by the Chairman of the Council.

Membership

Senior Medical Officer, NH & MRC Division, Australian Department of Health (Chairman, Convener and Secretary).

Dr S. M. Bell, Clinical Microbiologist, Prince of Wales Hospital, Sydney.

Mr G. Buckle, Director of Bacteriology, Alfred Hospital, Melbourne.

Dr S. W. Williams, Honorary Physician, Royal Children's Hospital, Parkville, Vic.

CHILD HEALTH (STANDING) COMMITTEE

Terms of reference

To enquire into and advise the Council through the Medicine Advisory Committee on all matters relating to the promotion of optimum health in Australian infants, children and adolescents.

Membership

Professor A. L. Clark, Department of Paediatrics, Monash University (Chairman).

Dr D. P. Bowler, Medical Superintendent, Royal Children's Hospital, Brisbane.

Professor A. C. Bowring, Associate Professor of Paediatric Surgery, University of New South Wales.

Dr M. Jonas, Adolescent Psychiatrist, Child Psychiatric Services, Austin Hospital, Heidelberg, Victoria.

Dr W. H. Kitchen, Royal Women's Hospital, Melbourne.

Dr B. W. Neal, representative on Council of the Australian Paediatric Association.

Dr M. Rugless, Principal Medical Officer (Schools), Department of Public Health, South Australia.

DENTAL HEALTH (STANDING) COMMITTEE

Terms of reference

To enquire into and advise the Council through the Medicine Advisory Committee on all matters relating to the prevention, control and treatment of dental diseases and abnormalities.

Membership

Mr A. J. Bloomfield, Dental Surgeon, Adelaide (Chairman).

Mr L. M. Carr, Commonwealth Department of Health.

Mr R. M. Cook, Oral Surgeon, Victoria.

Professor G. N. Davies, Professor of Social and Preventive Dentistry, University of Queensland.

Dr E. A. Fanning, Reader in Preventive Dentistry, University of Adelaide.

Professor P. C. Reade, Department of Dental Medicine and Surgery, University of Melbourne.

GERONTOLOGY (REFERENCE) COMMITTEE

Terms of reference

To enquire into and advise the Council through the Medicine Advisory Committee on the health problems of the ageing and their management.

Membership

Dr M. Cheong, Director of Geriatric Service, Department of Health, Queensland (Chairman).

Other members will be selected on the basis of their particular expertise in accordance with the needs of the Committee as specific matters are referred to it.

HEALTH PROBLEMS OF ALCOHOL ABUSE (REFERENCE) COMMITTEE

Terms of reference

To advise the Council through the Medicine Advisory Committee and the Public Health Advisory Committee on matters referred to it concerning health problems associated with the abuse of alcohol.

Membership

Dr P. S. Woodruff, Director-General of Public Health, South Australia.

Dr L. R. H. Drew, Senior Adviser in Mental Health, Commonwealth Department of Health.

Dr J. N. Santamaria, Director, Department of Community Medicine, St. Vincent's Hospital, Melbourne.

Dr A. Stoller, Chairman, Mental Health Authority, Victoria.

Dr G. S. Urquhart, Director of Psychiatric Services, Department of Health, Queensland.

An officer of the Commonwealth Department of Health (Secretary).

MATERNAL HEALTH (STANDING) COMMITTEE

Terms of reference

To enquire into and advise the Council through the Medicine Advisory Committee on matters relating to pregnancy and childbirth including obstetric factors which influence perinatal health.

Membership

Professor L. W. Cox, Department of Obstetrics and Gynaecology, University of Adelaide (Chairman).

Professor N. A. Beischer, Department of Obstetrics and Gynaecology, University of Melbourne.

Dr I. Cope, Consultant Obstetrician, Sydney.

Dr W. H. Kitchen, Royal Women's Hospital, Melbourne.

Dr J. McFarlane, Director, Maternal and Child Health, Department of Health, Queensland.

An officer of the Commonwealth Department of Health (Convener and Secretary).

MENTAL HEALTH (STANDING) COMMITTEE

Terms of reference

To enquire into and advise the Council through the Medicine Advisory Committee on medical matters relating to the prevention and control of mental illness and to the care and rehabilitation of patients with mental illness.

Membership

Dr G. L. Lipton, the representative on Council of the Australian and New Zealand College of Psychiatrists (Chairman).

Dr W. A. Dibden, Director of Mental Health Services, South Australia.

Dr L. R. H. Drew, Senior Adviser in Mental Health, Commonwealth Department of Health.

Professor W. Ironside, Department of Psychological Medicine, Monash University.

Professor I. Pilowsky, Department of Psychiatry, University of Adelaide.

Dr G. S. Urquhart, Director of Psychiatric Services, Department of Health, Queensland.

Mr R. L. Smith, Principal Clinical Psychologist, Mental Health Services, Western Australia.

NURSING (STANDING) COMMITTEE

Terms of reference

To investigate and consider matters concerning the practice of nursing and to report to the Council through the Medicine Advisory Committee.

Membership

Miss O. E. Anstey, Director of Nursing, Sir Charles Gairdner Hospital, Western Australia (Chairman).

Miss J. B. Christie, Nursing Adviser, Mental Health Authority, Victoria.

Miss J. Foley, Adviser in Nursing, Woden Valley Hospital, A.C.T.

Miss M. M. Gillespie, Director of Nursing, Woden Valley Hospital, A.C.T.

Miss M. O'Connor, Nurse Coordinator, Health Commission of New South Wales.

Miss J. Porter, Principal Nursing Officer, Department of Public Health, South Australia.

Senior Medical Officer, NH & MRC Division, Commonwealth Department of Health.

An officer of the Commonwealth Department of Health (Convener and Secretary).

