

## **How To Care for the Premature Puppy**

By Roberta Jamieson, Lepus Perm. Reg'd Whippets & Italian Greyhounds

On June 28<sup>th</sup>, 2008 the test of my life as a breeder happened. I have been breeding dogs for 25 years, but other livestock for much longer than that, and never had to address the issue of saving VERY premature babies before.

Needless to say there was very little information on the internet and basically I managed to save one of 2 live born puppies with piece-meal information, and a good dollop of "flying by the seat of my pants". Not a great way to save puppies.....

So I promised myself that I would not let this happen to some other poor soul who might wind up in this precarious position. Here now is all that I have learned in a nice neat package:

### **You Realize Your Bitch Is in Labor Far Too Early....**

First thing to have on hand (and plugged in) is a HOT water vaporizer AND a DIGITAL kitchen scale. These are really important, as the puppy will need high humidity in the room and a hot water vaporizer also helps keep the room warm, and you need to track the puppy's weight twice daily. You need to keep the whelping box very warm (between 85-100 degrees). Most preemies have little or no hair and thin sticky skin, so you need to keep it warm and moist in there. Another important thing to have on hand is virgin or extra virgin coconut oil. You will be applying this to the puppies' skin, particularly the belly, inside of legs and legs, frequently on a daily basis. The puppy can absorb this through the skin for energy, it is anti microbial, and will keep things from sticking to the skin (the hairless skin is very sticky), and the fatty acids in this oil are identical to those found in breast milk, so even if the bitch might lick it off, it is good for her too.

**IT IS VERY IMPORTANT TO BE PROACTIVE AND MAKE SURE YOU HAVE ALL**

**NECESSARY EQUIPMENT AT LEAST 2 WEEKS PRIOR TO YOUR BITCH'S DUE DATE. DO NOT BE CAUGHT OFF-GUARD!!** If you have it all in place and she whelps on time then there is nothing lost but maybe a few dollars and a little time, but if she does whelp too early, or has premature looking pups along with some that appear to be full term, then you will thank yourself over and over for having been fully prepared. Assume the worst case scenario, and get everything you need in advance. You never know when you will need it.

Once puppy is delivered, if it is alive and trying to breath, you may notice it gurgling or having some difficulty due to fluid aspiration because they are tiny and there is less pressure at birth to force the fluids out of the lungs. Let mom lick the puppy, so she bonds and the licking can help clear fluid, but you likely will also have to help get the fluid out. To do this, have a medium to large ziplock bag filled with warm water (and of course zipped closed). It will be like a little warm water bed. Lay puppy across it, with the head somewhat lower on the low edge, the body being on the bulky centre of the bag. Gently roll the puppy back and forth slowly on the bag.

This mimics the puppy squeezing through the birth canal and will help get any remaining fluid out of the lungs. Once this is done, place the puppy close in with mom, if possible (hopefully she is not in a rejecting mood). If she is, place the puppy on blankets/towels that are either on a heating pad, covered hot water bottle or other means of keeping the puppy warm (be careful not to let the temperature that the puppy is on get over 100 degrees Fahrenheit, or under 80 degrees Fahrenheit). Also, be cautious with a heat lamp as they can dry the puppy out, so if you are using one, have the vaporizer nearby to offset the drying effect. If the dam is rejecting the puppy, you will need to work on that, or if she continues or is dead, you will need to have more information on raising an orphan puppy (which will require you stimulating it to defecate after every meal, both urine and stool, as normally the dam would do this by licking). The general care of an orphan puppy can be easily found on the internet,

however, the premature puppy aspect is what I am dealing with in this article.

Now you will need to have a Platex nurser bottle and nipple available, or an eyedropper, or a feeding tube/catheter. I prefer to opt for the platex nurser. If you have an old one (the ones that used the bag) turn the nipple inside out...it will work better. This nurser will work even for preemie toy or small breed puppies. You will take a fine pin or needle, heat it up so it is red on the end, and push it through the nipple of the Platex nurser. You will repeat this so that you make 5 or 6 holes. You want any liquid in the nurser to drip out of the nipple at almost 2 drips per second when it is held upside down. Your premature puppy is NOT going to be able to nurse substantially or strongly enough to get any or enough nourishment from his mom. You are going to have to express milk from her teats into a very clean bowl, and mix that with formula.

