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ANIMAL WELFARE ACT 1992

DETERMINATION NO. 44 OF 1993

CODE OF PRACTICE - APPROVAL

UNDER section 22 of the Animal Welfare Act 1992, I APPROVE as a Code of Practice *the Australian Code of Practice for the Care and Use of Animals for Scientific Purposes with the exception of Section 2.*

Date: 15 5 93

BILL WOOD
Minister for the Environment,
Land and Planning

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National Health and Medical Research Council
Commonwealth Scientific and Industrial Research Organisation
Australian Agricultural Council

Australian code of practice for the care and use of animals for scientific purposes

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National Health and Medical Research Council
Commonwealth Scientific and Industrial Research Organisation
Australian Agricultural Council

and representatives of the

State governments of New South Wales, South Australia and Victoria

Endorsed by the

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Contents

Introduction

Purpose of the Code

The purpose of this Code is to ensure the humane care of animals used for scientific purposes.

Its aims are to:

- emphasise the responsibilities of both investigators and institutions using animals;
- ensure that the welfare of animals is always considered an essential factor;
- ensure that animal use is valid;
- minimise the number of animals used in projects and limit or avoid pain or distress; and
- promote the development and use of techniques which replace animal experiments.

Scope of the Code

The Code encompasses all aspects of the care and use of animals for scientific purposes in medicine, biology, agriculture, veterinary and other animal sciences, industry and teaching. It includes their use in research, teaching, field trials, product testing, diagnosis, and the production of biological products.

The Code provides general principles for the care and use of animals, specifies the responsibilities of investigators and institutions, and details the terms of reference, membership and operation of institutional Animal Experimentation Ethics Committees (AEECs). It also provides guidelines for the humane conduct of experiments, and for the acquisition of animals and their care.

The Code covers all live non-human vertebrates. Invertebrates are not currently the subjects of relevant State or Territory legislation. Investigators should consider forwarding proposals to use higher order invertebrates to AEECs.

Revision of the Code

This 5th edition of the Code of Practice is sponsored by the National Health and Medical Research Council (NHMRC), the Commonwealth Scientific and Industrial Research Organisation (CSIRO), and the Australian Agricultural Council (AAC). It was revised by representatives of these organisations together with the State governments of New South Wales, South Australia and Victoria.

The first Code was produced by the NHMRC in 1969. Revisions of the Code were undertaken in conjunction with the CSIRO in 1979 and 1982, and with the CSIRO and the AAC in 1985.

Periodic revisions take into account changes in biological science and in community attitudes.

Comments on the Code

Comments on this Code are invited and should be addressed to The Secretary, NHMRC, GPO Box 9848, Canberra ACT 2601.

State and Territory legislation regulating the use of animals for scientific purposes

Current in 1989

Queensland	*Animals Protection Act 1925–1977*
New South Wales	*Animal Research Act 1985*
Victoria	*Prevention of Cruelty to Animals Act 1986*
Tasmania	*Cruelty to Animals Prevention Act 1925*
South Australia	*Prevention of Cruelty to Animals Act 1985*
Western Australia	*Prevention of Cruelty to Animals Act 1920–1976*
NorthernTerritory	*Prevention of Cruelty to Animals Act 1980*
Australian Capital Territory	*Prevention of Cruelty to Animals Ordinance 1959*

The 1985 version of this Code was incorporated, with one modification, into the 'Code of practice relating to animal experimentation', made under section 7 of the *Victorian Prevention of Cruelty to Animals Act 1986.*

In South Australia it is possible to incorporate codes of practice within the *Prevention of Cruelty to Animals Act 1985.* Adoption of the 1985 version of the Code is a condition of licensing of research institutions.

Other relevant legislation

Commonwealth

(i) *Australian Wildlife Protection (Regulation of Exports and Imports) Act 1982*

(ii) *Export Control Act 1982*, including *Export Control (Animals) Order 1987*

(iii) *Quarantine Act 1908*

State–Territory

(i) Native Fauna Acts

(ii) Occupational Health and Safety Acts

Other relevant Australian codes of practice or guidelines

Model codes of practice for the welfare of animals cover the transport, handling and husbandry of farm animals. The following Codes are available from the Australian Quarantine and Inspection Service, Department of Primary Industries and Energy, Canberra ACT 2600:

The pig (1983)
The domestic fowl (1983)
Road transport of livestock (1983)
Rail transport of livestock (1983)
Air transport of livestock (1986)
Animals at slaughtering establishments (abattoirs, slaughterhouses and knackeries) (1986)
Intensive husbandry of rabbits (1987)
Sea transport of livestock (1988)

The International Air Transportation Association (IATA) Rules Book for the carriage of live animals, which may be obtained through the State Departments of Agriculture or their equivalent, or from IATA, 2000 Peel Street, Montreal Quebec H3A 2R4 Canada.

The Genetic Manipulation Advisory Committee, Department of Administrative Services, GPO Box 2183, Canberra ACT 2601:

Guidelines for small scale genetic manipulation work.
Guidelines for large scale work with recombinant DNA.

Procedures for assessment of the planned release of recombinant DNA organisms.

Useful guides

A guide to the use of Australian native mammals in biomedical research. NHMRC, GPO Box 9848, Canberra ACT 2601.

Smith, J.B. (Comp.)(1987). *Survey of laboratory animals and tumour cell-lines maintained in Australia,* 6th revision. Distributed by The Australian Council for the Care of Animals in Research and Teaching, c/- GPO Box 1142, Canberra ACT 2601.

Standing Committee on Agriculture. *Technical Report Series.* CSIRO Publications, 314 Albert Street, East Melbourne Vic 3002.

Zoonoses. Worksafe Australia, GPO Box 58, Sydney NSW 2001. This guide was initially produced by the NHMRC. With the establishment of The National Occupational Health and Safety Commission (NOHSC), responsibility for the production of occupational health guides was transferred from the NHMRC to the NOHSC (Worksafe Australia).

Definitions of terms used in this Code

Animal: Any live non-human vertebrate.

Animal Experimentation Ethics Committee (AEEC): A committee constituted in accord with the terms of reference and membership laid down in this Code of Practice. These committees are called Animal Ethics Committees and Animal Care and Ethics Committees in legislation in South Australia and New South Wales respectively.

Approved project: A project which has been formally approved by a properly constituted AEEC, on the basis of a written proposal.

Distress: Acute or chronic response of an animal caused by stimuli that produce biological stress which produces observable, abnormal physiological or behavioural responses.

Endangered species: A species named as endangered in an Act of the Australian or the relevant State Parliament, or equivalent Territory legislation or in the Convention on

International Trade in Endangered Species of Wild Fauna and Flora (CITES).

Experiment: Any test or trial for a scientific purpose, including any activity to test an hypothesis or demonstrate a known fact.

Investigator: A person approved by an AEEC to be responsible for the conduct of an approved project involving animals.

Project: A series of related experiments that forms a discrete piece of research.

Proposal: A written outline of a research project put forward for consideration by an AEEC.

Scientific purposes: All those activities performed to acquire, develop or demonstrate knowledge or techniques in any scientific discipline, including activities for the purposes of teaching, research, diagnosis, product testing, and the production of biological products.

Tranquillisers: Drugs which are used to treat anxiety or produce sedation.

