

SUBCUTANEOUS FLUIDS

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FLUID THERAPY

Administration of supplemental fluids can benefit pets with a number of different medical conditions, but most notably, for kidney disease. Although the idea of giving fluids by injection may initially be intimidating, we whole-heartedly encourage you to learn this technique. The potential benefit to your pet will make it well worth your time and effort to learn this simple technique. Once you try it we believe that you will find that it is not nearly as difficult as it might seem.

SUPPLIES

The most common fluid chosen for subcutaneous administration is a balanced electrolyte solution called Ringer's Lactate, often abbreviated LRS. Other equipment includes a workspace, a hook over the workspace to hang the fluids bag, an IV administration set, a needle, and a sharps container for disposing of the needle. The IV drip set is simply a tube that connects the fluid bag to the needle. Although it may initially seem complicated, you will soon become very comfortable with the procedure described below.

CONNECTING THE DRIP SET TO THE BAG

1. Remove the inner bag of fluids from the outer protective bag and hang it from the hook.
2. There are usually two ports located at the bottom of the bag, an injection port and a dripset port. The dripset port will have a removable cap on it. Remove this cap by pulling off. This will expose a hole that will accept the pointed end of the IV set. Do not contaminate the opening with anything.
3. Remove the IV dripset from its packaging and immediately close the clamp in the middle of the IV tube by adjusting the roller. If you forget to do this, you are going to have fluids pouring all over the table or floor.
4. The top end of the IV set has a large, pointed spike with a protective cap. Remove this cap and push the spike firmly into the opening of the dripset port. It must be seated firmly to prevent leaks and to keep it from falling out. Once the

dripset is in do not remove it from its port for any reason. Do not contaminate the insertion spike with anything.

5. Remove the protective cap from the lower end of the IV set, set it down but do not discard it. With your other hand gently squeeze and release the bulb at the top of the drip set until the bulb chamber is about half full with fluid. Then, open the lock (roller) on the tubing and the fluid should begin to flow freely. When all the air has run out of the IV drip tube, close the clamp again and re-cap the end of the IV tube with the previously saved cap. do not contaminate the exposed end of the tubewith anything.
6. Pick up a needle and break the protective seal around the needle so that the open end (not the sharp end) is exposed. Remove the protective cap from the lower end of the IV set, and place the needle on it. Seat it firmly. Do not contaminate the opening of the needle with anything.

FLUID ADMINISTRATION

Choose a location where you will treat your pet. This may be on a table, counter top, or similar area. Some find that placing the pet in a box with an open top is helpful. We do not recommend doing this in your lap, bent over on the floor, or other situation where you have little comfort or control. For this procedure to be successful you must have control of your pet and you must be comfortable. The procedure will usually last about five to ten minutes. Hang the IV bag about 3 feet above the level of your pet's head. The end of the IV set should easily reach your pet. Get your pet and get into your positions—you are ready to start.

Insertion of the needle can be just about anywhere that the pet has loose skin. Common sites are along the chest or abdominal trunk on either side or over the back. Pick up a roll of clean, loose skin, lay the point of the needle, with the bevel up, at the base of the roll of skin with the needle almost but not quite parallel to the body wall, and advance the needle through the skin quickly by pulling the roll of skin on to it while pushing the needle forward at the same time. The faster you do this the less it will hurt your pet. This should place the point of the needle under the skin. Release the roll of skin and the point of the needle should remain under the skin. Keep one hand on your pet to

comfort and steady, and with the other hand grasp the IV set clamp and open it. Fluids should run freely.

COMPLETING THE PROCESS

When the appropriate amount of fluid has been administered stop the flow of fluids by closing the IV set roller clamp. Remove the needle from your pet by pulling it straight out. Replace the cap on the needle as demonstrated being careful not to stick yourself with it. Break the seal on a new needle. Remove the used needle from the IV dripset and replace it with the new one. Do not contaminate the end of the dripset or the new needle opening. Never leave a used needle on the dripset. Dispose of the old needle in an appropriate container.

GENERAL CONSIDERATIONS

As long as the pet's coat is reasonably clean, it is not necessary to "sterilize" the skin with alcohol before inserting the needle. In reality, wiping a little alcohol on the skin does not really sterilize it, the odor and feel of alcohol may aggravate your pet, and the alcohol may sting if the needle carries it in. Many pets will taste the alcohol and begin to drool profusely.

Most pets tolerate this procedure quite well. However, if the fluids are unusually cold or hot, they may be uncomfortable. Ideally, they should be stored at about body temperature. However, as long as they are at room temperature most pets are fine. Do not refrigerate them, and if you heat them up, check them first on yourself to ensure that they are not too hot.

As the fluids are running, a lump will form under the skin. Do not be alarmed; this is a pocket of fluid that will be absorbed over several hours. If absorption is slow, gravity may cause the fluid to migrate downward. It could move under the skin of the front or rear legs, but if this happens, it is not a problem; the fluids will still be absorbed.

If a few bubbles of air are injected under the skin, this will not be harmful. If quite a bit of air gets under the skin, you may feel a crackling sound when you push on the skin, and your pet may experience mild discomfort for a couple of hours, but no real harm will occur. The body will eventually absorb the air.

FREQUENTLY ASKED QUESTIONS

1. *What if the fluids stop running or the rate slows down in the middle of the procedure?* This often happens when the end of the needle moves up against the skin or the underlying tissue. Do not remove the needle; rather, gently reposition it until the fluids begin to flow again. Experiment with the position of the needle until the fluids flow freely.
2. *What if the fluid runs slowly on subsequent treatments?* Sometimes the clamp on the dripset will crush the tubing. If this happens, simply move the clamp to another place on the IV tubing, and open the crushed area of the tube by gently massaging it with your fingers.
3. *What if the fluids become cloudy in appearance or have floating particles?* If any cloudiness, discoloration or floating particles occur, do not use the bag. It usually means that the fluids have become contaminated. If you administer these fluids to your pet, a serious infection may occur.