

Research Animal Anaesthesia Network (RAAN)

Checklist for researchers requiring assistance with animal anaesthesia and analgesia.

This checklist aims to support research scientists requiring advice on, or assistance with, anaesthesia and analgesia in experimental animals. By optimising the animals' experience (refinement) while reducing the number of animals required (reduction), appropriate anaesthetic and analgesic techniques are legal and pragmatic pre-requisites in research involving animals. Wherever possible the use of animals should be avoided (replacement) [<https://nc3rs.org.uk/>]. Animal welfare and experimental outcomes are optimised when anaesthesia and analgesia are expertly considered, planned and prosecuted.

For further information about RAAN, please visit <https://ava.eu.com/resources/raan-research-animal-anaesthesia-network/> or email ResAnAnNet@gmail.com

The information detailed below should be provided to the anaesthesia and analgesia advisor to facilitate an informed discussion.

Date:
Lead researcher and contact details:
Study title:
Hypothesis and study objectives (in brief):
Target species/strain (or breed)/sex/age (or size):
Stage of project e.g., grant application, ethical approval, mid-project with unexpected anaesthesia related morbidity and mortality, other.

Procedural Information:

How many anaesthetics will each animal require during this study?

For each anaesthetic, please itemize and describe briefly all the procedures/operations/interventions that each animal will undergo. (Add more lines if necessary)

Anaesthetic	Procedure, e.g., carotid cannulation, cystotomy, device implantation
1	i)
	ii)
2	i)

For each anaesthetic listed above, please provide additional information. (Add more lines if necessary)

Anaesthetic	Estimated duration (h)	Estimated level of invasiveness	Terminal or recovery
1			
2			
3			

Do you intend to anaesthetise animals in batches? If yes, please indicate the number per session or day.

Are there any specific concerns you have related to anaesthesia, analgesia or pain as confounders in your study? Y/N

If yes, please describe.

Check PREPARE guidelines:

<https://norecopa.no/prepare>

Additional details for consideration:

Study details/requirements	Notes/training required
Animals involved: - Number of animals (total) - Type of housing - Physical containment level of facility	
Animal preparation: - Source - Acclimation period - Food and water withholding periods - Pre-emptive analgesia - Housing (individual v group) - Pre-anaesthetic medication	
Anaesthetic record: - Documentation e.g., https://ava.eu.com/resources/checklists/	
Induction and maintenance of anaesthesia: - Monitoring equipment - Instrumentation - Personnel responsible for monitoring - Supportive therapies	
Recovery from anaesthesia: - Location - Personnel responsible for recovery - Post-operative care requirements	
Pain assessment: - Frequency - Method - Rescue analgesia intervention level	
Pain management: - Multimodal - Preventive - Post-procedural duration	
Anaesthetic delivery equipment: e.g., anaesthetic machine, breathing system, chamber, carrier gas, vaporizer, anaesthetic agent, scavenging system, face mask, endotracheal tubes	
Appropriate consumables: e.g., syringes and needles appropriate for species	
Access to required drugs: - Location specific license or permit - Requirement for dilution of drugs - Storage of drugs - Recording of drug use	