Section 1

General principles for the care and use of animals for scientific purposes

For the guidance of Investigators, Institutions and Animal Experimentation Ethics Committees and all involved in the care and use of animals for scientific purposes.

1.1

Experiments on animals may be performed only when they are essential to obtain and establish significant information relevant to the understanding of humans or animals, to the maintenance and improvement of human or animal health and welfare, to the improvement of animal management or production, or to the achievement of educational objectives.

1.2

People who use animals for scientific purposes have an obligation to treat the animals with respect and to consider their welfare as an essential factor when planning and conducting experiments.

1.3

Investigators have direct and ultimate responsibility for all matters relating to the welfare of the animals they use in experiments.

1.4

Techniques which replace or complement animal experiments must be used wherever possible.

1.5

Experiments using animals may be performed only after a decision has been made that they are justified, weighing the scientific or educational value of the experiment against the potential effects on the welfare of the animals.

1.6

Animals chosen must be of an appropriate species with suitable biological characteristics, including behavioural characteristics,

genetic constitution and nutritional, microbiological and general health status.

1.7

Animals must not be taken from their natural habitats if animals bred in captivity are available and suitable.

1.8

Experiments must be scientifically valid, and must use no more than the minimum number of animals needed.

1.9

Experiments must use the best available scientific techniques and must be carried out only by persons competent in the procedures they perform.

1.10

Experiments must not be repeated unnecessarily.

1.11

Experiments must be as brief as possible.

1.12

Experiments must be designed to avoid pain or distress to animals. If this is not possible, pain or distress must be minimised.

1.13

Pain and distress cannot be evaluated easily in animals and therefore investigators must assume that animals experience pain in a manner similar to humans. Decisions regarding the animals' welfare must be based on this assumption unless there is evidence to the contrary.

1.14

Experiments which may cause pain or distress of a kind and degree for which anaesthesia would normally be used in medical or veterinary practice must be carried out using anaesthesia appropriate to the species and the procedure. When it is not possible to use anaesthesia, such as in certain toxicological or animal production experiments or in animal models of disease, the end-point of the experiments must be as early as possible to avoid or minimise pain or distress to the animals.

1.15

Investigators must avoid using death as an experimental end-point whenever possible.

1.16

Analgesic and tranquilliser usage must be appropriate for the species and should at least parallel usage in medical or veterinary practice.

1.17

An animal which develops signs of pain or distress of a kind and degree not predicted in the proposal, must have the pain or distress alleviated promptly. If severe pain cannot be alleviated without delay, the animal must be killed humanely forthwith. Alleviation of such pain or distress must take precedence over finishing an experiment.

1.18

Neuromuscular blocking agents must not be used without appropriate general anaesthesia, except in animals where sensory awareness has been eliminated. If such agents are used, continuous or frequent intermittent monitoring of paralysed animals is essential to ensure that the depth of anaesthesia is adequate to prevent pain or distress.

1.19

Animals must be transported, housed, fed, watered, handled and used under conditions which are appropriate to the species and which ensure a high standard of care.

1.20

Institutions using animals for scientific purposes must establish Animal Experimentation Ethics Committees (AEECs) to ensure that all animal use conforms with the standards of this Code.

1.21

Investigators must submit written proposals for all animal experimentation to an AEEC which must take into account the expected value of the knowledge to be gained, the validity of the experiments, and all ethical and animal welfare aspects.

1.22

Experiments must not commence until written approval has been obtained from the AEEC.

1.23

The care and use of animals for all scientific purposes in Australia must be in accord with this Code of Practice, and with Commonwealth, State and Territory legislation.

Section 2

Responsibilities of institutions and their animal experimentation ethics committees

2.1 Responsibilities of institutions

2.1.1

Institutions in which animals are used for scientific purposes must:

(i) establish one or more AEECs or their equivalents, directly responsible to the governing body of the institution or its delegate;

(ii) ensure, through the AEEC, that all experiments comply with relevant legislation;

(iii) provide each AEEC with facilities and powers to fulfil its terms of reference and operate as set out in Section 2.2;

(iv) refer to the appropriate AEEC for comment all matters which may affect animal welfare in the institution including the building of, or modification of, animal facilities;

(v) review periodically the operation of each AEEC;

(vi) respond effectively to recommendations from each AEEC to ensure that the facilities for the housing, care, use and disposal of animals are appropriate to the maintenance of the health and well-being of the animals;

(vii) respond effectively to recommendations from each AEEC to ensure that all animal experimentation within the institution remains in accord with this Code. If recommended extra or improved facilities, or additional staff or staff training, cannot be provided, AEECs must be informed promptly;

(viii) upon the advice of the AEEC, discipline investigators who contravene the Code or decisions of the AEEC;

(ix) provide all investigators and relevant other staff with details of the institution's policy on the care and use of animals, and on confidentiality, relevant Freedom of Information legislation, legal requirements and commercial considerations;

(x) provide staff members with information on potential disease hazards from their work with animals, especially specific hazards to pregnant women;

(xi) establish mechanisms to respond to enquiries or complaints concerning the use of animals within the institution and ensure that staff may voice concerns without jeopardising their employment;

(xii) ensure that the AEEC develops guidelines for animal care and use within the institution and that these are implemented, including those which ensure that emergencies are detected promptly and dealt with effectively;

(xiii) ensure that there are adequate numbers of staff to care for the animals and that all staff are appropriately instructed; and

(xiv) ensure that appropriate veterinary services are available and that there is access to diagnostic services.

2.2 Responsibilities and operation of AEECs

Terms of reference

2.2.1

AEECs must have terms of reference which include provisions to:

(i) monitor the acquisition, transport, production, housing, care, use and disposal of animals;

(ii) recommend to the institution any measures needed to ensure that the standards of this Code are maintained;

(iii) examine and approve, approve subject to modification, or reject written proposals relevant to the use of animals in experiments and approve only those experiments for which animals are essential and which conform to the requirements of this Code, taking into consideration ethical and welfare aspects as well as scientific or educational value;

(iv) withdraw approval for any project or authorise the treatment or humane killing of any animal;

(v) examine and comment on all institutional plans and policies which may affect animal welfare;

(vi) maintain a register of approved proposals; and

(vii) perform all other duties required by this Code.

Membership

2.2.2

An AEEC must have a membership which will allow it to fulfil its terms of reference. It must comprise at least four persons, including a separate person appointed to each of the following categories:

Category A. A person with qualifications in veterinary science, preferably with experience relevant to the activities of the institution, or a person with qualifications and experience to provide comparable expertise;

Category B. A person with substantial recent experience in animal experimentation;

Category C. A person with demonstrable commitment to, and established experience in, furthering the welfare of animals, who is not employed by or otherwise associated with the institution, and who is not involved in the care and use of animals for scientific purposes. The person should where possible be selected on the basis of membership of an animal welfare organisation; and

Category D. An independent person who does not currently and has not previously conducted experiments using animals, and who is preferably not an employee of the institution.

2.2.3

The AEEC may include additional persons to ensure that it can function adequately.

2.2.4

The chairperson should hold a senior position in the institution.

2.2.5

A person responsible for the daily care of animals should attend meetings of the AEEC.

2.2.6

If the committee has more than seven members, at least two must not be employed by the institution and must fulfil the criteria of Categories C or D.

