



## **BRIARPOINTE VETERINARY CLINIC**

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### **SUBCUTANEOUS FLUID ADMINISTRATION**

Administration of supplemental fluids can benefit dogs with a variety of medical conditions. Most commonly, this is recommended for dogs with kidney disease or chronic renal failure (CRF). We recommend that you learn this technique for your dog. It is normal to feel reluctance about administering any treatment to your pet. Giving injections is outside the comfort zone for almost anyone outside the medical professions. However, subcutaneous fluid administration is not nearly as difficult as it sounds. The benefits provided to your dog will make it well worth your time to learn this simple technique.

#### ***What equipment is involved?***

The equipment consists of a bag of fluids, a fluid drip set, and a needle. The fluid drip set is simply a tube that connects the fluid bag to the needle. You will eventually become comfortable with the steps involved.

Remove the intravenous fluid bag and the fluid drip set from their protective packaging.

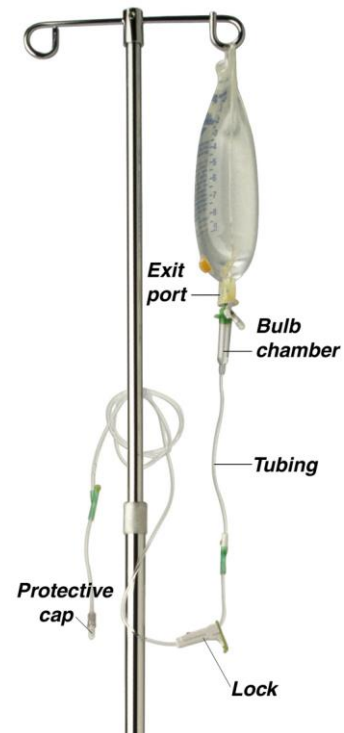
Close the line lock in the middle of the fluid tubing, by moving the roller. The lock on a new fluid set is often already in the open position.

The top end of the fluid bag has a large, pointed end with a protective cap. Remove this cap, but do not allow it to become contaminated. IT SHOULD NOT TOUCH ANYTHING.

Pull the protective covering from the exit port on the bottom end of the fluid bag. This will expose a hole that will accept the pointed end of the fluid set.

Push the pointed end of the fluid set into the open hole of the fluid bag. It must be seated firmly to prevent leaks.

Gently squeeze and release the bulb at the top of the drip set until the bulb chamber is about half full with fluid.



Remove the protective cap from the lower end of the fluid set, but do not discard it. Do not allow it to become contaminated. IT SHOULD NOT TOUCH ANYTHING.

Open the line lock or roller on the tubing and then hold or suspend the fluid bag; fluid should flow freely. Fill the fluid line with fluid from the bag. Be sure that all air bubbles run out of the tubing.

1. Once the fluid line is full, close the lock on the fluid line by rolling the roller downward.
2. Replace the protective cap on the lower end of the fluid set.

Break the protective covering around the needle so that the open end (not the sharp end) is exposed. Do not allow it to become contaminated by allowing it to touch ANYTHING.

Remove the protective cap from the lower end of the fluid set, and place the open end of the needle on it. Seat it firmly. Discard the protective cap.

#### *Sites to insert the needle*



#### ***How is the needle inserted?***

Insert the needle just under the skin in one of several locations that have unusually loose skin. These include:

1. At the level of the shoulder blades, just to the right and to the left of midline.
2. At the level of the back legs, just to the right and to the left of midline.

#### ***What is the correct technique?***

Choose a comfortable location where you will treat your dog. This may be on a table, countertop, or on your lap.

1. Hang the fluid bag about 3 feet above the level of your dog's head.
2. Place your dog in the treatment location. Be sure both of you are in a position that will be comfortable for about 10-15 minutes. The end of the fluid set should easily reach your dog.
3. Pick up a roll of loose skin in one of the above locations.
4. Lay the point of the needle at the base of the roll of skin **with the needle horizontal** and pointing to the dog's head. This assumes that the dog is in an upright or standing position.
5. Advance the needle slightly forward while pulling the roll of skin backward. That should place the point of the needle under the skin.
6. Release the roll of skin. The point of the needle should remain under the skin.

7. Grasp the fluid set lock in one hand. Begin the flow of fluids by rolling the roller upward. The fluid may flow faster or slower if you angle the needle slightly. It's OK to move it slightly to get the fastest flow.

### ***How much fluid should I give each time?***

The instructions at the end of this handout tell how much to give for your specific situation. As a rule, the average sized dog should receive 100-200 ml of fluids at one time. If you are using two spots, you should give half of that amount in each location.

When you have given the prescribed amount, complete the following steps:

Stop the flow of fluids by rolling the roller in the fluid set lock downward firmly. If you do not close it well and the bag is left hanging, fluid will drip out.

Remove the needle from the skin and replace its protective cap.

PLACE A NEW, STERILE NEEDLE ON THE DRIP SET AS SOON AS YOU ARE THROUGH. This keeps bacteria that were picked up on the old needle from migrating into the fluids. If you wish, you may return it to our hospital for proper disposal.

Store the equipment in a safe place until the next fluid administration.

### ***What other tips do I need to know?***

While it is not necessary to "sterilize" the skin with alcohol before inserting the needle, it is probably a good idea. In reality, wiping a little alcohol on the skin does not really sterilize it, but doesn't hurt, either.

Most dogs tolerate fluid administration 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 dogs are fine. Do not refrigerate them.

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

There is no problem if a few bubbles of air are injected under the skin. If quite a bit of air gets under the skin, you may feel a crackling sound when you push on the skin, and your dog may experience mild discomfort for a couple of hours, but no real harm will occur. The body will eventually absorb the air.

### **What to do if the fluid stops flowing during administration:**

This often happens when the end of the needle moves 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 needle's position until the fluids flow freely. Twisting the needle will change the position of the bevel. This may be all that is needed.

### **WHAT TO DO IF THE FLUID RUNS SLOWLY ON SUBSEQUENT TREATMENTS**

When you are finished giving fluids, you should close the lock firmly. However, closing the lock firmly may crush the tubing so that fluid will not flow well on subsequent use. If this happens, move the lock to another place on the fluid tubing, and open the crushed area of the tube by pinching it with your fingers.

### **WHAT TO DO IF THE FLUIDS BECOME CLOUDY IN APPEARANCE**

If any cloudiness or discoloration occurs, do not use the bag. It usually means that the fluids have become contaminated with bacteria. If you administer these fluids to your dog, a serious infection may occur under the skin.

### **SPECIFIC INSTRUCTIONS FOR YOUR DOG**

1. Give \_\_\_\_\_ ml of fluids at each treatment.
2. Treat your dog every \_\_\_\_\_ days or \_\_\_\_\_ times per week.

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*Edited by John S. Parker, DVM*  
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