PREVENTIVE MEDICINE IN COMMUNITY AND GENERAL PRACTICE (STANDING) COMMITTEE

Terms of reference

To enquire into and advise the Council through the Medicine Advisory Committee on the preventive aspects of general practice and community medicine and to provide advice to assist in the implementation of preventive medicine programs approved by the Council.

Membership

Dr N. A. Andersen, Representative on Council of the Royal Australian College of General Practitioners (Chairman).

Dr K. J. Cullen, Busselton Population Studies, Busselton Health Centre, W.A.

Dr J. D. Livingston, member, Preventive and Community Medicine Committee of the Royal Australian College of General Practitioners.

Dr D. S. Muecke, Chairman, Preventive and Community Medicine Committee of the R.A.C.G.P.

Professor J. G. P. Ryan, Department of Social and Preventive Medicine, University of Queensland.

Professor R. Webster, Department of Community Health, University of Melbourne.

REPRODUCTION AND FAMILY HEALTH (STANDING) COMMITTEE

Terms of reference

To enquire into and advise the Council through the Medicine Advisory Committee on the health aspects of human reproduction, the promotion and maintenance of health of the family, and the problems of health within the family as a unit.

Membership

Professor R. P. Shearman, Department of Obstetrics and Gynaecology, University of Sydney.

Mrs D. E. H. Cavaye, Laywoman on the Council.

Dr P. Eisen, Senior Staff Specialist in Psychiatry, Flinders Medical Centre, South Australia.

Dr H. Fogarty, General Practitioner, Brisbane.

Dr S. I. Robertson, Health Commission of New South Wales.

Mrs D. Sargeant, Lecturer-in-Charge, Social Biology Resources Centre, University of Melbourne.

An officer of the Commonwealth Department of Health (Secretary).

THERAPEUTIC METHODS SUBCOMMITTEE ON HYPNOSIS, HYPNOTHERAPY AND PARAENERGY

Terms of reference

To investigate and report to the Medicine Advisory Committee on the place of hypnosis and hypnotherapy in current medical practice, to evaluate the claims made for paraenergy, and advise on the establishment of guidelines for training medical and paramedical personnel in the use of these techniques.

Membership

Dr G. L. Lipton, Hon. Federal Secretary, Australian and New Zealand College of Psychiatrists (Chairman).

Professor J. G. McLeod, Department of Medicine, University of Sydney.

Dr M. J. Sainsbury, Director of the N.S.W. Institute of Psychiatry.

An officer of the Commonwealth Department of Health (Secretary).

PUBLIC HEALTH ADVISORY COMMITTEE

Terms of reference

(i) To enquire into and advise the Council on all matters of public health and preventive medicine and matters involving health legislation and adminsitration by the Commonwealth and State Governments;

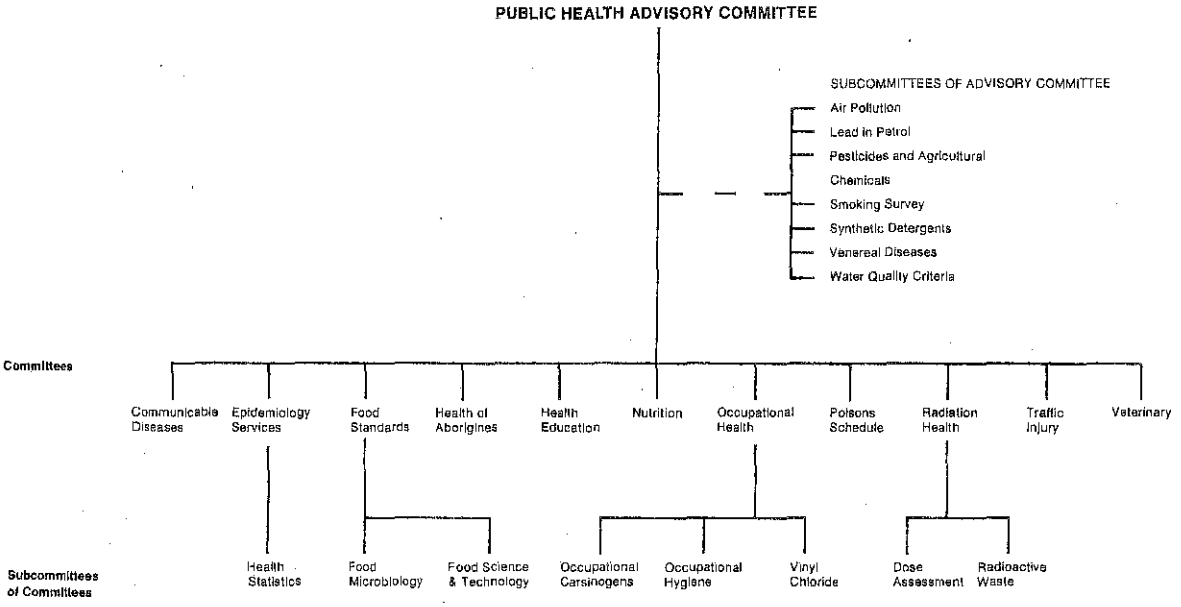
(ii) To receive, consider and transmit to the Council its recommendations on the reports of the following committees;

(a) Communicable Diseases (Standing) Committee.

(b) Food Standards (Standing) Committee.

(c) Health Education (Standing) Committee.

Section (d): Public Health Advisory Committee and associated Committees.



(d) Health of Aborigines (Reference) Committee.
(e) Epidemiology Services (Standing) Committee.
(f) Nutrition (Standing) Committee.
(g) Occupational Health (Standing) Committee.
(h) Poisons Schedule (Standing) Committee.
(i) Radiation Health (Standing) Committee.
(j) Traffic Injury (Standing) Committee.
(k) Veterinary Public Health (Standing) Committee.

and other committees that the Council may direct to report through the Public Health Advisory Committee.