2.2.7

The composition of the AEEC must also comply with any relevant legislation.

2.2.8

Before appointment, all members of the AEEC should acknowledge in writing their acceptance of the terms of reference of the committee and any requirements for confidentiality required by the institution.

Written proposals

2.2.9

Written proposals should contain the following information as appropriate:

(i) the project title;

(ii) the names and qualifications of the responsible investigators and all others involved directly;

(iii) a statement that these qualifications and experience are appropriate to the procedures to be performed;

(iv) a clear description in lay terms of the aims of the project, and the procedures to be employed;

(v) details of the scientific or educational aims of the project;

(vi) details of the experimental techniques, including surgical or other procedures to be used, doses of anaesthetic, analgesic, or tranquillising agents, methods to be adopted to ensure that anaesthesia is adequate, and the method, if any, by which the animals will be killed humanely;

(vii) source of the animals, and any necessary permits;

(viii) number and species of animals required, and justification;

(ix) duration of the experiment;

(x) details of animal care and housing during the experiment, including location;

(xi) arrangements made for the disposal of the animals at the completion of the experiment;

(xii) justification of the project in terms of potential value of the experiments in obtaining or establishing significant information relevant to the understanding of humans or animals, to the maintenance and improvement of human or animal health and welfare, to the improvement of animal management or production, or to the achievement of educational objectives;

(xiii) reasons why animals are necessary for the project and why techniques which do not use animals have been rejected as unsuitable;

(xiv) justification for any repetition of previously performed experiments;

(xv) identification of and justification for all procedures which have the potential to cause pain or distress, and details of the steps to be taken to avoid or minimise the pain or distress;

(xvi) details of how the animals will be monitored during the experiments;

(xvii) details of monitoring procedures used to ensure that when neuromuscular and similar blocking agents are used, the potentially painful nature of any procedure is blocked by appropriate anaesthesia and analgesia;

(xviii) justification for experiments which may cause pain or distress, but in which anaesthesia or analgesia cannot be used. Such experiments include certain toxicological, pathogenic and animal production studies. The planned end-point and the reason for its choice must be given and justified. Death as an end-point must be avoided wherever possible and if unavoidable must be fully justified by the investigator. Measures to be taken to minimise pain or distress must be detailed;

(xix) identification of and justification for the use of any animal that has been the subject of a previous experiment;

(xx) any features of the proposal which raise special ethical considerations;

(xxi) any health risks to other animals or to staff;

(xxii) expected commencement and completion dates; and

(xxiii) a declaration signed by the responsible investigator(s) stating that he or she is currently licensed or authorised to perform experiments using animals (if required by legislation), and is aware of responsibilities set out in this Code and in applicable legislation.

Operating procedures

2.2.10

AEECs must ensure that operating procedures are established which will enable compliance with the provisions of this Code. Such procedures should cover in particular:

(i) specific local factors that must be taken into account when examining proposals;

(ii) powers that the AEEC is prepared to delegate to an Executive;

(iii) membership of the Executive; and

(iv) any other matter specific to the institution that will assist compliance with this Code.

2.2.11

The AEEC may establish an Executive (including at least one member from Categories C or D) to approve minor modifications to projects and deal with emergencies, but any decisions by the Executive must be reviewed by the AEEC at its next meeting.

2.2.12

The Executive may not approve proposals.

2.2.13

Minutes must be maintained which record decisions and all other aspects of the AEEC's operation.

2.2.14

Meetings must be as frequent as the volume of business demands, but normally scheduled not less than quarterly.

2.2.15

The process by which decisions are made must be fair to investigators and acceptable to all AEEC members.

Approving proposals

2.2.16

Only those experiments which conform to the requirements of all relevant sections of this Code and of legislation may be approved.

2.2.17

Proposals must be considered and approved at meetings of the AEEC.

2.2.18

Decisions on approvals of proposals should preferably be made on the basis of unanimous agreement.

2.2.19

Investigators must be informed of decisions in writing.

2.2.20

A register of all approved proposals must be maintained.

2.2.21

Decisions must be made as promptly as possible.

2.2.22

Irreconcilable differences between the AEEC and an investigator must be referred to the governing body of the institution for review.

2.2.23

Experiments must not start before written approval is given.

Monitoring

2.2.24

AEECs must ensure that adequate records are kept on the acquisition, breeding, health, care, use and disposal of animals and the condition of animals during experiments.

2.2.25

Inspections of all animal housing and laboratory areas must be conducted and appropriate records maintained to ensure compliance with the Code.

2.2.26

AEECs must ensure that any experiment breaching this Code or relevant legislation or not being performed as approved is stopped, reviewed, and appropriate action taken.

2.2.27

On each site where animals are used, the AEEC should nominate a person who is authorised to respond to emergencies. Where possible, this person should be a member of the AEEC.

2.2.28

Large institutions with multiple sites of animal care and use should consider whether an Executive Officer with veterinary or other appropriate specialist qualifications should be appointed. An Executive Officer should be authorised by the AEEC to ensure compliance with the Code and with the decisions of the AEEC.

2.2.29

Before the Executive Officer or other authorised person arranges for the treatment or humane killing of an animal being used in a research project, all reasonable steps must be taken to consult with the responsible investigator and a member of the AEEC. Any action taken by such persons must be reported promptly in writing to the responsible investigator and the AEEC, including reasons for the action taken.

Annual review

2.2.30

Experiments of long duration and the long term continuing use of individual animals must be reviewed annually by the AEEC or more frequently if considered desirable.

Report to institution

2.2.31

The AEEC must report at least annually to the governing body of the institution on its activities, on numbers and types of experiments approved, on the physical facilities for the care and use of animals within the institution, on any administrative or other difficulties being experienced and on any requirements for training staff.

Categorising proposals

2.2.32

The AEEC may adopt or develop a system to categorise proposals, to help identify areas of special concern.

Experiments at more than one institution

2.2.33

When experiments are conducted at more than one institution, AEEC approval should be sought from all institutions except when the responsibility has been formally delegated to one AEEC.

Section 3

Responsibilities of investigators

3.1 General

3.1.1

Investigators have direct and ultimate responsibility for all matters related to the welfare of their animals. They must act in accord with all requirements of this Code.

3.1.2

The responsibility of investigators extends over all facets of the care and use of animals in projects approved by the AEEC.

3.1.3

Investigators are responsible for the standard of animal care and use by all other persons involved in the experiment. They must ensure that the extent of supervision is compatible with the level of competence of each person and the responsibilities they are given.

3.1.4

Investigators should consult other experienced scientists, veterinarians, or laboratory animal, livestock or wildlife specialists when necessary.

3.1.5

Before any project begins, investigators must submit a proposal to the AEEC which demonstrates that the project will comply with the conditions of this Code and relevant legislation.

3.1.6

Investigators must not begin experiments before written AEEC approval is obtained, and must adhere to any requirements of the AEEC.

3.1.7

Investigators must ensure that satisfactory arrangements are made for contacting them and other responsible persons in the event of emergencies.

