

Guidelines on the Use of Animals for Training Surgeons and Demonstrating New Surgical Equipment and Techniques

To be read in conjunction with the Australian code of practice for the care and use of animals for scientific purposes. Prepared by the Animal Welfare Committee of the NHMRC.

Preamble

This document was developed in response to requests from Animal Ethics Committees (AECs) for guidance when they are considering applications for the use of animals to train surgeons in new techniques and how to use new technology. Such applications may be outside the previous experience of AECs. The National Health and Medical Research Council (NHMRC) and the Royal Australasian College of Surgeons (RACS) have developed the following guidelines jointly to assist AECs evaluating such applications. **It is intended that this document be read in conjunction with the Australian code of practice for the care and use of animals for scientific purposes.¹**

The use of animals for surgical training and demonstration and for the development of new surgical procedures may be necessary in those circumstances where it can be demonstrated that a suitable alternative is not available. Failure to properly train surgeons in new procedures can have serious implications for patient care². Nevertheless, AECs must ensure that such use is justified, according to the following conditions which are based on the *Australian code of practice for the care and use of animals for scientific purposes*.

¹ *The Australian Code of Practice for the Care and Use of Animals for Scientific Purposes*. 7th edition, 2004. Published by the National Health and Medical Research Council in conjunction with CSIRO, the Australian Research Council and the Australian Vice-Chancellor's Committee. Available from National Mail & Marketing, phone 1800 020 103 or by email nmm@nationalmailing.com.au.

² The use of live animals is an essential component of training or retraining surgeons in laparoscopic techniques. For most surgeons these represent a radical change in the way in which common operations such as cholecystectomy, appendicectomy and hernia repair are done. Patients undoubtedly benefit if these new techniques are used competently, but the techniques are also associated with new risks that can be appreciated only by experience with living animals.

GUIDELINES

These guidelines apply to surgeons, associated personnel, AECs and institutions planning to undertake surgical training or demonstration of new techniques in animal models, or who are engaged in the development or further development of new techniques.

1. All use of animals for the purposes of surgical training and demonstration must comply with the *Australian code of practice for the care and use of animals for scientific purposes* (the Code).
2. Prior to the commencement of the workshop all participants must be informed of, and fully understand, their ethical and legal responsibilities regarding the use of live animals. They should also be informed of their right to report incidents of incompetence, misconduct or other breaches of the Code to the institutional AEC.
3. All training procedures in which animals are to be used must be undertaken at institutions which have properly constituted Animal Ethics Committees. Applications must be submitted to that Committee for approval. [Refer to 2004 Code clause 2.1.1(i)].
4. Relevant animal welfare legislation in the Australian States or Territories or in New Zealand should be checked for special conditions relating to the use, care and housing of animals in order to ensure that the institution complies with them. [(Refer to 2004 Code clause 2.1.1(ii)]
5. Applications to an AEC for approval to use animals for surgical training should contain the following information in addition to that required by the Australian Code of Practice³:
 - (i) the name of the surgeon who accepts primary responsibility for the entire training exercise;
 - (ii) the name and qualifications of a person(s) competent in anaesthesia and in the care of the species to be used;
 - (iii) a description of the educational merit of the project and why animals are necessary;
 - (iv) the source of animals; and

³ See 2004 Code clauses 2.2.15-2.2.16 for information to be included in written proposals.

- (v) details of the housing and care of the animals at the facility where the procedures are to occur.
6. The institutional AEC must be satisfied that the use of live animals is essential for the project and that the species chosen is the most appropriate.
 7. Training methods which do not need animals must be used wherever possible. Training in basic surgical skills such as suturing, knot tying and the anastomosis of hollow viscera and blood vessels can, to a large extent, be performed on non-living material, and most other skills can be learnt directly from more experienced surgeons.
 8. The AEC must ensure that the welfare of the animals will be considered at all times; before, during and after procedures. This includes provision of appropriate holding facilities, food and water, minimisation of pain and distress and euthanasia.
 9. The surgeon in charge must ensure that there are enough trained personnel to provide proper monitoring of all the animals during the procedure and proper care of the animals before and after the procedure. (It is assumed that most procedures will be non-recovery; recovery surgery should only be allowed in exceptional circumstances.)
 10. The AEC should carefully evaluate the benefits of holding surgical workshops sponsored by a commercial organisation where animals are required for the demonstration of new equipment. Workshops should not be held by commercial operators purely for promotional or commercial reasons. Animals should only be used where the new techniques or equipment to be demonstrated are likely to lead to significant benefits in human or animal surgery.
 11. If the animal is to be killed, it must be killed humanely, preferably by overdose of anaesthetic at the end of the training procedure. If the animal is not to be killed, this must be approved in advance by the AEC, and must be in accord with the 2004 Australian Code of Practice clauses 3.3.25-3.3.38.

12. Proposals for surgeons to perform the same procedure repeatedly on anaesthetised animals in a single workshop may be approved provided anaesthesia and analgesia are maintained and the animals are euthanased at completion of the workshop. [Refer also to 2004 Code clause: 3.3.11].
13. Applications should also take into consideration any State or Territory guidelines governing the use of animals for the training of surgeons and demonstrating new surgical equipment and techniques.⁴

Check List for an AEC

1. What are the benefits of the proposed training workshop?
2. Is the use of animals justified?
3. Has the applicant provided evidence that the use of alternatives has been fully considered?
4. Is the person conducting the workshop competent in the procedures to be performed?
5. Has provision been made for adequate housing and care of the animals? Does the species to be used have particular requirements?
6. If recovery of the animals after surgery is requested, is this justified? Will the animal require special housing, diet or care?
7. Have details been provided regarding pain relief, anaesthesia and post-operative care? Are they adequate?
8. How many animals will be used? Is this number justified?
9. Will animals be used for more than one invasive procedure in any one session/workshop?
10. What provisions have been made for the disposal of animal carcasses?

⁴ In New South Wales see *Guidelines for ACECs considering the use of animals for postgraduate surgical training*. Developed by the NSW Animal Research Review Panel and available from the Animal Welfare Inspectorial Office, PO Box A970 SYDNEY SOUTH 1232.