Composition

(a) An officer of the Commonwealth Department of Health, Canberra;
(b) The Commissioner for Environmental and Special Health Services, Health Commission of New South Wales;
(c) The Director-General of Health and Medical Services, Queensland;
(d) The Director-General of Public Health, South Australia;
(e) The Director of Public Health, Tasmania;
(f) The Chief Health Officer, Victoria;
(g) The Commissioner of Public Health, Western Australia;
(h) The First Assistant Director-General, Public Health Division, Department of Health, Canberra;
(i) The Director of Health, Northern Territory;
(j) The Chairman, Capital Territory Health Commission, Canberra;
(k) The Principal, School of Public Health and Tropical Medicine, Sydney;
(l) A lay member of the Council;
(m) The Secretary of the Council.

Membership

Dr C. P. Evans, Deputy Director-General, Commonwealth Department of Health (Chairman).

Dr D. M. Storey, Commissioner for Environmental and Special Health Services, Health Commission of New South Wales.

Dr P. R. Patrick, Director-General of Health and Medical Services, Queensland.

Dr P. S. Woodruff, Director-General of Public Health, South Australia.

Dr A. D. Ross, Director of Public Health, Tasmania.

Dr B. P. McCloskey, Chief Health Officer, Victoria.

Dr J. C. McNulty, Commissioner of Public Health, Western Australia.

Dr W. A. Langsford, Commonwealth Department of Health (Deputy Chairman and Convener).

Dr C. H. Gurd, Director of Health, Northern Territory.

Mr J. Blandford, Commissioner, Capital Territory Health Commission.

Professor L. A. G. Davidson, Principal, School of Public Health and Tropical Medicine.

Mr J. A. Hancock, layman on Council.

Dr K. W. Edmondson, Secretary of the Council.

Dr A. S. Cumming Thom, Commonwealth Department of Health (Secretary).

COMMUNICABLE DISEASES (STANDING) COMMITTEE

Terms of reference

To enquire into and advise the Council through the Public Health Advisory Committee on the epidemiology and control of communicable diseases in man.

Membership

Dr W. J. Stevenson, Commonwealth Department of Health (Chairman).

Professor C. R. Boughton, Division of Infectious Diseases, Prince Henry Hospital, Sydney.

Professor G. N. Cooper, School of Microbiology, University of New South Wales.

Dr B. J. Feery, Commonwealth Serum Laboratories, Melbourne.

Dr J. A. Forbes, Medical Superintendent, Fairfield Hospital, Victoria.

Professor D. White, Department of Microbiology, University of Melbourne.

Dr W. A. Langsford, Commonwealth Department of Health (Convener).

EPIDEMIOLOGY SERVICES (STANDING) COMMITTEE

Terms of reference

To advise the Council through the Public Health Advisory Committee or other Advisory Committees as appropriate, on the need for epidemiologic research in Australia both in relation to the study of disease and the development of health services.

Membership

Professor R. R. H. Lovell, Department of Medicine, University of Melbourne (Chairman).

Dr A. I. Adams, Director, Division of Health Services Research, Health Commission of New South Wales.

Dr J. W. Donovan, Adviser in Epidemiology, Commonwealth Department of Health (Deputy Chairman).

Professor M. G. McCall, Department of Medicine, University of Western Australia.

Dr S. Sax, Chairman, Hospitals and Health Services Commission, Canberra.

Dr J. S. Yu, Department of Medicine, Royal Alexandra Hospital for Children, N.S.W.

An officer of the Commonwealth Department of Health (Secretary).

HEALTH STATISTICS SUBCOMMITTEE

Terms of reference

To advise the Epidemiology Services (Standing) Committee on the statistical systems and methods required in the practical study of health and related matters.

Membership

Dr G. C. Scott, Department of Preventive and Social Medicine, School of Public Health and Tropical Medicine, Sydney (Chairman and Convener).

Dr J. W. Donovan, Adviser in Epidemiology, Commonwealth Department of Health (Deputy Chairman).

Dr M. M. Lugg, Health Statistitian, Department of Public Health, Western Australia.

Professor G. R. Palmer, Head, School of Health Administration, University of New South Wales.

Dr D. Race, Chief Medical Officer, Hospitals and Charities Commission, Victoria.

Mr A. J. Whittington, Assistant Statistician, Bureau of Statistics, Canberra.

An officer of the Commonwealth Department of Health (Secretary).

FOOD STANDARDS (STANDING) COMMITTEE

Terms of reference

To make recommendations to the Council through the Public Health Advisory Committee on standards for the description, safe manufacture, composition, packaging, labelling, storage, transportation, display, advertising and sale of food for human consumption.

Membership

Professor R. A. Edwards, School of Food Technology, University of New South Wales (Chairman).

Dr R. H. C. Fleming, Director, Food and Nutrition Section, Commonwealth Department of Health (Deputy Chairman and Convener).

Mr D. R. Barnes, Department of Primary Industry, Canberra.

Dr C. Hudson, Council of Australian Food Technology Associations.

Mr C. Norris, Acting Australian Government Analyst, Department of Science, Canberra.

Mr G. L. Robinson, Assistant Chief Inspector, Department of Public Health, South Australia.

Mr M. V. Tracey, Chief, Division of Food Research, C.S.I.R.O., North Ryde, N.S.W.

Another medically qualified member to be appointed.

An officer of the Commonwealth Department of Health (Secretary).

FOOD MICROBIOLOGY (REFERENCE) SUBCOMMITTEE

Terms of reference

To consider and make recommendations to the Food Standards (Standing) Committee on all matters referred to it concerning food microbiology including development of codes of hygienic practice and microbiological standards for food.