3.1.8

Investigators must ensure that the choice of species is appropriate for the purpose of the project. Requirements for known genetic constitution, freedom from specific diseases,

documented health, nutritional and environmental histories and other relevant factors should be taken into account. When the definition of the biological status of animals is necessary, investigators must ensure that the supplier can provide adequate proof of definition. Where relevant, species and individual animals should be chosen on the basis that the proposed experiments will result in the least pain and distress. In making this decision, all aspects of the biological nature of the animals, including their behavioural characteristics and their cognitive development, should be taken into account.

3.1.9

Investigators must ensure that records of the experimental use of animals are maintained.

3.1.10

Investigators must inform the AEEC when each project is completed or discontinued.

3.2 Planning projects

3.2.1

In addition to the information required by the AEEC, the investigator needs to address the following questions during the planning stages of a project:

(i) Is the project justified ethically and scientifically?

(ii) Can the aims be achieved without using animals?

(iii) Has the most appropriate species of animal been selected?

(iv) Are suitable holding facilities and competent staff available?

(v) Have all staff been informed of the experimental procedures?

(vi) Is the biological status (genetic, nutritional, microbiological, general health) of the animals appropriate?

(vii) Are the environmental conditions (including caging or pen type, noise, photoperiod, temperature, humidity, ventilation, density of housing, and social structures) appropriate?

(viii) Are the experiments designed so that statistically valid results can be obtained or the educational objectives

achieved, using the minimum necessary number of animals?

(ix) If the experiments could cause the animals any pain or distress, what will be done to minimise or avoid this?

(x) What arrangements will be made to monitor the animals adequately?

(xi) Have any of the experiments been performed previously? If so, why should they be repeated?

(xii) Are there any permits that must be obtained for the importation, capture, use, destruction or release of the animals?

3.3 Conduct of experiments

General considerations

Limiting pain and distress

3.3.1

Pain and distress cannot be evaluated easily in animals, and therefore investigators must assume that animals experience pain in a manner similar to humans. Decisions regarding their welfare in experiments must be based on this assumption unless there is evidence to the contrary.

3.3.2

The investigator must anticipate and take all possible steps to avoid or minimise pain and distress, including:

(i) choosing the most humane method for the conduct of the experiment;

(ii) ensuring the technical skills and competence of all persons involved in animal care and use;

(iii) ensuring that animals are adequately monitored for evidence of pain and distress;

(iv) acting promptly to alleviate pain or distress;

(v) using anaesthetic, analgesic and tranquillising agents appropriate to the species and the experimental purposes;

(vi) conducting projects over the shortest time practicable; and

(vii) using appropriate methods of euthanasia.

3.3.3

The use of local or general anaesthetics, analgesics or tranquillisers must be appropriate to the species, and should at least parallel their use in current medical or veterinary practice.

3.3.4

Experiments which are liable to cause pain of a kind and degree for which anaesthesia would normally be used in medical or veterinary practice must be carried out under anaesthesia.

3.3.5

Distress can sometimes be avoided or minimised by non-pharmacological means. Before an experiment begins, animals should be appropriately conditioned to the experimental environment and procedures, and be familiar with handlers. During and after experiments, appropriate nursing procedures to minimise pain and distress, and to promote the well-being of the animals must be provided.

3.3.6

The monitoring of animals must at all times be adequate to prevent the occurrence, or allow prompt alleviation, of pain or distress.

3.3.7

If animals develop signs of severe pain or distress despite the precautions outlined above, they must have the pain or distress alleviated promptly or must be killed humanely and without delay. Alleviation of such pain or distress must take precedence over continuing or finishing the experiment.

Signs of pain or distress

3.3.8

Investigators should be familiar with the normal behaviour of the animal species chosen, be knowledgeable of signs of pain or distress specific to that species, and must monitor their animals for these signs.

3.3.9

Animals must be monitored to allow detection of deviations from normal behaviour patterns. Such deviations are often the first indications that animals are experiencing pain or distress. Change in patterns of sleeping, feeding, drinking, grooming, exploratory behaviour, performance in learning or discriminatory tasks, reproduction or social behaviour should be looked for.

3.3.10

Animals must be monitored appropriately for clinical signs of acute pain or distress. These may include one or more of the following: aggressive and/or abnormal behaviour (some species may become unduly submissive), abnormal stance or movements, abnormal sounds, altered cardiovascular and/or respiratory function, abnormal appetite, rapid decline in body weight, altered body temperature, vomiting and abnormal defaecation or urination. Indicators of sustained pain or distress may include loss of body weight, failure to thrive, impaired reproductive ability and reduced resistance to disease.

Repeated use of animals in experiments

3.3.11

Individual animals must not be used in more than one experiment either in the same or different projects, without the express approval of the AEEC. However appropriate re-use of animals may reduce the total number of animals used in a project, result in better design of experiments, reduce stress or avoid pain to other animals.

3.3.12

When approving experiments involving the re-use of animals, the AEEC must be satisfied that either, (i) none of the experiments cause the animals pain or distress; or (ii) the second and subsequent experiments produce little or no pain or biological stress to the animals (e.g. modifying diet, taking a succession of blood samples, repeated non-invasive recording procedures) and that the animals have recovered fully from the first experiment before further procedures are carried out.

Duration of experiments

3.3.13

Experiments, particularly those which involve any pain or distress should be as brief as practicable. AEEC approval must be sought for the continued long-term use of individual animals. The decision to continue must be based on the clinical well-being of the animal and the absence of aversion to the experimental situation.

Handling and restraining animals

3.3.14

Animals must be handled only by persons instructed and competent in methods which avoid distress and do not cause injury.

3.3.15

The use of restraint devices is sometimes necessary for the welfare of the animal and the safety of the handler. Restraint devices must be used to the minimum extent, for the minimum period required to accomplish the purpose of the experiment, and be appropriate for the animal.

3.3.16

Tranquillisers or anaesthetics may aid restraint but may prolong recovery from the procedure. When these agents have been used, recovery of the animals must be monitored.

3.3.17

Periods of prolonged restraint should be avoided. Where animals are in prolonged restraint, consideration must be given to their biological needs, including their behavioural requirements, and they must be monitored regularly by a veterinarian or other qualified person not participating in the experiment. If any ill effects are shown, the animal must be removed from the restraint or the method modified.

Completion of projects

3.3.18

Upon completion of the project, animals must be returned promptly to either normal husbandry conditions or, if appropriate and permitted, to their natural habitat, or be killed humanely.

3.3.19

Where practicable investigators should share with other investigators tissue from animals being killed.

Humane killing of animals

3.3.20

When it is necessary to kill an animal, humane procedures must be used. These procedures must avoid distress, be reliable, and produce rapid loss of consciousness without pain until death occurs. The procedures should also be compatible with the aims of the experiments.

3.3.21
The procedures should be performed only by persons competent in the methods to be used, or under the direct supervision of a competent person. The appropriate means must be readily at hand.

3.3.22
Animals should be killed in a quiet, clean environment, and normally away from other animals. There should be no disposal of the carcass until death is established.

3.3.23
Dependent neonates of animals being killed must also be killed or provision made for their care.

3.3.24
When fertilised eggs are used, the method of disposal must ensure the death of the embryo.

Autopsy

3.3.25
Autopsy should be performed when animals die unexpectedly.

Additional considerations

Surgery

3.3.26
Surgical procedures must be carried out under appropriate local or general anaesthesia. There must be adequate monitoring of the depth of anaesthesia and of side effects such as hypothermia, and cardiovascular and respiratory depression.

