# Subcutaneous Fluid Administration

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## Purpose of Procedure

The most common reason for subcutaneous (SC, SQ) fluid treatment at home is for treatment of kidney disease. When the kidneys are unable to make concentrated urine, fluid loss from the body is increased. Although some animals drink enough to compensate, other animals do not drink enough and become dehydrated. SQ fluid therapy helps prevent or treat the dehydration and also helps the kidneys flush more waste products from the body. SQ fluids are most often administered on a chronic basis to cats. They can be administered to dogs and other small animals for various other reasons.

## Description of Technique

The supplies needed to perform SQ fluid therapy at home include an intravenous (IV) fluid bag, an IV tubing administration set, and needles. The equipment is set up as follows:

- Take out the administration set (tubing). The flow of fluid through the tubing is controlled by a pinch clamp (usually blue or green) and a roller clamp (usually white). The roller clamp is used for adjusting flow rates in incremental steps. Initially, close both clamps.
- Tear off the plastic outer wrap and remove the fluid bag, holding it with the tab or plug up. To attach the tubing to the bag, pull off the tab or plug, remove the cap from the spiked portion of the tubing, and insert the spike all the way into the fluid bag.
- Invert the bag so that the plug is at the bottom. Hold the bag up and squeeze it so that about one quarter of the clear chamber beneath the spike fills with fluid. While holding the bag up, open the clamps to allow the fluid to fill the tubing. Take the cap off the free end of the tubing. When fluid begins to flow out of the tubing, close the clamp. If there are air bubbles in the tubing, let the fluid run out until the bubbles are gone.
- Twist the cap off the needle, and place the needle over the free end of the tubing.

To administer the fluid, do the following:

- Find a quiet spot. Placing your cat or other small animal in a box or carrier with an open top may help keep it still. If you have a squirmy pet, you may need someone to hold your pet while you administer the fluids.
- Grasp the skin on the back of the animal's neck between the shoulders and gently pull it up. Any area where there is loose skin is fine to use; the best area is the front half of the animal.
- Remove the needle cover and insert the needle under the skin. Hold the needle parallel to the ground or at a 45-degree angle. If the needle comes out the other side of the skin, pull back a little. If fluid leaks out as you give it, the needle has gone through to the other side and needs to be repositioned.
- Hang the bag up on a hook or hold it well above the animal. Open the clamp to start the flow. The bag can be squeezed, or the fluid can be allowed to drip by gravity. Continue until the prescribed dose has been given.
- A lump will gradually develop under the animal's skin where the fluid enters; it will slowly disappear over the next few hours. The fluid may settle lower over the shoulders because of gravity.

After giving the fluids, close the clamp, pull the needle out of the skin, and replace the needle cover. If fluid leaks out after you remove the needle, do not be alarmed. Simply pinch the leaking spot briefly.

Use a new needle for each administration. Place used needles in a puncture-proof container, and return them to the veterinary hospital for disposal.

### Dosage

The frequency and amount of fluid needed are dependent on a number of factors, such as the size of your pet and the severity of its disease. Fluid bags generally hold 250, 500, or 1000 milliliters (mL). The bags are marked with numbers; when the fluid level drops from one number to the next, 100 mL has been administered. Although the measurements are not precise, they are accurate enough for SQ fluid treatments. Monitoring your pet's condition with blood tests helps to determine the effectiveness of the SQ fluid therapy and provides guidance on the need for changes in the dosage.