#### **THE BASIC FORMULA:**

10 liquid oz. RAW (if possible) fresh or frozen goat milk or goat colostrum  
3 liquid oz. Plain Pedialyte  
1 raw egg yolk (preferably organic free range)  
1 cup goat or cow FULL FAT yogurt or kefir (preferably organic)  
½ teaspoon corn syrup

You will need to blend this with a blender or mixer. Label the date on the jar and store in the fridge (it will be good for about a week).

The rule of amounts for feeding a pup is 1 ml of formula for every oz (28 grams) of body weight. If the puppy weighs 4 oz, then one would feed 4 ml, however I like to err on the side of caution and make it about 3 ml. You will be feeding EVERY HOUR round the clock for 24 hours. Use a syringe to measure the mls as they have gauged accurate markings and it's easy to draw up the right amount and then squirt that into the bottle.

So let's say your puppy is 4 oz. You need 3 ml of liquid. You will express your bitch's colostrum into a clean bowl, then add 1.5 ml of the above formula and then add a further 1.5 ml more of pedialyte to that formula. Pour this

into the nursing bottle, place it in warm to hot water to warm the milk to body temperature (test it on your wrist). The reason for this half & half mixing of formula to pedialyte is because often preemies have difficulty digesting full formula for the first day or two. So you are watering it down to ease the digestion. You MUST feed this mix hourly and it MUST be warmed to body temperature, so use a fresh batch (including fresh expressing the bitch's colostrum each and every time). Be sure the bottle & nipple are washed and rinsed in the hottest water or sterilized between uses. Now, you could tube feed, and there is a very excellent video on YouTube showing you how to do this

([www.youtube.com/watch?v=bIKWr7yRU2g](http://www.youtube.com/watch?v=bIKWr7yRU2g)), or use an eyedropper, BUT I prefer using the easy drip nipple bottle feeding method because it helps the puppy still attempt to suck (therefore exercising his sucking muscles), so that he will be able to nurse from his mom much sooner than if you tube feed. BE CERTAIN when bottle feeding that the puppy is being held in a NATURAL PUPPY nursing position (ie he should be laying on his tummy, head slightly elevated higher than his rear). DO NOT put puppy upright or on it's back to nurse as they can easily aspirate and drown on the formula. This is extremely important. This is particularly important if you opt to feed by eyedropper. Puppy body position MUST be a natural nursing position. Puppy should be able to pull himself off the bottle as soon as he is full. His belly below his ribs should look slightly distended, so that means he's got a full tummy. After he has had a few of these bottle feedings, try to plug the puppy onto one of his mom's teats to try nursing for a little bit. He will tire quickly. As soon as he drops off, give him his bottle. Do this every time you feed. This helps him develop his strength and desire to nurse from mom. With any luck, he could be nursing from her on his own by the end of day 3 or 4.

Watch for his stools carefully. He should pass the blackish meconium (first stool) and then his stools after that should be that kind of mustard yellow that pups normally have. Don't fret too much about the consistency of the stool, but the color is VERY important. If the stool is

whitish, and looking like curdled milk, the puppy is unable to digest the food, and is getting no nutrient matter. This will be a bad sign and may bode that the pup may not survive. If the stools are yellow, then he is producing bile and digesting the food to some extent. You may find that the puppy is not gained weight in the first 24 hours and may even lose some weight. That is not abnormal. Over the next 12 to 24 hours you are going to ramp up your formula mix by still expressing colostrum from the bitch, but with each feeding use less and less pedalyte until you are feeding the straight original formula, so it will no longer be "watered down by half". The puppy should by end of the second day or at the very least by noon of the 3<sup>rd</sup> day start gaining some weight. If he is not, go back to hourly feeds for the daytime hours, and 2 hourly feeds at night.

#### **IMPORTANT THINGS TO REMEMBER:**

If the puppy is travelling around the whelping box and crying, he is hungry and/or in trouble. Full, satisfied puppies go to sleep and stay asleep until they are hungry. Be proactive and feed them as on time as possible, whether it's the hourly or two hourly feed.

The puppy **MUST** have colostrum from the mother sometime during the first 24-48 hours. It is best to try to express her colostrum into a bowl and mix it with the formula **FOR EVERY SINGLE FEEDING**.

The puppy **MUST BE KEPT WARM** and the **ROOM MUST BE MOIST** (hot vapourizer).