3.3.27
Anaesthesia and surgery must be performed by competent staff with appropriate training and experience. Instruction in surgical or anaesthetic techniques must be under the direct and constant supervision of such persons.

3.3.28
The choice and administration of anaesthetic, analgesic and tranquillising agents must be suitable for the species and appropriate for the purpose of the experiment.

3.3.29
When more than one surgical procedure is to be performed the animal must have recovered to good general health between each procedure. Every effort must be made to reduce the total

number of procedures and the AEEC must have been informed specifically of the need for more than one.

3.3.30

When the animal is not to recover from the surgery, it must be unconscious for the whole procedure, either by continuing the administration of the general anaesthetic or by inducing brain death.

3.3.31

When the animal is to recover from the anaesthetic, surgical procedures must conform to accepted standards in human and veterinary practice. Analgesics and tranquillisers must be used when required and their use should parallel that in current medical and veterinary practice.

Post-operative care

3.3.32

The comfort of animals must be promoted throughout the post-operative period. Attention should be given to warmth, hygiene, fluid and food intake, and control of infection. The use of analgesics and tranquillisers may be needed to minimise post-operative pain or distress. Care should be taken that animals recovering from anaesthesia do not injure themselves by uncoordinated movements, and that conditions are such that they are not disturbed, attacked or killed by other animals in the same enclosure.

3.3.33

Appropriate clinical records must be kept, accessible to all involved in the post-operative care of the animal.

3.3.34

Investigators must ensure that adequate monitoring, treatment and care of post-operative animals is provided. They must ensure that they are fully informed of the animals' condition.

3.3.35

The duties of all staff must be clearly defined and ways of dealing with emergencies established.

3.3.36

Any post-operative animal observed to be in a state of severe pain or distress which cannot be alleviated quickly must be killed humanely without delay.

3.3.37
Regular observation of surgical wounds is essential to check the progress of healing. Any problems must be attended to immediately.

Implanted devices

3.3.38
Skilled and specialised attention is required in the care of animals following an operation in which monitoring or sampling devices have been implanted, or a fistula created. Regular observation is essential to determine signs of distress, pain or infection which must be treated immediately.

Neuromuscular paralysis

3.3.39
Neuromuscular blocking agents must not be used without adequate general anaesthesia or an appropriate surgical procedure which eliminates sensory awareness. Immobilisation of an animal solely with a neuromuscular blocking agent is not acceptable. When these agents are used with an anaesthetic, special care must be taken to ensure the maintenance of an adequate plane of anaesthesia. Since criteria such as character of respiration and corneal and flexor withdrawal reflexes cannot be used, continuous or frequent intermittent monitoring of physiological variables such as heart rate, blood pressure, pupil size and the electroencephalogram is necessary, together with the effects on these of mild sensory stimuli. Care is required to ensure that drugs used in the experiments do not interfere with this monitoring.

Electroimmobilisation

3.3.40
Electroimmobilisation must not be used as an alternative to analgesia or anaesthesia. When its use is proposed for the restraint of animals, AEECs must carefully evaluate published evidence to assess whether it may cause distress. If so, an alternative restraint method must be used.

Animal models of disease

3.3.41
The scientific validity of animal models of human diseases rests in part on how closely they resemble a particular disease. Thus the attendant pain and distress of the human disease may also occur in the animal. Special care must be taken in selecting

the appropriate species and the investigator must accept responsibility for ensuring that any pain or distress is minimised and that the AEEC is informed of the potential effects of the disease on the animals. The use of painful, distressful or lingering death as an end-point in these experiments must be avoided wherever possible.

Modifying animal behaviour

3.3.42

Procedures used to modify an animal's behaviour or to induce it to perform specific tasks depend on motivating the animal. The preferred inducement is positive reinforcement, but the inducement may be some form of biological stress. This stress should be as mild as possible. Severe water, food, social or sensory deprivation must not be used. Painful or noxious stimuli must be limited to those which do not distress human beings, and must be used for the minimum time necessary. Behaviour can usually be modified using procedures that involve no more than a physiological stress, e.g. thirst within the range of the normal experience of the species.

Toxicological experiments

3.3.43

Investigation of the safety of agents intended for use in human beings, animals, the household or the environment, or of naturally occurring toxins, should be performed by persons with appropriate training. If suitable non-animal tests are available, they must be used. In particular, *in vitro* methods should be used as an initial screening test wherever possible.

3.3.44

The end-point of such experiments must be as early as is compatible with reliable assessment of toxicity, and must minimise the extent of any pain and distress.

3.3.45

Investigators must not allow the experiments to proceed to the painful or distressful or lingering death of animals unless no other experimental end-point is feasible and the goals of the experiments are the prevention, alleviation, treatment or cure of a life-threatening disease or situation in human beings or animals.

3.3.46

When death is essential as the end-point, the experiments must be designed to result in the deaths of as few animals as possible.

Experiments involving hazards to humans or other animals

3.3.47

Hazards may arise from sources including viruses, bacteria, fungi, parasites, radiation, radioactivity, corrosive substances, toxins, allergens, carcinogens, recombinant DNA, anaesthetic gases and physical injuries.

3.3.48

Any potential pathogenic effects of these hazards when used in experiments must be explained as far as possible to all staff. Tests before, during and after the experiments may be required for staff.

3.3.49

The AEEC should check that the advice of the institution's biohazards committee has been sought and that appropriate measures for containment, disposal and decontamination have been established.

3.3.50

Animals being administered infectious organisms should be quarantined as appropriate, taking into account risks to other animals and to people.

3.3.51

The end-point of experiments involving hazardous agents should conform to the requirements for toxicological experiments.

3.3.52

Precautions, security and emergency plans to contain hazardous agents must be appropriate to a 'worst-case' situation.

Animal welfare and animal health research

3.3.53

When studying ways of improving the health or welfare of animals, investigators may need to design experiments that replicate the problem, such as injury, trauma, nutritional disorder, physical exertion, disease or environmental stress. Thus, the attendant pain or distress may also be replicated.

When such experiments are necessary, the investigator must ensure that:

(i) the principal aim of the experiment is to improve animal welfare or health;

(ii) alternative methods are not possible, such as the use of animals already subjected to the problem;

(iii) all possible steps are taken to minimise any pain or distress; and

(iv) the end-points of experiments conform to the requirements for toxicological experiments.

Experimental manipulation of animals' genetic material

3.3.54

All work involving the introduction of foreign DNA into mammalian cells or whole animals must be conducted in accord with guidelines issued by the Genetic Manipulation Advisory Committee and the relevant biohazards committee of the institution.

3.3.55

All proposals to manipulate the genetic material of animals, their germ cells or embryos must also be submitted to an AEEC for approval.

3.3.56

The manipulation of the genetic material of animals has the potential to affect the welfare of the animals and their offspring adversely. Investigators must inform the AEEC of the known potential adverse effects on the well-being of the animals.

3.3.57

The clinical status of animals in which the genetic material has been manipulated experimentally must be monitored for unusual or unexpected adverse effects. Investigators must report such effects to the AEEC.

Experimental induction of neoplasia

3.3.58

The site for induction of tumours must be chosen carefully. Subcutaneous, intradermal and flank sites should be chosen when possible. Footpad, brain and eye sites must not be chosen unless there is no alternative.