Membership

Mr S. W. C. Smith, Principal Chemist, Commonwealth Department of Health (Chairman).

Dr K. A. Buckle, Lecturer, School of Food Technology, University of New South Wales.

Dr J. H. B. Christian, Associate Chief, Division of Food Research, C.S.I.R.O. North Ryde.

Miss M. I. B. Dick, Chief Microbiologist, Kraft Foods Limited, Melbourne.

Dr E. M. Mackay-Scollay, Head of Division of Microbiology, Perth Medical Centre.

Mr E. A. Meyrick, Senior Bacteriologist, Australian Government Analytical Laboratories, Department of Science, Sydney.

An officer of the Commonwealth Department of Health (Convenor and Secretary).

FOOD SCIENCE AND TECHNOLOGY (REFERENCE) SUBCOMMITTEE

Terms of reference

To enquire into and advise the Food Standards (Standing) Committee on matters concerning food science and technology including:

(i) the specifications for purity and specifications for identity of food constituents;

(ii) the technological need for and the safety of food additives;

(iii) contaminants in foods; and

(iv) the use of colouring substances in cosmetics, pharmaceuticals and foods.

Membership

Dr R. H. C. Fleming, Director, Food and Nutrition Section, Commonwealth Department of Health (Chairman).

Dr D. T. Burkett, Department of Clinical Pharmacology, Flinders University, South Australia.

Professor K. D. Cairncross, Associate Professor of Biology, School of Biological Sciences, Macquarie University.

Mr L. G. Clark, Director and Government Analyst, Division of Analytical Laboratories, Health Commission of New South Wales.

Dr K. T. H. Farrer, Manager, Research and Development, Kraft Foods Ltd., Melbourne.

Mr K. C. Richardson, Food Technology Liaison Officer, C.S.I.R.O., North Ryde, N.S.W.

Professor R. A. Rodda, Department of Pathology, University of Tasmania.

Dr A. J. Ryan, Reader in Pharmacy, University of Sydney.

An officer of the Commonwealth Department of Health (Convenor and Secretary).

HEALTH OF ABORIGINES (REFERENCE) COMMITTEE

Terms of reference

To present to the Council through the Public Health Advisory Committee detailed reports on specific health matters concerning Aborigines which have been referred to it by the Chairman of the Council at the request of such bodies as the National Aboriginal Consultative Committee, the Workshop on Aboriginal Medical Services, and other interested groups.

Membership

Dr W. A. Langsford, Commonwealth Department of Health (Chairman).

Dr L. J. Holman, Director-General of Public Health, Western Australia.

Dr P. G. Livingstone, Deputy Director-General of Health and Medical Services, Queensland.

Mr R. Marshall, National Aboriginal Consultative Committee.

Mr B. Mason, National Aboriginal Consultative Committee.

Professor G. M. Maxwell, Department of Paediatrics, University of Adelaide.

Dr B. Reid, Commonwealth Department of Health, Northern Territory.

HEALTH EDUCATION (STANDING) COMMITTEE

Terms of reference

To advise the Public Health Advisory Committee on matters concerning health education of the public.

Membership

Dr S. S. Richardson, Principal, Canberra College of Advanced Education, A.C.T. (Chairman).

Mr J. T. Carr, Executive Officer, Health Education Council, Western Australia.

Dr T. H. G. Dick, Medical Commissioner, Mental Health Services Commission, Tasmania.

Dr C. O. Fuller, Principal Medical Officer, Environmental Health, Department of Public Health, South Australia.

Mr J. E. Holliday, Chief Officer, Queensland Health Education Council.

Dr S. J. Krister, Principal Medical Officer, Environmental and Special Health Services, Health Commission of New South Wales.

Dr S. D. MacLeod, Director of Medical Services, Capital Territory Health Commission.

Dr D. W. Rankin, Chief Health Education Officer, Department of Health, Victoria.

Dr F. S. Soong, Health Education Specialist, Commonwealth Department of Health, Northern Territory.

NUTRITION (STANDING) COMMITTEE

Terms of reference

To enquire into and advise the Council through the Public Health Advisory Committee on all matters relating to nutrition.

Membership

Professor B. Hudson, Howard Florey Institute of Experimental Physiology and Medicine, Melbourne (Chairman).

Dr M. Gracey, Head, Gastroenterological Research Unit, Princess Margaret Children's Medical Research Foundation, Subiaco, Western Australia.

Dr B. S. Hetzel, Chief, Division of Human Nutrition (C.S.I.R.O.), South Australia.

Dr P. F. Heywood, Lecturer in Nutrition, School of Public Health & Tropical Medicine, Sydney.

Professor C. Kidson, Professor of Biochemistry, University of Queensland.

Professor R. H. Thorp, representative on Council of the Australian Federation of Consumer Organisations.

Miss C. N. Turner, Chief Research Dietitian, Cancer Institute, Melbourne.

An officer of the Commonwealth Department of Health (Convenor and Secretary).

OCCUPATIONAL HEALTH (STANDING) COMMITTEE

Terms of reference

To enquire into and advise the Council through the Public Health Advisory Committee on all matters relating to industrial hygiene and occupational health.

Membership

Professor D. Ferguson, Professor of Environmental and Occupational Health, School of Public Health & Tropical Medicine, University of Sydney (Chairman).

Dr A. Bell, Health Commission of New South Wales.

Dr A. J. Christophers, Chief Industrial Hygiene Officer, Department of Health, Victoria.

Dr P. D. Clark, Principal Medical Officer (Occupational Health), Department of Public Health, South Australia.

Dr W. H. Denehy, Federal President, Australian and New Zealand Society of Occupational Medicine, Victoria.

