

Quick Reference Summary Sheet

Subcutaneous Injections in Adult Rats

Procedure:

1. Pre-warm sterile substance to be administered. Do not exceed 37°C.
2. Weigh animal. Calculate volume to administer.
 - a. Drug administration maximum = 5 ml/kg/site; 10 ml/kg total
 - b. Fluid administration maximum = 20 ml/kg/site; 40 ml/kg total
3. Fill an appropriately sized syringe and needle. Maintain sterility.
 - a. Rats: 3-5 ml syringe, 23-25G; 5/8" length needle
4. Restrain animal appropriately to safely allow skin access for injection.
 - a. Restrain with or without cloth or small towel to cover face.
 - b. Wrap non-dominant hand around rat, tuck body close to you to prevent escape, then tent (lift) the loose skin with the same hand (Figures 1 and 2).
 - c. With biohazardous agents, use a restrainer or anesthesia and padded forceps (Figure 3).
5. Insert needle, bevel up, through base of tented skin, parallel to body, with dominant hand (Figure 4).
 - a. Insert the entire needle length.
6. Pull back on the plunger. If no blood or air appears, inject contents and remove needle.
 - a. If blood appears (hit a capillary): replace needle, syringe and contents and re-attempt.
 - b. If air appears (exited skin): re-attempt once with same needle.
7. Discard syringe and needle into sharps container. Do not recap.
8. Return animal to its cage and observe for any complications.
9. Note procedure on cage card/monitoring records.

Potential Complications:

- Local reaction:
 - E.g. bleeding, bruising, lesion formation or swelling
- Systemic reaction:
 - E.g. weight loss, hunched, piloerection, lethargy, isolated, pain

