

Guidelines for the Transport of Laboratory Animals

The following guidelines are drawn from a number of sources.

General Recommendations:

The general principles for animals obtained from interstate or overseas, transport of animals and admission of new animals into holding areas are covered in The NHMRC Australian Code of Practice for the Care and Use of Animals for Scientific Purposes, which should be the first point of reference.

Whatever the circumstances, animals should always be *fit for the intended journey* and, where their health is compromised, appropriate precautions must be taken. CI's should understand that they have a duty of care to the animals and a responsibility to assure their safe and secure arrival. This includes the responsibility to make contingency plans so that animals can be accepted if delays occur and shipments arrive outside normal working hours.

Alternatively, arrangements may have to be made for animals to be diverted and accommodated elsewhere if they cannot enter the facility for immediate unloading. Whoever receives the animals on arrival should inspect the animals as soon as possible, ideally before the carrying agent leaves.

Some of the factors which may impact on animals being transported are:

- Handling
- Separation from familiar conspecifics, possibly individual housing.
- Confinement in an unfamiliar transport container
- Loading and unloading
- Movement and vibrations during the journey, including acceleration and deceleration
- Physical stress due to maintaining balance (especially larger animals)
- Unfamiliar sights, sounds and smells
- Fluctuations in temperature and humidity
- Withholding of food, or voluntary abstention from eating or drinking
- Disruption of light:dark regime
- New housing and care protocols at the end user establishment, including unfamiliar humans and possibly new social groups or hierarchies

Change is stressful to animals, and transport is an especially powerful stressor that should be regarded as a major life event and not undertaken unless absolutely necessary. Even where every possible effort has been made to minimise transport stress, plan journeys with care and ensure that all staff are properly trained and empathetic.

Minimum Standards for Transportation Inwards:

- 1) The International Air Transport Association and AQIS must be consulted in the first instance for regulations pertaining to the respective air travel or export/import of mice, rats, rabbits or guinea pigs.
- 2) Good communication concerning the progress of the journey is essential between the supplier, shipper and recipient so that appropriate contingency plans and schedule alterations can be implemented to ensure the animals' health and welfare at all times
- 3) Food and water must be provided to the animals wherever possible during transport.
- 4) Animals must not be transported for more than 24 hours without food and water.
- 5) The sender must ensure that the animals to be transported are in good health.
- 6) An assessment of the health and welfare of the animals must be made upon arrival.
- 7) Appropriate facilities for acclimatisation, isolation or quarantine should be provided.

Newly-arrived animals may take up to two weeks to acclimatise, depending on the duration and mode of travel, which should be considered in the planning stage of scientific procedures. These animals should be closely monitored, especially guinea pigs as they may be reluctant to eat or drink from unfamiliar systems. Consultation with the animal technician or laboratory veterinarian may be required

Minimum Standards for Transportation Outwards

- 1) Containers for domestic, local and internal transportation of animals must be:
 - a. adequately ventilated (with reduced stocking rates in containers with filters);
 - b. Vermin- and escape-proof;
 - c. Durable (including crush-proof);
 - d. Sufficiently spacious (higher stocking densities than normal housing may be required to prevent injury);
 - e. Provided with appropriate bedding (for thermoregulation and impact absorption);
- 2) Rodents should be transported in compatible groups of familiar animals, formed at least 24 hours before transport commences.
- 3) Sick or injured animals should be transported only for purposes of treatment, diagnosis or euthanasia.
- 4) Consideration should be given to the transport of pregnant animals.

It is also important to consider the climate, season and time of day when animals will be travelling. During excessively warm weather it may be advisable to travel overnight to avoid high ambient temperatures during the day.

Drivers should receive instruction in the care of animals under their charge. They should be responsible, experienced, empathetic and competent

Each individual involved with every stage of the journey should have access to the entire route plan, know whom to contact for information and have a clear understanding of their responsibilities. For any journey involving transfers or more than one mode of transport and all international journeys, the supplier should notify the recipient that the animals have been dispatched as soon as critical stages of the journey has commenced. Vehicles should always be fitted with mobile phones and/or drivers should carry them.

When planning transport by air, it is essential to liaise with the animal holding facility at each airport *en route*, to ensure that animal husbandry and veterinary support are adequate. There must be appropriate cover outside normal working hours and security staff, or whoever is on call, should know how to direct calls and take appropriate action

Individuals that carry harmful genetic mutations or that may be otherwise genetically modified (GM) may have special requirements and due regard should be paid to the effects of the modification. All GM animals should be accompanied by comprehensive information including the nature of the phenotype and any specialist management needs with respect to husbandry and veterinary care.

Transport of Live Fish

Transfer of live fish over long distances either by road or by sea has the potential to cause considerable stress. Fish should be assessed for health status and size prior to loading so that tanks are not loaded with compromised fish or overloaded beyond their capacity. Large animals will require sufficient space to be able to turn around. Dissolved oxygen levels and fish behaviour should be checked at appropriate intervals if transport tanks are not fitted with an automatic continuous dissolved oxygen monitoring system. Compressed air or water sprays should be used to help dissipate CO₂ over longer trips. Unexpected deaths in transit must be reported as an adverse event.

When completing an application for the scientific use of animals Question 17 must be completed in full:

17. Are the animals to be transported during this activity? Yes/No

If Yes, provide details:

Method (include container/restraint details):	Give details of container including size shape etc or cite container type if industry standard.
Type of transport:	Describe ALL methods of transport (air, road, boat, by foot etc) to be undertaken including the expected on-board conditions eg air conditioned vehicle, shaded tanks etc.
Duration and frequency of transportation:	Include the expected time taken for ALL trips to and from a facility or to and from an animal's natural habitat. If transport is non-commercial, describe methods for providing feed and water.
Permits: (ensure the appropriate section in Part C has been completed)	List all relevant permits here. This may include AQIS, QPWS, QDPI&F, NLIS, CITES etc.

Standard Operating Procedures have been generated for the transportation of laboratory animals:

By air: http://www.uq.edu.au/research/rrtd/files/animal/sops/sop_aht_28_a.pdf;

By road: http://www.uq.edu.au/research/rrtd/files/animal/sops/sop_aht_28_b.pdf;

By foot: http://www.uq.edu.au/research/rrtd/files/animal/sops/sop_aht_28_c.pdf;

and should be cited in an animal ethics application.

Further Reading

Aquatic Animal Welfare Guidelines. National Aquaculture Council, Australian Department of Agriculture, Fisheries and Forestry.

Code of Practice for the Housing and Care of Laboratory Mice, Rats, Guinea-Pigs and Rabbits. Victorian Department of Primary Industries 2004.

'Housing for Laboratory Rats, Mice, Guinea Pigs and Rabbits'; A.L. Hargreaves ANZCCART 2000

Moberg G (2000) Biological response to stress: implications for animal welfare. In: *The Biology of Animal Stress: Basic Principles and Implications for Animal Welfare* (Moberg G, Mench J, eds). Oxford: CAB International, pp 1–21

SCAHAW (2004) *The Welfare of Animals During Transport (broilers and hens; turkeys; ducks, geese, pigeons and quail; ostrich & other ratites; deer; reindeer; rabbits; dogs & cats; rodents & primates; fish; exotics)*. European Food Safety Authority, European Commission