



Guidelines for Rodent post-operative care

Geltungsbereich: Tierhauseinrichtungen der Medizinischen Universität Innsbruck

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These guidelines apply to all surgical procedures performed on rodents, in which the animals are expected to recover from anesthesia. All surgical procedures can only be performed by appropriately trained personnel and must follow the project authorization.

Immediate post-operative care

This is the period of additional attention after the surgical procedure. This requires a special recovery area with appropriate environmental conditions such as heating pads or red heat lamps to provide a comfortable warmth for the animal. The monitoring and scoring (-, +, ++) of the animal in the recovery station will be carried out till the achievement of the appropriate recovery level from the anesthesia (till approximately 1h after the surgery, in most cases), estimated on the basis of the cage side observations (respiratory rate, general level of alertness) as well as during the examination of bright, alert, responsive (B.A.R) during the handling – performed at least 2x during the first postoperative hour (e.g. every 15 minutes). Animals that are awake, actively react to handling and with the respiratory rate above 100/min (**minimum score: +**) can be placed in the ordinary maintenance room for the post-op recovery, according to the project-specific procedures, that are detailed in the project license.

Scoring:

(-) shallow breath, animal is awake but inactive (no limb movements, no head movements);

(+) behavioral responses normal for expected conditions: head movements, non-coordinated movements, active reaction to handling, breath rate above 100/min;

(++) coordinated movements, locomotion (active exploration, grooming, feeding, drinking), regular posture, normal breath rate

Animal post-op Welfare

Rodent post-op recovery will be monitored regularly and recorded in post-operative care sheets for the time period stated in each project license (up to 7 days). Assessed parameters include: body weight, general clinical signs of pain (e.g., inactive, hunched posture, fur coat rough, red eye / nose discharge, pink staining of the neck-rats; 'pain face' – e.g. semi-closed eyes and nose bulge in mice) as well as behavioral signs of pain (e.g., back arch, belly press, writhe, stagger, twitch, fall). Animals should be treated with opioids or non-steroidal-antiinflammatory in case they show signs of pain, depending on the project. But in general analgetic drugs should have been applied in a pre-emptive manner. Any subscore of 3 is potentially serious, and one should always attempt to determine the underlying cause or explanation (e.g. detailed examination of the animal regarding the condition of the surgical sites, implementation of additional analgesic pain medication, veterinary consultation). Consult veterinary staff (+43 676 8716 **72278**) if any subscores of 3 are recorded.

Occurrence of procedure-specific behaviors: These are identified on the basis of the individual project, its potential adverse effects and expected indicators.

Humane End-points: The clinical signs, or combination of clinical signs, that will indicate that the animal has to be euthanized, that are described in the particular project authorization (license).

Animal post-op Welfare Score Sheet for Rodents

Template of the Animal post-op Welfare Score Sheet for Rodents is available on our [homepage](#)

Animal post-op Welfare Score Sheet for Rodents (one score sheet per animal)

Animal/Species # _____ Batch/No# _____ Pre-study Bodyweight _____
Surgeon _____ Date Treatment/operation _____ Project No: _____

Immediate post-op care – monitor the animal till 1h after the surgery/recovery from anesthesia

SCORE: (-, +, ++)

TIME (in min.) after the end of the surgery		
RESPIRATORY RATE		
B.A.R (bright, alert, responsiveness during the handling)		
DRUGS/fluids (and dose)		

NOTES:

Animal post-op welfare Score:

SCORE: (normal is 0, score - 1,2,3 for increase in severity)

DAY and date	1	2	3	4	5	6	7
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BODY WEIGHT & B.A.R (bright, alert, responsive)

BODY WEIGHT							
bright, alert, responsive							
Approach response (inquisitive behaviour, investigates your presence)							

OPERATION SITE

Wound OK							
Bleeding							
Sutures / clips OK							

GENERAL CLINICAL SIGNS

Inactive							
Hunched posture							
Coat rough-fur on end							
Red eye/nose discharges (semi-closed eyes and nose bulge in mice)							

BEHAVIOURAL SIGNS OF PAIN

Back arch (hunched up with arched back)							
Belly press (presses belly to cage floor)							
Stagger/Fall (sudden loss of balance / animal falls over)							
Twitch (sudden spasm of flank muscles)							

POST-OP SUPPORT – Analgesic Administration \Administration of subcutaneous fluids

DRUG/fluids (and dose)							
SIGNATURE							

NOTES:

Abbildung 1