3.3.59
Investigators must monitor their animals closely for signs of pain or distress, especially sudden changes in body weight.

3.3.60
Animals with experimentally induced tumours must be killed humanely before predictable death occurs, cachexia becomes advanced, or the tumour becomes large enough to cause ulceration or severe limiting of normal behaviour.

3.3.61
With ascitic tumours, including hybridomas, investigators must ensure that the volume of ascitic fluid does not cause gross abdominal distension, and the volumes of solid tumours and cachexia do not become distressful to the animals.

3.3.62
In tumour therapy experiments, the end-points chosen must be as early as possible, compatible with reliable assessment of the therapy. Weight changes must be monitored closely. Death from the tumour must not be chosen as an experimental end-point.

Lesions of the central nervous system

3.3.63
Anatomical or chemical lesions of the central nervous system have been widely used to study its structure and function in health and disease. These experiments demand special consideration when the lesion produces loss or impairment of limb or trunk movements, loss of sensibility to touch, temperature or pain, impairment of the animal's awareness of its surroundings or impairment of appetite or thirst mechanisms. Special animal care, caging, and other facilities may be needed and the AEEC, in approving such experiments, has a particular responsibility to ensure that these facilities are available and that the condition of the animals is closely monitored.

Withholding food or water

3.3.64
Experiments involving the withholding or severe restriction of food or water should produce no continuing detrimental effect on the animal. In these experiments, the fluid balance and/or body weight must be monitored, recorded and maintained within the limits approved by the AEEC.

Fetal experimentation

3.3.65

When fetal experimentation or surgery compromises the ability of the neonate to survive and be without pain or distress, it must be killed humanely before or immediately following birth unless such pain or distress can be relieved.

3.3.66

Unless there is specific evidence to the contrary, investigators must assume fetuses have the same requirements for anaesthesia and analgesia as adult animals of the species.

3.3.67

During surgery of the mother, consideration must be given to any special requirements for anaesthesia of the fetus.

3.3.68

Eggs must be destroyed before hatching, unless hatching is a requirement of the experiment. The AEEC must approve the arrangements made for the hatchlings.

Research on pain mechanisms and the relief of pain

3.3.69

In experiments in which unanaesthetised animals are to be subjected to stimuli designed to produce pain, investigators must:

(i) ensure that these stimuli limit pain at all times to levels comparable to those which do not distress human beings;

(ii) ensure that the animals are exposed to the minimum pain necessary for the purpose of the experiment; and

(iii) provide treatment for the relief of pain, or allow self-administration of analgesics, or escape from repetitive, painful stimuli, when possible.

Field work

3.3.70

Field work that is purely observational must be notified to the AEEC so that the need for the submission of a proposal can be determined.

Section 4

Acquisition and care of animals in breeding and holding areas

4.1 Animals collected from their natural habitats

4.1.1

Most species of indigenous fauna are protected by State laws. Officers of State and Territory conservation authorities must be consulted when these species are required. Permits are usually necessary to collect, keep, release or kill protected fauna, and further permits are usually required to import or export such species between or through States. Any conditions imposed on permits must be observed.

4.1.2

An animal from an endangered species must not be used unless the research will be of direct benefit to the conservation of that species or a closely related species and will not further endanger the species.

4.1.3

Animals should be taken from natural habitats only if animals bred in captivity are not available or are unsuitable for the specific scientific purpose.

4.1.4

Capture is stressful to the animals. When it is unavoidable, steps must be taken to minimise any distress caused to the captured animals and disruption of the colonies from which they are taken. There must be careful choice of suitable capture techniques, skilled persons must be used, and appropriate and safe enclosures or caging must be provided after capture. Animals must be monitored for signs of distress following capture and remedial steps taken if necessary.

4.1.5

Fish may be caught using commercial harvesting practices.

4.1.6

If it is necessary to use traps, they must be inspected at intervals frequent enough to minimise stress. Trapped animals should

be protected from predators and environmental extremes, and food and water should be provided when necessary.

4.2 Animals obtained from other States or countries

4.2.1

Under quarantine and fauna laws, individual States and Territories can restrict the exit and entry of animals or animal tissues.

4.2.2

A Certificate of Health may be required to accompany animals travelling interstate and this is normally issued by State or Territory Departments of Agriculture or their equivalent.

4.2.3

For native fauna, the appropriate State or Territory fauna authority may require further certification that animals will be taken legally.

4.2.4

Permits must be obtained from the Australian National Parks and Wildlife Service (ANPWS) for the importation of live animals, except for those species which are specifically exempt. The Australian Quarantine and Inspection Service (AQIS) should also be contacted.

4.2.5

Permits are also required by ANPWS and AQIS for the importation of dead animal specimens.

4.2.6

Permits must be obtained from ANPWS for the export of both live and dead specimens of all native Australian fauna. Prior approval is also required from ANPWS for export of some animal species not native to Australia (e.g. non-human primates).

4.3 Transport of animals

4.3.1

Transportation can cause distress due to confinement, movement, noise and changes in the environment and personnel.

4.3.2

The extent of any distress will depend on the animals' health, temperament, species, age, sex, the number travelling together and their social relationships, the period without food or water, the duration, the mode of transport, environmental conditions, particularly extremes of temperature, and the care given during the journey.

4.3.3

The conditions and duration of the transport must ensure that the health and well-being of the animals are not unduly compromised.

4.3.4

Potential sources of distress should be identified and steps taken to avoid or minimise their effects on the animals.

4.3.5

Containers must be escape- and tamper-proof, there must be adequate nesting or bedding material and animals must be protected from sudden movements and extremes of climate.

4.3.6

Food and water must be provided when necessary.

4.3.7

Transport by air should be in accord with IATA regulations and domestic transport of farm animals must be in accord with the relevant Codes of Practice.

4.3.8

Both the suppliers and recipients of animals must ensure that there are satisfactory delivery procedures, with animals received by a responsible person.

4.4 Admission of new animals into holding areas

4.4.1

When new animals are being admitted into animal holding areas, they should be quarantined and inspected by a qualified person. Their health should be evaluated, treatment instigated if required, and their suitability for the proposed experiments assessed. This period also should allow their acclimatisation to the holding facility and staff.

4.4.2

Animals which do not adapt satisfactorily to their new environment should not be kept.

4.5 Care of animals in holding and production facilities

4.5.1

Facilities include the buildings, yard or paddocks in which animals are kept.

4.5.2

Investigators, AEECs and the institutions must ensure that facilities are appropriately staffed, designed, constructed, equipped and maintained to achieve a high standard of animal care and fulfil scientific requirements.

4.5.3

The design and management of facilities will depend on the type of animals to be kept and the experiments to be undertaken. The overall condition and management of facilities must permit effective maintenance and servicing and be compatible with maintaining the animals in good health.

4.5.4

Farm animals must be held in accord with the relevant codes of practice.

Outdoor holding areas

4.5.5

These must be compatible with the needs of the species, provide adequate shelter and water, protect the animals from predation and meet other species-specific needs.

Indoor housing

4.5.6

Buildings should be compatible with the needs of the animals to be housed, and the projects undertaken. Facilities for free movement and group contact are specially important for some species of animals.

