

Quick Reference Summary Sheet

Intraperitoneal Injections in Mice

Procedure:

1. Pre-warm sterile substance to be administered. Do not exceed 37°C.
2. Weigh animal. Calculate volume to administer (maximum = 10 ml/kg).
3. Fill an appropriately sized syringe and needle. Maintain sterility.
 - a. Mice: 0.3 - 1 ml syringe, 25-27G needle; 5/8" length or smaller
4. Restrain animal appropriately for safe access to abdomen for injection.
 - a. Mice: Scruff with non-dominant hand, and hold the animal with its head slightly lower than the abdomen (Figure 1).
5. Insert the needle into the lower right quadrant of the abdomen with your dominant hand.
 - a. Inject into the centre (blue circle) of an imaginary triangle consisting of (Figure 2):
 - i. Vertical line along animal's midline
 - ii. Horizontal line just above level of hip or at level of second visual set of nipples (female only)
 - iii. Diagonal line to genitalia
 - b. Can alternate sides if injecting over multiple days.
 - c. Direct the needle towards the head at a 30-40° angle to the horizontal plane of the animal (Figure 3).
 - d. In mice: insert ~1/2 of the needle length for lean animal or the whole length for a fat animal.
6. Pull back on the plunger. If no blood, urine or intestinal contents appear, inject contents and remove needle.
 - a. If aspirate contents, replace needle and syringe and re-attempt once only if animal remains healthy after 5-10 minutes of observation.
 - b. When re-attempting, redirect the angle slightly. Monitor animal afterwards for 5-10 minutes to ensure no complications arise.
7. Discard syringe and needle into sharps container. Do not recap.
8. Return animal into its cage and observe for any complications.
9. Note procedure (drug, dose, route, volume, complications) on cage card/monitoring records.

Potential Complications:

- Bleeding at injection site
- Signs of abdominal pain
- Peritonitis
- Laceration of abdominal organs, intestine and/or damage to internal blood vessel
- Injection into the intestinal tract or bladder