Dr A. G. Cumpston, Director of Occupational Health, Department of Public Health, Western Australia.

Mr A. J. Findlay, Senior Chemist, School of Public Health & Tropical Medicine, University of Sydney.

Dr E. M. Rathus, Director of Industrial Medicine, Department of Health, Queensland.

Mr K. C. Stone, Secretary, Victorian Trades Hall Council.

Dr K. M. Williams, Department of Health Services, Tasmania.

An officer of the Commonwealth Department of Health (Convener and Secretary).

OCCUPATIONAL CARCINOGENS SUBCOMMITTEE

Terms of reference

To enquire into, review and report to the Occupational Health Committee on requirements for the protection of the worker from occupational carcinogens.

Membership

Dr K. Williams, Senior Medical Officer, Department of Health Services, Tasmania (Chairman).

Dr A. Bell, Director, Division of Occupational Health and Radiation Control, Health Commission of New South Wales.

Dr J. A. Bisby, Shell Co. of Australia, Melbourne.

Professor K. Cox, Australian Cancer Society, Sydney.

Dr S. F. McCullagh, Chief Medical Officer, James Hardy & Co. Pty. Ltd., Sydney.

OCCUPATIONAL HYGIENE (REFERENCE) SUBCOMMITTEE

Terms of reference

To enquire into and advise the Occupational Health (Standing) Committee on matters referred to it relating to occupational hygiene.

Membership

Mr A. W. Findlay, Senior Chemist, Occupational Health Section, School of Public Health & Tropical Medicine, University of Sydney (Chairman).

Mr G. V. Coles, Department of Public Health, Western Australia.

Mr C. H. Couper, Senior Chemist, Government Chemical Laboratory, Queensland.

Mrs P. E. de Silva, Assistant Senior Scientific Officer, Industrial Hygiene Division, Department of Health, Victoria.

Dr C. Grygorcewicz, Scientific Officer, Department of Public Health, South Australia.

Mr A. T. Jones, Officer-in-Charge, Industrial Hygiene Branch, Health Commission of New South Wales.

Mr G. Major, Physicist, School of Public Health & Tropical Medicine, University of Sydney.

An officer of the Commonwealth Department of Health (Secretary).

VINYL CHLORIDE SUBCOMMITTEE

Terms of reference

To enquire into and make recommendations to the Occupational Health (Standing) Committee on the occupational health hazards associated with the manufacture and use by industry of vinyl chloride monomer.

Membership

Dr N. M. Mitchell, Adviser in Occupational Health, Commonwealth Department of Health (Chairman).

Mr J. I. Auld, Australian Society of Engineers, Site Union Delegate, I.C.I., Botany, N.S.W.

Dr A. Bell, Director, Division of Occupational Health and Radiation Control, Health Commission of N.S.W.

Mr J. E. Brewster, General Manager, B. F. Goodrich Chemical Limited, Victoria.

Dr R. E. Davies, Chief Medical Officer, I.C.I. Australia Limited, Victoria.

Mr. A. W. Findlay, School of Public Health and Tropical Medicine, University of Sydney.

Mr H. W. Guilhaus, Executive Action Officer, I.C.I. Vinyl Chloride Committee, N.S.W.

Mr D. O'Leary, Secretary, Chemical Workers' Branch, Federated Ironworkers' Association, N.S.W.

Mr R. Pettiona, Federal Secretary, Rubber Workers' Union, Victoria.

POISONS SCHEDULE (STANDING) COMMITTEE

Terms of reference

To enquire into the scheduling, labelling, packaging and advertising in public media of drugs, poisons and other substances hazardous to human health in the States and Territories and to make recommendations to the Council through the Public Health Advisory Committee.

Membership

Dr E. J. Fitzsimons, Director, Toxicology Section, Commonwealth Department of Health (Chairman).

Mr F. Ahern, Pharmaceutical Chemist Inspector, Department of Health, Victoria.

Dr J. E. Aldred, Physician, Victoria.

Mr V. Bugler, Senior Pharmacist, Capital Territory Health Commission, A.C.T.

Mr R. Burke, Chief Inspector of Drugs and Poisons, Department of Health, Queensland.

Mr. B. M. Graham, Secretary, N.S.W. Poisons Advisory Committee, Health Commission of N.S.W.

Mr W. M. Griffiths, Principal Pharmacist, Department of Public Health, Western Australia.

Dr P. J. Ravenscroft, Clinical Pharmacologist, Princess Alexandra Hospital, Brisbane.

Mr R. C. McCarthy, Senior Pharmaceutical Inspector, Department of Public Health, South Australia.

Mr C. M. Oscar, representative of the Pharmaceutical Association of Australia and New Zealand.

Mr F. D. Potts, Chief Inspecting Pharmacist, Department of Health Services, Tasmania.

Dr C. Reid, Research Medical Officer, School of Public Health & Tropical Medicine, University of Sydney.

Professor D. N. Wade, School of Physiology and Pharmacology, University of New South Wales.

An officer of the Commonwealth Department of Health (Convener and Secretary).

RADIATION HEALTH (STANDING) COMMITTEE

Terms of reference

To enquire into and advise the Council through the Public Health Advisory Committee on all matters relating to:

(i) the effects in man of naturally occurring ionizing radiation and of artificial radiations, including ionizing radiations, microwaves, lasers and masers used in industry, commerce, related scientific research and medical investigations;

(ii) the levels of, and the measures necessary to minimise, the radiation exposure of individuals and the Australian population from such radiations; and

(iii) procedures and practices which would assist Australia and the States in the implementation of their public health legislation relating to radioactive substances and irradiation.

Membership

Mr J. F. Richardson, Deputy Director, Australian Radiation Laboratory, Commonwealth Department of Health, Victoria (Chairman and Convener).