4.5.7

Buildings should be designed and operated to control environmental factors appropriately, to exclude vermin and to limit contamination associated with the keeping of animals,

the delivery of food, water and bedding, and the entry of people and other animals.

4.5.8
Buildings must be maintained in good repair. Walls and floors should be constructed of durable materials that can be cleaned and disinfected readily.

4.5.9
Buildings must be kept clean and tidy, and operated to achieve the effective control of vermin.

4.5.10
There must be adequate storage areas for food and equipment.

4.5.11
Detergents, disinfectant, deodorants and pesticides may contaminate the animals' environment and choice of agents should be made in consultation with investigators.

4.5.12
There should be a reticulated water supply and proper facilities for drainage, if appropriate.

4.5.13
There must be adequate contingency plans to cover such emergencies as the breakdown of lighting, heating or cooling.

4.5.14
Precautions against the entry of unauthorised persons should be taken.

Environmental factors

4.5.15
Animals must be provided with environmental conditions which suit their behavioural and biological needs unless otherwise approved by the AEEC for the purposes of a project.

4.5.16
Air exchange, temperature, humidity, light and noise should be maintained within limits compatible with the health and well-being of the animals.

4.5.17
Effective ventilation is essential for the comfort of animals and the control of temperature, humidity, and odours. Ventilation systems should distribute air uniformly and achieve adequate air exchange.

4.5.18

Noxious odours, particularly ammonia, must be kept to a level compatible with the health and comfort of the animals and staff. The adequacy of the ventilation system, the design, construction and placement of cages and containers, population densities both within cages and within a room, the effectiveness of the cleaning and the frequency of bedding changes, will all influence the level of noxious gases.

4.5.19

These environmental factors potentially affect the welfare of the animals and may affect the results of experiments. Investigators should be informed in advance of planned changes to the environmental conditions of their animals.

Food and water

4.5.20

Animals must receive appropriate, uncontaminated and nutritionally adequate food according to accepted requirements for the species. The food should be in sufficient quantity and of appropriate composition to maintain normal growth of immature animals or normal weight of adult animals and the requirements of pregnancy or lactation. Uneaten perishable food should be removed promptly unless contrary to the needs of the species.

4.5.21

Drinking water should be constantly and reliably available, and be clean, fresh and uncontaminated.

4.5.22

Variations to these requirements as part of an experimental project must receive prior AEEC approval.

Pens, cages and containers and the immediate environment of the animals

4.5.23

Pens, cages and containers should be designed, constructed and maintained to ensure the comfort and well-being of the animals, taking into account the following factors:

(i) species-specific behavioural requirements, including free movement and activity, sleeping, privacy, and contact with others of the same species;

(ii) species-specific environmental requirements such as lighting and temperature;

(iii) provision of single housing for animals when it is appropriate for the species and if necessary for the purpose of the experiment e.g. during recovery from surgery or collection of samples;

(iv) the need to provide ready access to food and water;

(v) the need to clean the pen, cage or container;

(vi) protection from spread of pests and disease;

(vii) requirements of the experiments; and

(viii) the need to observe the animals readily.

4.5.24

Pens, cages and containers must:

(i) be constructed of durable, impervious materials;

(ii) be kept clean;

(iii) be maintained in good repair;

(iv) be escape-proof;

(v) protect the animals from climatic extremes;

(vi) not cause injury to the animals;

(vii) be large enough to ensure the animals' well-being; and

(viii) be compatible with the behavioural needs of the species.

4.5.25

The population density of animals within cages, pens or containers and the placement of these in rooms must be such that acceptable social and environmental conditions for the species can be maintained.

4.5.26

Bedding and litter must be provided if appropriate to the species, and should be comfortable, absorbent, safe, non-toxic, able to be sterilised if needed, and suitable for the particular research purpose.

4.5.27

The AEEC and relevant investigators should be informed in advance of planned changes to these conditions, since these may affect the welfare of the animals and the results of experiments.

4.6 Management and staff

Person-in-charge

4.6.1
Animal acquisition, breeding and holding facilities must be supervised by persons with appropriate veterinary or animal care qualifications or experience.

4.6.2
The person-in-charge should be responsible for the management of the day-to-day care of the animals in holding and breeding facilities, for supervising the work of other staff in the facility and should act as liaison between the investigator and facility staff.

4.6.3
The person-in-charge should ensure that there is reliable monitoring of the well-being of all animals by other staff, and be knowledgeable regarding signs of pain, distress and illness specific to each species housed. After animals are allocated to an approved project the investigator has primary responsibility for ensuring adequate monitoring of the animals' well-being.

4.6.4
The person-in-charge must ensure that ill or injured animals which are not assigned to approved projects are treated promptly and the cause of death investigated for animals which die unexpectedly.

4.6.5
The person-in-charge should contribute to the development and maintenance of the institution's animal care policies and procedures.

4.6.6
The person-in-charge must ensure that staff are provided with appropriate protective clothing, maintain high standards of personal hygiene, do not eat, drink or smoke in animal areas, and have all required vaccinations, particularly against tetanus and other zoonoses.

4.6.7
The person-in-charge must document procedures used in the management of holding and breeding facilities. These procedures should take into account the requirements of the species held, the experiments being conducted, and the health and safety of the staff, and include transport, quarantine and

disposal of animals, routine husbandry, prevention, diagnosis and treatment of disease, monitoring of health status and genetic constitution, and physical environmental factors. These procedures should be made known to all staff involved in the care and use of the animals and should be reviewed regularly.

4.6.8

The person-in-charge must ensure that adequate records are maintained of:

(i) the source, care, allocation, movement between locations, use and disposal of all animals, and of any diseases developed;

(ii) the fertility, fecundity, morbidity and mortality in breeding colonies, in order to monitor the management of the colonies, and to assist detection of the origin and spread of disease; and

(iii) the health status, genetic constitution and the physical environment of the animals, when definition of these is required.

4.6.9

Records maintained by the person-in-charge must be made available to investigators.

4.6.10

The person-in-charge should ensure that investigators are informed of any changes to the conditions under which animals are held and which may affect the results of their experiments.

Staff

4.6.11

The most important factor ensuring high standards of animal care is enough well-trained, committed staff. Personnel working with animals in a holding facility should be appropriately instructed in the care and maintenance of those animals, how they may affect the animals' well-being and how their actions may affect the outcome of experiments.

4.6.12

Institutions should encourage and promote formal training in animal science or technology (see Appendix for list of courses).

4.6.13
Personnel employed in the care of animals should be instructed in how to recognise at an early stage changes in animal behaviour, performance and appearance.

4.6.14
New appointees who will care for animals must be appropriately instructed in their duties and in institutional policy.

4.6.15
Staff should be informed of the important zoonotic diseases of animals under their care and of precautions that should be taken. Regular health checks of staff who handle animals are recommended in the interests of both staff and animals.

4.7 Routine husbandry procedures

4.7.1
Husbandry procedures which are not part of an approved experiment (e.g. clipping coats and nails, vaccinations) must be performed by competent personnel.

4.7.2
Routine husbandry procedures on farm animals should be carried out in accord with relevant Codes of Practice and legislation.

