

**University of Cincinnati  
Animal Care and Use Program**

## Toe Clipping

### Toe Clipping of Mice

According to the *Guide for the Care and Use of Laboratory Animals*: “Toe-clipping should be used only when no other individual identification method is feasible. It may be the preferred method for neonatal mice up to 7 days of age as it appears to have few adverse effects on behavior and well-being at this age (Castelhana-Carlos et al. 2010; Schaefer et al. 2010), especially if toe clipping and genotyping can be combined. Under all circumstances aseptic practices should be used. Use of anesthesia or analgesia should be commensurate with the age of the animals (Hankenson et al. 2008).”

Toe Clipping of Mice: Must be used for genotyping and identification

1. Toe clipping may be performed on altricial mice after toes are no longer webbed and no older than post-natal day 7 when the toe clip segment(s) will be used BOTH for identification and genotyping purposes.
2. IACUC approval must be obtained.
3. Toe clipping procedure:
  - a. Toes should be clean prior to performing the procedure.
  - b. Start with clean (or sterile) sharp scissors (or equivalent).
  - c. Clean the instrument between animals as described above
  - d. One toe per pup (preferred) with a maximum of one toe per foot.
    - Only the distal/third phalanx should be removed, not the entire toe (first, second, and third phalanx).
    - Hind toes preferable over forefeet.
    - Forefeet – do not remove the hallux (“dew claw” or “thumb”).

### References

1. Vachon P. Anatomical and Histological Observations of Fore- and Hind limb Toes in Adult Mice after Amputations Performed at the Age of Two Weeks. *Can J Vet Res* 1998; 62: 311-313.
2. Castelhana-Carlos MJ, Sousa N, Ohi F, et. al. Identification methods in newborn C57BL/6 mice: a developmental and behavioural evaluation. *Lab Anim* April 2010; vol 44; no. 2; p. 88-103.
3. Schaefer DC, Asner IN, Seifert B, et. al. Analysis of physiological and behavioural parameters in mice after toe clipping as newborns. *Lab Anim* January 2010; vol 44; no 1; p. 7-13.
4. Paluch LR, Lieggi CC, Dumont M, et. al. Developmental and Behavioral Effects of Toe Clipping on Neonatal and Prewaning Mice with and without Vapocoolant Anesthesia. *J Am Assoc Lab Anim Sci* March 2014; 53(2): 132-140.