

Bleeding Technique Selection - Mice

Procedure	Advantages	Disadvantages
Saphenous Vein	No anesthesia Serial bleeding okay Moderate volumes Minimally invasive Complications rare	Moderate volumes require technical skill Requires shaving Restraint may raise stress hormones/blood glucose May cause temporary limping Not aseptic
Pedal Vein	No anesthesia Serial bleeding okay Easy technique Quick, no shaving Minimally invasive Complications rare	Small volumes of blood only Restraint may raise stress hormones/blood glucose May cause temporary limping Not aseptic
Facial Vein	No anesthesia Serial bleeding okay Moderate to large volumes Quick, easy technique Minimally invasive Complications infrequent	Greater risk for bites (zoonosis risk) Rarely, poor technique may cause hemorrhage Restraint may raise stress hormones/blood glucose Temporary facial soreness may impact eating Mixture of venous and arterial blood Not aseptic
Tail Nicking	No anesthesia Serial bleeding okay Easy repeat sampling (scab removal) Easy technique Complications rare if using needle	Discomfort common Complications more common if using scalpel Only small volumes Heating may increase dehydration risk Artery can take time to clot Restraint may raise stress hormones/blood glucose Sample quality variable (often contains tissue) Not aseptic
Tail Snipping	Easy technique Easy repeat sampling (scab removal)	Requires IACUC justification Anesthesia/anesthetic required (>21 days old) Discomfort common Damage common (especially for repeat sampling) Leukocytosis common (especially with tail milking) Heating may increase dehydration risk Sample quality variable (often contains tissue) Mixture of venous and arterial blood Not aseptic
Retro-Orbital	High quality aseptic sample Large volumes Quick/comfortable with skilled tech	Requires IACUC justification General anesthesia required Requires skilled technician - often difficult to learn Poor technique can cause blindness or death Not applicable to serial sampling Mixture of venous and arterial blood
Cardiac Puncture	High quality aseptic sample Large volumes Cut down for arterial or venous blood	Terminal procedure ONLY Deep anesthesia required Poor technique may limit volume Some technical skill required