Mr E. J. Kearley, Senior Scientific Officer, Industrial Hygiene Division, Department of Health, Victoria.

Dr G. Klempfner, Director, Department of Nuclear Medicine, Queen Victoria Memorial Hospital, Melbourne.

Mr B. E. King, Physicist in Charge, State X-Ray Laboratory, W.A. Government Medical Department.

Dr B. Kynaston, representative on Council of the Royal Australasian College of Radiologists.

Mr R. G. Stafford, Scientific Officer, Department of Public Health, S.A.

Mr K. A. Stevens, Radiation Health Physicist, Department of Health, Queensland.

Dr G. M. Watson, Nuclear Science and Technology Branch, Australian Atomic Energy Commission, New South Wales.

AD HOC SUBCOMMITTEE ON DOSE ASSESSMENT

Terms of reference

To consider and report to the Radiation Health (Standing) Committee on the following:

(i) preparation and general outline on surveys to assess the genetic and somatic doses to the Australian population from the medical and dental uses of ionizing radiation and radioactive substances;

(ii) ways and means of undertaking the survey;

(iii) definition of the extent and nature of the co-operation from the Australian Government and State Health authorities which would be of assistance; and

(iv) estimated costs involved.

Membership

Mr T. N. Swindon, Australian Radiation Laboratory, Department of Health, Victoria (Chairman).

Mr F. R. Chandler, Superintendent Radiographer, Prince Henry's Hospital, Melbourne.

Dr G. C. Scott, School of Public Health & Tropical Medicine, University of Sydney.

Mr R. W. Stanford, Head, Department of Medical Physics, Royal Perth Hospital, W.A.

Dr D. P. Thomas, Director of Diagnostic Radiology, Austin Hospital, Melbourne.

Council agreed that this Subcommittee should be disbanded as soon as the survey is completed.

AD HOC SUBCOMMITTEE ON THE SAFE DISPOSAL OF RADIOACTIVE WASTE

Terms of reference

To investigate methods for the safe disposal of radioactive waste material and recommend to the Council through the Radiation Health (Standing) Committee means by which such safe disposal may be achieved.

Membership

Mr J. F. Richardson, Deputy Director, Australian Radiation Laboratory, C/wlth Department of Health, Victoria (Chairman).

Mr F. P. J. Robotham, 15 Harrison Street, Mitcham, Victoria.

Mr K. A. Stevens, Radiation Health Physicist, Department of Health, Queensland.

Dr G. M. Watson, Nuclear Science and Technology Branch, Australian Atomic Energy Commission, N.S.W.

TRAFFIC INJURY (STANDING) COMMITTEE

Terms of reference

To enquire into and advise the Council through the Public Health Advisory Committee on:

(i) factors of medical significance in the causation and prevention of injuries in traffic accidents; and

(ii) the medical aspects of the rescue of the victims of traffic accidents, their resuscitation and subsequent management.

Membership

Professor J. Ludbrook, representative on Council of the Royal Australasian College of Surgeons (Chairman).

Dr M. Henderson, Executive Director of Traffic Safety, Traffic Accident Research Unit, Department of Motor Transport, New South Wales.

Professor J.S. Robertson, Department of Pathology, University of Adelaide.

Mr D. A. McCullough, Managing Director, P.A. Management Consultants Pty Ltd, South Melbourne.

An officer of the Commonwealth Department of Health (Convener and Secretary).

VETERINARY PUBLIC HEALTH (STANDING) COMMITTEE

Terms of reference

To enquire into and advise the Council through the Public Health Advisory Committee on matters relating to the infections, use, husbandry and control of animals and animal products, which may directly or indirectly affect human health.

Membership

Dr W. J. Stevenson, Commonwealth Department of Health (Chairman).

Dr R. L. Doherty, Director, Queensland Institute of Medical Research.

Dr J. A. Forbes, Medical Superintendent, Fairfield Hospital, Victoria.

Professor J. Francis, Veterinary School, University of Queensland.

Mr J. A. Hart, Veterinary Health Branch, Department of Primary Industry, A.C.T.

Dr K. L. Hughes, School of Veterinary Science, University of Melbourne.

Dr P. F. Lewis, Principal Veterinary Officer, Commonwealth Serum Laboratories, Victoria.

An officer of the Commonwealth Department of Health (Convener and Secretary).

AIR POLLUTION CONTROL (REFERENCE) SUBCOMMITTEE

Terms of reference

To enquire into and advise the Public Health Advisory Committee on:

(i) ambient air quality standards; and

(ii) emission standards for air pollutants.

Membership

Dr K. J. Wilson, Deputy Director-General of Public Health, South Australia (Chairman).

Dr J. R. Harry, Principal Engineer — Air, State Pollution Control Commission, New South Wales.

Dr G. J. Cleary, Director, Air Pollution Control Division, Queensland.

Mr P. A. Le Roy, Chief Air Quality Officer, Environment Protection Authority, Victoria.

A medically qualified representative of the Health Commission of New South Wales.

An officer of the Commonwealth Department of Health (Convener).

AD HOC SUBCOMMITTEE ON LEAD IN PETROL

Terms of reference

To enquire into and report to the Public Health Advisory Committee on health policy in relation to lead in petrol.

Membership

Dr K. J. Wilson, Deputy Director-General of Public Health, South Australia (Chairman).

Dr P. D. Clark, Department of Public Health, South Australia.

Dr R. G. Edwards, Director, Division of Clinical Chemistry, Institute of Medical and Veterinary Science, South Australia.

PESTICIDES AND AGRICULTURAL CHEMICALS (STANDING) SUBCOMMITTEE

Terms of reference

To enquire into and make recommendations to the Public Health Advisory Committee upon:

(i) the problems associated with maximum residue limits for pesticides and incidental agricultural chemical residues in food for human consumption; and

(ii) the maximum residue limits for the residues of veterinary medicines (including anthelmintics).

