



Subcutaneous Fluid Administration

Are there any alternatives? I don't really want to do this.

This is a normal reaction for most people. Giving injections may be outside the comfort zone for most people outside of the medical profession. However, fluid administration is not as difficult as it sounds, and the benefits to your pet make this a worthwhile technique to learn.

How do I set up the equipment?

Your fluids kit contains: a bag of sterile fluids (a balanced electrolyte solution), a fluid extension set (a length of clear tubing that attaches to a syringe), two 60ml syringes, and 18 gauge (pink) needles and 20 gauge (yellow) needles.

All of the items in your fluids kit are in sterile packages and must be handled appropriately to ensure that they remain as clean as possible. The portions of your fluid kit that should remain sterile are the tips of the syringes, the connection ends of the extension set, the needles and the fluids inside the fluid bag. It is important to not touch these areas or let them touch anything that is not sterile. Always keep clean needles on the syringes, if a needle is dropped or touches the counter it should be replaced. Always use new needles when drawing fluids out of the fluid bag. Reusing a needle can contaminate your fluids, which will contaminate your whole kit, resulting in the need to replace it.

To assemble your kit:

- Remove the fluid bag from the plastic wrapper and set aside.
- Remove one syringe from the plastic wrap and attach an 18-gauge needle to it. *To keep the syringe as clean as possible, do not let the tip of it touch your hands or the table before attaching a needle.*
- Open the fluid extension set, and the second syringe. Remove the blue cap from the winged end of the extension set and attach this end to the syringe, remove the blue cap from the other end and attach an 18-gauge needle to it.
- To fill the syringes insert the needle into the bag through the rubber port at the bottom of the bag and draw up 60 mls of fluids into each syringe (you may need to adjust the amount of fluids you draw up, based on what your veterinarian recommends).
- After filling the syringes, replace the needle on the extension set with a 20-gauge needle.

If you get large air bubbles in the syringes you can disconnect the needle and push the air out, if you need to remove the extension set from the syringe, kink the line first.

Where is the needle inserted?

The most common area for fluid administration in the cat is the loose skin over the shoulders. This area also works well for dogs; however, often more than one site is used for dogs, because they have less

excess skin than cats. The skin over each hip is often loose enough to allow for fluid administration. The sites used, varies from dog to dog, so choose the site with the most excess skin.

If at any time during the administration of the fluids you notice that the skin is getting tight over the fluid bump, or that the bump is becoming firm remove the needle and place it in a new location.

What should I expect as I am administering the fluids?

Most pets tolerate this procedure quite well. However, if the fluids are too cold they may be slightly uncomfortable. Most pets tolerate room temperature fluids, but if you wish to warm them, you can place the filled syringes, with the needles in place, in a bowl or sink of warm water, *do not microwave the fluids. Always test the fluids on your arm before administering; they should not be warmer than lukewarm.* Use caution when warming the fluids, hot fluids can harm your pet. Ideally the fluids should be stored at room temperature.

As the fluids are administered they will accumulate under the skin and form a bump. This bump will gradually disappear as the fluids are absorbed by the body; this usually takes 2-4 hours. Gravity may cause the fluids to migrate down around the elbows where they will be absorbed.

How are the fluids administered?

- Choose a location where you are able to handle your pet, this may be a table or counter top. Be sure you are both in a position that will be comfortable for 5-10 minutes.
- Have your equipment set up and ready to use, you will use the syringe with the extension set and 20-gauge needle to administer the fluids.



- Pinch up a roll of loose skin over the shoulder, to form a “skin tent”, this is the roughly triangular flap of skin formed between your fingers and your pets’ body.
- Lay the point of the needle at the base of the skin tent, as seen in the picture to the right, and advance the needle smoothly forwards. You want the needle lined up so that when you place it in the skin the needle tip is in the middle of the roll of skin just under your finger tips. To check for proper placement of the needle, you can gently draw back on the plunger of the syringe, if you are



met with resistance, the needle is placed correctly. If you get a large amount of air drawn into the extension set, the needle has gone through both sides of your skin tent, remove the needle and place it again.

- Release the skin tent and hold the needle in place with one hand, with the other hand set the syringe vertically on the counter top, with flat bottom of the plunger down. Apply firm downward pressure to the barrel of the syringe until the syringe is empty. If you notice that your pet becomes irritated with the procedure try giving the fluids at a slower rate.
- When the first syringe is empty, leave the needle in the skin and kink the extension set, disconnect the empty syringe and attach the full syringe to it, put a needle on the empty syringe. *Do not allow the syringe tips to touch the counter top or your hands.*
- Administer the second syringe of fluids. If you notice that the fluid hump is becoming firm you may need to move the needle to a new location.
- When you are finished administering the second syringe, smoothly draw the needle straight out of the skin and gently pinch or press where the needle was. This will help prevent some of the fluids you administered from leaking out. You may notice a small amount of blood mixed with the fluids leaking from the puncture site, do not worry, sometimes a small blood vessel in the skin is broken when the needle is placed. If this happens, just gently pinch or press the site for a little longer.
- Attach new needles as soon as you are finished administering the fluids to avoid contaminating the syringes and extension set and to ensure that clean needles are used each time. *Always store your syringes with the extension set and needles attached.* Recap the used needles and store them in a hard-plastic container. If you wish, you may bring the needles into the clinic for proper disposal. *Do not dispose of needles in your regular garbage.*

Note: *It is not necessary to “sterilize” the skin with alcohol before inserting the needle. In reality, wiping the skin with alcohol does not sterilize it and the odor and feel of the alcohol may aggravate your pet.*

What if air bubbles are carried under the skin?

A few small air bubbles are not going to be a problem for your pet. However, if quite a bit of air gets under the skin you may feel crackling when you push on the skin. This may cause your pet mild discomfort for a couple hours, but the body will absorb the air and no real harm will be done. To avoid injecting air under the skin you can disconnect the needle from the syringe, or kink the extension set and disconnect it from the syringe and push the air out. Always insure the extension set is filled with fluids before beginning fluid administration, a good way to do this is to draw the fluids into the syringe through the extension set.

How much do I give?

Your veterinarian will determine in advance, how much fluid you will need to give your pet and how often to give it. The average sized cat usually receives 100-150mls of fluids at one time. The amount given will vary depending on the size of your pet, the level of dehydration and the frequency of fluid administration.



I have used this bag for several treatments and now the fluid is cloudy. What does that mean?

If the fluids become cloudy or discolored, do not use them. It usually means that the fluids have become contaminated with bacteria and administering these fluids risks causing an infection under the skin. If your fluids become contaminated then the whole fluid kit is contaminated, throw out everything except the unopened needles and come in to the clinic to buy a new subcutaneous fluid kit.

***Syringes and extension sets should be replaced every 2 weeks if fluids are given daily.**

***Needles should only be used once to limit the chances of contaminating the fluids or the equipment.**