**KEEP THE PUPPY'S BELLY, INNER AND OUTER LEGS WELL GREASED WITH VIRGIN COCONUT OIL.**

If the bitch has no milk or has died, you will need to speak to your vet about getting plasma either from the bitch or shipped in to give to the puppies for maternal antibodies. It can be shipped in from HEMOPET in California as they have frozen stores.

<http://www.hemopet.org/products.html>

After the first few bottle feeds, start plugging him onto mom's teat until he drops off her nipple, prior to giving him his bottle.

**BURP** the puppy after each bottle. **THIS IS QUITE IMPORTANT.**

**FEED HOURLY FOR THE FIRST 24 HOURS. I CANNOT STRESS HOW IMPORTANT THIS IS.** (You can even give a few feedings every half hour if you feel the puppy can't take in a full feed at hourly intervals).

Feed every two hours after that, **HOWEVER**, if by the end of the 2nd day the puppy is still not gaining weight or is losing weight, go **BACK TO HOURLY FEEDING** during the daytime, and if you need to, do it every 2 hours at night. You will continue feeding every 2 hours until the puppy is nursing well off of his mom, and then you may need to give anywhere from 1 to 4 partial bottle supplements a day to help top him up as his mom's milk starts to come in (it will take some time to do this). By partial I mean, if for a full feeding he would take in 6 ml, you may only need to give him 2 ml or whatever he wants to "top him up".

I strongly advise sleeping beside the whelping box, to make sure puppy(ies) do not get laid on, rolled on, stepped on, and have an alarm set to wake you for the feeds.

I found it helpful to use the hot vaporizer to warm the formula up....I would place the dish over the steam hole and let it warm the milk and then pour it in the bottle to use. Be careful not to burn yourself because the steam is **VERY HOT!!** Stir the formula and test it frequently because it will warm quickly, and you **DON'T** want the steam to make the formula **HOT!!** Don't use the microwave as it destroys nutrients in the formula.

You might find that you will have to somewhat supplement with the formula even past the day that you see the puppy nursing well on his own. Mom may take a lot longer for her milk to come in due to not enough draw from the pup(s) in the first few days. So you may need to top the puppies up a few times a day even once they have been nursing vigorously from

mom. Let them nurse as long from mom as possible, and then offer the bottle afterwards. Puppies that are born more than a week premature (ie 10 or 11 days) can survive, but they will be about a week behind in development, so you will not see them open their eyes until they are 3 weeks old or a tad older, and the ears won't open until almost 4 weeks of age. The teeth will come in around 4 weeks of age as well. This is normal.

Watch for anything amiss, such as gurgling/sniffing/sneezing, which could be signs of either an infection of the mucosa in the nose, or possible pneumonia. Also monitor your bitch, as she could get metritis (pyometria). It may be prudent to give her strong raspberry leaf tea twice daily for a full month from the day she whelps. This can help prevent metritis.

I found using Australian Bush Flower Essences VERY helpful for both the pup and bitch. I used ABFE emergency essence for the first week, as well as Weak Puppy essence (this must be mixed by you or special order and the ABFEs that make it up are Bottlebrush, Bush Fuchsia, Pink Mulla Mulla & Sundew), and Dynamus Essence (a premade Combo Essence available already made) for the first month. For more information about ABFEs see <http://www.ausflowers.com.au/cms/details.asp?NewsID=2> You can find distributors WORLD WIDE on that web site.

I also gave the bitch Dynamus Essence to help normalize her hormones (which were all over the place). She did get metritis and I caught it right away. Her surviving puppy did start getting the sniffles/sneezing and I immediately started him back on the ABFE emergency for 3 doses, the weak puppy & Dynamus, plus a couple of drops of astragalus tincture and a couple of drops of oregon grape tincture, both put in a couple milliliters of water. I gave him ½ ml of that twice a day for a day and really within hours he was no longer sneezing mucous or sniffing. He's been fine ever since. His name is Leo, he was born July 1<sup>st</sup>, 11 days

premature, and he is doing well now at almost a month old.

I hope this information helps anyone who has the misfortune of going through this, but trust me, it's worth all the work, because the reward is a puppy or puppies who have a bond with you, like no other. The bitch knows too, that you helped her and her babies. They don't have to go through that hellish anguish of looking for babies that did not survive.....

Best of Luck

If you need any more information or support during a premature birth, please email me, Roberta Jamieson at [lepusreg@gmail.com](mailto:lepusreg@gmail.com)

Leo about 12 hours old (150 grams):





Leo, 4 weeks old, 1.110 kgs



Leo Racing – 18 months old.