Membership

Dr E. J. Fitzsimons, Director, Toxicology Section, Commonwealth Department of Health (Chairman).

Mr R. S. Belcher, Deputy Chief, Division of Agricultural Chemistry, Department of Agriculture, Victoria.

Mr E. J. Martyn, Chief Entomologist, Department of Agriculture, Tasmania.

Mr C. W. R. McCray, Animal Research Institute, Department of Primary Industries, Queensland.

Professor C. Raper, Victorian College of Pharmacy.

Mr J. T. Snelson, Pesticides Co-ordinator, Department of Primary Industry, A.C.T.

Professor J. D. Steel, School of Veterinary Science, University of Melbourne.

Mr D. E. Weedman, Registrar of Pesticides, Department of Agriculture, N.S.W.

An officer of the Commonwealth Department of Health (Convener and Secretary).

SMOKING SURVEY AD HOC SUBCOMMITTEE

Terms of reference

(i) To plan and supervise a survey of the smoking habits and attitudes of children and of the factors which motivate them to start smoking and to report through the Public Health Advisory Committee to the Council.

(ii) To forward to the Minister's Advisory Committee on Smoking Education those findings which will assist the Minister's Advisory Committee in its work.

Membership

An officer of the Commonwealth Department of Health (Chairman).

Dr F. W. Clements, Visiting Lecturer, School of Public Health & Tropical Medicine, University of Sydney.

Mr J. Cullen, Assistant Director, Division of Health Education, Health Commission of New South Wales.

Dr R. P. Irwin, School of Teacher Education, Canberra College of Advanced Education.

Dr P. S. Hollingworth, General Practitioner, A.C.T.

SYNTHETIC DETERGENTS (REFERENCE) SUBCOMMITTEE

Terms of reference

To enquire into and report to the Public Health Advisory Committee on the public health problems associated with the use of detergents.

Membership

Dr P. M. Philpott, Director, Environmental Hygiene Section, Commonwealth Department of Health (Chairman).

Mr R. F. Brady, Colgate-Palmolive Pty Limited, N.S.W.

Dr A. J. Christophers, Chief Industrial Hygiene Officer, Department of Health, Victoria.

Mr D. R. Devlin, U.P.L. Silicates Pty Ltd, N.S.W.

Dr B. Fraser, Chief Medical Officer, Metropolitan Water, Sewerage and Drainage Board, N.S.W.

Mr C. D. Parker, Director, Water Science Laboratories Pty Ltd, Victoria.

Dr B. L. Reidy, Executive Director, Australian Chemical Specialties Manufacturers Association, Victoria.

An officer of the Commonwealth Department of Health (Convener and Secretary).

AD HOC SUBCOMMITTEE ON VENEREAL DISEASES

Terms of reference

To enquire into and make recommendations to the Public Health Advisory Committee on the diagnosis, treatment and management of venereal disease including the preparation of suitable handbooks.

Membership

Dr A. C. Green, Director, Commonwealth Department of Health, South Australia (Chairman and Convener).

Dr D. D. E. Evans, Pathologist-in-Charge, Pathology Laboratory, Commonwealth Department of Health, Tasmania.

Dr A. H. Finger, Epidemiology Division, Department of Public Health, South Australia.

Dr M. F. Garner, Institute of Clinical Pathology and Medical Research, Health Commission of New South Wales.

Dr D. Kelly, Department of Health, Queensland.

Dr W. A. Lopez, Adviser, Communicable Diseases, Health Commission of N.S.W.

Dr W. A. Newnham, Venereologist in Charge, Department of Public Health, W.A.

WATER QUALITY CRITERIA (REFERENCE) SUBCOMMITTEE

Terms of reference

To enquire into and report to the Public Health Advisory Committee on water quality and formulate draft criteria related to the health aspects of:

(i) drinking water;

(ii) water to be used for recreational purposes;

(iii) water to be used for industrial purposes; and

(iv) water to be reused.

Membership

Dr P. M. Philpott, Director, Environmental Hygiene Section, Commonwealth Department of Health (Chairman and Convener).

Dr C. O. Fuller, Principal Medical Officer, Environmental Health, Department of Public Health, South Australia.

Dr S. J. Krister, Principal Medical Officer, Environmental and Special Health Services, Health Commission of New South Wales.

Dr R. S. W. Lugg, Department of Public Health, Western Australia.

Dr S. D. MacLeod, Director of Medical Services, Capital Territory Health Commission.

Dr E. J. McArdle, Regional Medical Officer of Health, Hobart, Tasmania.

Dr J. Quinn, Assistant Director, Department of Health, Northern Territory.

Dr R. Rogers, Department of Health, Queensland.

Dr W. Sloan, Assistant Chief Health Officer (Public Health), Victoria.

Committee Membership and Constitution

The following recommendations were approved by the Council.

Medical Research Advisory Committee

REGIONAL GRANTS SUBCOMMITTEES 1977

Six Regional Grants Subcommittees for 1977, and dates for their visits to interview recipients and/or applicants of NH & MRC grants, prior to the Eighty-fourth Session of the Council, were approved.

Melbourne Regional Grants 27 June-1 July

Three Subcommittees are to be formed from the following members:

Dr R. Doherty, Dr W. Levick, Professor W. J. O'Sullivan, Professor J. Paterson, Professor J. McLeod, Dr M. Denborough, Professor S. Leeder, Dr A. S. Henderson, Professor J. Ludbrook, Professor J. Llewellyn-Jones, Professor M. Berry, Professor D. Cameron, Professor J. Lawrence.
Secretaries: Mr K. O'Brien, Mr J. Shaw, Mr G. Noonan.

