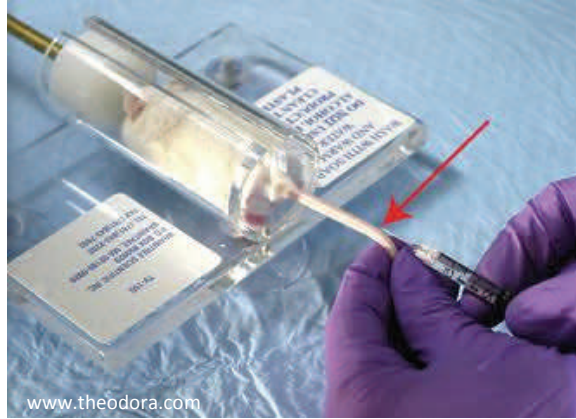# Intravenous (IV) Injections - Mouse

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The veins on the lateral aspects of the mouse's tail are excellent sites for IV administration, though this technique does require practice and skill. The principal function of these veins is for thermoregulation. They will dilate when the mouse's body temperature rises in order to dissipate heat. Application of heat to the whole animal or locally to the tail can be used to cause vasodilatation making vascular access easier. Dilate the tail vessels by placing the tail in warm water (37oC), never exceeding 40 - 44oC range, or under a heat lamp (25-30 cm away using a 60W bulb). The animal's body temperature should never exceed 104oF (40oC) for over 5 minutes. **Animals must be constantly monitored for signs of heat distress.** The mouse should be restrained so that its tail is accessible. Commercial restrainers are available for this purpose. A 26-28G needle is used. The vein is located, the needle inserted by directing the needle into the vein with its bevel facing upward at an angle of approximately 20 degrees. The needle is inserted slowly. Visualize the needle as it enters the vein. Once the vein's wall has been penetrated, decrease the needle's angle and the needle should be directed cranially approximately 2 mm. Blood should be aspirated into the needle's hub before making an injection. During material administration, the vein should blanch as fluid runs through it, and no material or swelling should be detectable at the injection site—this indicates injection is outside of the vein. Material should be administered slowly to avoid vascular overload or rupture of the vein from excess pressure. Once the needle is removed, pressure should be applied over the injection site by gently holding a piece of gauze over the injection site for approximately 30 seconds to prevent hematoma formation. Preferably the needle should be inserted into the vein midway down the tail, permitting additional attempts for venipuncture proximally (closer to the body) if the initial attempt is unsuccessful.