

Euthanasia

Item 2 – Euthanasia of Neonatal Rodents

Neonatal rodents (mice or rats up to 14 days of age) are unusually resistant to hypoxia and the inhalant anesthetics often used as euthanizing agents in adult rodents (i.e. CO₂). Inhalant agents alone should not be used in neonatal rodents. Inhalants may be used to induce unconsciousness, followed by some other method of euthanasia. The Institutional Animal Care and Use Committee (IACUC) recommends the following euthanasia methods for neonatal rodents:

- Overdose of injectable anesthetic, given IP.
- Exposure to 100% CO₂ for a **minimum of 30 minutes**. Compressed CO₂ gas in cylinders is the only recommended source of carbon dioxide for euthanasia.
- Exposure to hypothermia (not direct exposure to ice) for approximately 5 minutes until there is no response to noxious stimuli (i.e. foot pinch). Once there is no response to noxious stimuli, the neonate is euthanized by decapitation (reserved for situations where anesthesia or CO₂ would compromise study - scientific justification required).

Any deviation from the guideline concerning euthanasia of neonatal rodents will be considered and reviewed by the IACUC on a case-by-case basis.

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