Sydney Regional Grants 11-15 July

Three Subcommittees are to be formed from the following members:

Professor R. Porter, Professor F. Gibson, Dr C. Jenkin, Professor J. Waterson, Professor R. Lovell, Professor C. I. Johnston, Dr B. Armstrong, Professor W. Ironside, Dr R. Edwards, Professor R. C. Bennett, Dr R. Seamark, Professor M. D. Attwood.
Secretaries: Dr K. W. Edmondson, Mr G. Williams, Mr G. Noonan.

Adelaide Regional Grants 18-21 July

Dr J. D. Harley, Dr J. Coghlan, Professor G. Ada, Dr G. Ryan, Professor W. Louis.
Secretary: Mr J. Shaw.

Perth Regional Grants 18-21 July

Professor C. Kidson, Professor W. E. Glover, Dr I. Marshall, Dr J. V. Hurley, Professor J. Lance.
Secretary: Mr K. O'Brien.

Brisbane Regional Grants 25-28 July

Professor G. Schofield, Dr R. G. H. Morgan, Dr H. D. Niall, Professor A. Basten, Dr J. Colebatch, Professor D. Tracey.
Secretary: Dr K. W. Edmondson.

Hobart Regional Grants 7-8 July

Dr B. Hudson, Dr S. Skinner, Associate Professor M. G. McCall.
Secretary: Dr K. W. Edmondson.

SPECIAL RESEARCH FELLOWSHIPS (STANDING) COMMITTEE

Statement (iii) of the terms of reference is amended to read:

To advise the successful applicants and others, where necessary, on their continuing education and careers.

RESEARCH FELLOWSHIPS COMMITTEE

The above Committee was established with the following terms of reference and membership:

Terms of reference

To advise the Medical Research Advisory Committee on matters relating to the award of NH & MRC Research Fellowships associated with:

(1) Project grants.
(2) Grants to Institutes receiving NH & MRC institutional support.
(3) Areas of special need determined from time to time by the Council.

To ensure uniformity of standards and practice in the areas of Research Fellowships nominated above.

To make recommendations on the method of appointment, review of progress, promotion and tenure of appointment of Research Fellows.

Membership

The Chairman of the Medical Research Advisory Committee or his nominee from the Medical Research Advisory Committee. (Chairman).

The Secretary of the Council.

A person representing the Appointments and Promotions Committees of the institutes receiving NH & MRC institutional support.

Three persons nominated by the Medical Research Advisory Committee.

For 1977 the following members for the Research Fellowships Committee were appointed:

Dr T. H. Hurley, Consultant Physician, Melbourne, Chairman of the Medical Research Advisory Committee (Chairman).

Dr K. W. Edmondson, Secretary of the National Health and Medical Research Council.

Dr D. A. Denton, Director, Howard Florey Institute of Experimental Physiology and Medicine, Melbourne.

Professor D. R. Curtis, Department of Pharmacology, Australian National University, Canberra.

Dr R. L. Doherty, Director, Queensland Institute of Medical Research, Brisbane.

Assoc. Professor L. Lazarus, Director, Garvan Institute of Medical Research, St. Vincent's Hospital, Darlinghurst, N.S.W.

Medicine Advisory Committee

THERAPEUTIC METHODS SUBCOMMITTEE ON HYPNOSIS, HYPNOTHERAPY AND PARAENERGY

The terms of reference of the Therapeutic Methods Subcommittee on Hypnosis and Hypnotherapy are amended to read:

To investigate and report to the Medicine Advisory Committee on the place of hypnosis and hypnotherapy in current medical practice, to evaluate the claims made for paraenergy, and advise on the establishment of guidelines for training medical and paramedical personnel in the use of these techniques.

Public Health Advisory Committee

The following changes in membership were approved:

FOOD STANDARDS COMMITTEE

Deletion of:

Mr W. C. K. Hammer
Mr I. S. Ogle

Addition of:

Mr D. R. Barnes, Department of Primary Industry, Canberra
Dr C. Hudson, Council of Australian Food Technology Associations.

POISONS SCHEDULE COMMITTEE

Deletion of:

Mr R. Dash

Addition of:

Mr B. M. Graham, Secretary, N.S.W. Poisons Advisory Committee, Health Commission of New South Wales.

AIR POLLUTION CONTROL SUBCOMMITTEE

Addition of:

a medically qualified Representative of the Health Commission of New South Wales.

FOOD SCIENCE AND TECHNOLOGY SUBCOMMITTEE

An additional toxicologist.

OCCUPATIONAL HYGIENE SUBCOMMITTEE

Deletion of:

Nominee of the Commissioner of Public Health, W.A.

Addition of:

Mr G. V. Coles, Department of Public Health, W.A.

WATER QUALITY CRITERIA SUBCOMMITTEE

Deletion of:

Dr D. Kelly
Dr J. Hancock
Nominee of the Capital Territory Health Commission

Addition of:

Dr J. Quinn, Assistant Director, Department of Health, N.T.
Dr S. D. MacLeod, Medical Adviser, Capital Territory Health Commission, A.C.T.
Dr R. Rogers, Department of Health, Queensland.

TIME AND PLACE OF NEXT MEETING

It was agreed that the Eighty-fourth Session of the Council would take place in Canberra on 24-25 November 1977 preceded by meetings of the Medical Research Advisory Committee, the Medicine Advisory Committee and the Public Health Advisory Committee.

APPRECIATION TO DEPARTMENT OF MAIN ROADS

The Chairman, on behalf of members of the Council, expressed appreciation to Mr G. E. C. McKercher, Director of the Department of Main Roads, for the use of the Auditorium of the State Offices, 10 Murray Street, Hobart.

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