4.8 Identification of animals

4.8.1
Animals must be identified by a method such as tattoo, neckband, individual tag, electronic numbering device, physical mark, or by a label or marking attached to the cage, container, pen, yard or paddock in which the animals are kept.

4.8.2
The person-in-charge of the facility is responsible for ensuring that animals are identified before allocation to an approved project, after which time both the person-in-charge and the investigator are responsible.

4.8.3
The method of identification should be reliable and cause the least stress possible.

4.9 Disposal of animal carcasses and waste

4.9.1

Appropriate provision must be made for prompt and sanitary disposal of animal carcasses and waste material in accord with any Commonwealth, State or Territory legislation, local council by-laws and community standards.

Section 5

Responsibilities of teachers

5.1 Tertiary institutions

5.1.1

When animals are being used to achieve educational objectives the person in charge of the class must:

(i) accept ultimate responsibility for ensuring that the care and use of the animals is in accord with all relevant provisions of this Code and Commonwealth, State or Territory legislation;

(ii) have relevant training and qualifications;

(iii) consider whether alternative teaching methods can be used;

(iv) obtain prior AEEC approval for use of all animals for the entire course;

(v) instruct students appropriately in the care and use of animals before those students participate in experiments with live animals;

(vi) ensure that there is close, competent supervision of all students;

(vii) allow students to anaesthetise animals or carry out surgery only if it is essential for their training; and

(viii) be responsible for the humane killing of the animals, if required.

5.1.2

Persons supervising students who are training in research must ensure that the students are appropriately instructed prior to using animals, and must be responsible for the welfare of animals used by students.

5.2 Secondary and primary schools

5.2.1

Use of animals in secondary and primary schools must comply with any policies on the use of animals in teaching issued by State, Territory or other educational authorities.

Appendix

Animal technician courses

The following institutions offer courses for animal technicians:

Queensland

Ithaca College of TAFE
Fulcher Road
Red Hill Qld 4059

New South Wales

School of Biological Science
Sydney Technical College
GPO Box 2626
Sydney NSW 2001

Bankstown Technical College
500 Chapel Road
Bankstown NSW 2200

Victoria

Department of Applied Science
Footscray College of TAFE
PO Box 197
Footscray Vic. 3011

Department of Applied Science
Box Hill College of TAFE
465 Elgar Road
Box Hill Vic. 3128

South Australia

Department of Para-Veterinary Studies
Gilles Plains College of TAFE
Black's Road
Gilles Plains SA 5086

Western Australia

Department of Animal Studies
Bentley Technical College
Jarrah Road
East Victoria Park
Perth WA 6101

Australian Capital Territory

Animal Care Unit
Biology Department
School of Science
University of Canberra
Haydon Drive
Bruce ACT 2617

Bibliography

Recommended introductory reading

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Laboratory Animal Medicine. American College of Laboratory Animal Medicine Series. Academic Press, Orlando Florida USA.

Green, C.J. (1982)
Animal Anaesthesia. Laboratory Animal Handbooks 8. Laboratory Animals Ltd, London UK.

Morton, D.B. & Griffiths, P.H.M. (1985)
'Guidelines on the recognition of pain, distress and discomfort in experimental animals and an hypothesis for assessment'. *Veterinary Record,* Apr. 20, 116:431–436.

Rose, M.A. (ed.) (1988)
Proceedings of animal experimentation seminar on ethical, scientific and legal perspectives. 8–10 July 1985, University of New South Wales, Sydney. University of NSW Kensington NSW.

1. Textbooks

NOTE: Many of these texts have specific chapters relevant to subsequent sections in this bibliography, e.g. anaesthesia, housing and environment. These texts have been carefully selected to provide an overview of current knowledge in the care and use of animals in research.

Baker, H.J., Lindsey, J.R. & Weisbroth, S.H. (eds) (1979–80)
The laboratory rat. Vols.1 and 2. Academic Press, New York USA.

Biological Council (1984)
Guidelines on the use of living animals in scientific investigations. Biological Council, London UK.

Canadian Council on Animal Care (vol.1,1980: vol. 2, 1984)
Guide to the care and use of experimental animals. CCAC, Ottawa Canada.

Flatt, R.E. (ed.) (1979)
'Defining the laboratory animal and its environment'. *Laboratory Animal Science,* 30(2):Part II.

Foster, H.L., Small, J.D. & Fox, J.G. (eds) (1983)
*The mouse in biomedical research.*Vols.1–4. Academic Press, New York USA.

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Laboratory animal husbandry: ethology, welfare and experimental variables. State University of New York Press, Albany NY, USA.

Gay, W.I. (ed.) (1965–86)
Methods of animal experimentation. Vols.1-7. Academic Press, New York USA.

Kendall Hall, Special Education Programs (1987)
Animal experimentation management: a role for the veterinary profession. Available from Prof. D.C. Blood, Veterinary Clinical Centre, Princes Highway, Werribee Vic. 3030.

Marcus, L.C. (1981)
Veterinary biology and medicine of captive amphibians and reptiles. Lea and Febiger, Philadelphia Pennsylvania USA.

National Institutes of Health (1985)
Guide for the care and use of laboratory animals. NIH Publication no. 85–23. National Institutes of Health, Bethesda MD USA.

Poole, T.B. (ed.) (1987)
UFAW Handbook on the care and management of laboratory animals. 6th edition. Universities Federation for Animal Welfare. Longman Scientific and Technical, Harlow UK.

The Royal Society and the Universities Federation for Animal Welfare (1987)
Guidelines on the care of laboratory animals and their use for scientific purposes. 1. Housing and care. Universities Federation for Animal Welfare, Potters Bar Hertfordshire UK.

Tuffery, A.A. (ed.) (1987)
Laboratory animals: an introduction for new experimenters. Wiley, Chichester UK and New York USA.

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Management and welfare of farm animals. 3rd edition. Bailliere Tindall, London UK.

Universities Federation for Animal Welfare (1984)
Standards in laboratory animal management, parts 1 and 2. Universities Federation for Animal Welfare, Potters Bar Hertfordshire UK.

Wagner, J.E. & Manning, P.J. (1976)
The biology of the guinea pig. Academic Press, New York USA.

Weisbroth, S.H., Flatt, R.E. & Kraus, A.L. (1974)
The biology of the laboratory rabbit. Academic Press, New York USA.

2. Periodicals

ACCART News (quarterly)
Australian Council for the Care of Animals in Research and Teaching, c/- GPO Box 1142, Canberra ACT 2601.

ATLA (Alternatives to Laboratory Animals)
Published by Fund for Replacement of Animals in Medical Experiments (FRAME), 34 Stoney Street, Nottingham NG1 1NB UK

Australian Animal Technicians Association National Magazine
AATA National Council, c/- PO Box 4025, University of Melbourne Vic. 3052.

Australian Primatology
Bulletin of the Australian Primate Society. Dr Cobie Brinkman, Department of Psychology, Australian National University, GPO Box 4, Canberra ACT 2601.

Australian Society for Laboratory Animal Science Newsletter (quarterly)
Editor: Dr J Clarke, CSIRO Glenthorne Laboratory, O'Halloran Hill SA 5158.

ICLAS Bulletin (quarterly)
International Council for Laboratory Animal Science, ICLAS Secretariat, POB 6, 70211 Kuopio Finland.

ILAR News (quarterly)
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