

Whelp to Wean

Table of Contents

Acknowledgments	4
Chapter 1 - PREGNANT DOG CARE.....	5
HOUSING.....	5
FEEDING	5
VACCINES AND MEDICATIONS	5
X-RAYS	6
TEMPERATURE MONITORING	6
PLAN ON A NIGHTTIME WHELP	6
Chapter 2 - WHELPING	7
BASIC RULES OF HOUSING	7
Sanitizing.....	7
Quarantine.....	7
Exceptions to Quarantine	7
Puppy Proofing	8
HOUSING DURING & AFTER DELIVERY	8
General Discussion	8
Housing Options	8
Whelping Box Options	9
Bedding	11
Temperature Control	11
LABOR AND DELIVERY	12
Whelping Supplies	12
Whelping Phases	12
The Whelping Pause	13
Eclampsia, Calcium Deficiency and Dosing	13
The Unsettled Mom (aka Meanie Moms)	15
After Whelping Expectations	15
Got Milk?	16
Newborn Monitoring	16
Chapter 3 - NEWBORN PUPPY CRITICAL CARE FACTORS	18
HYPOXIA – Breathing	18
What to look for:	18

What to do:.....	18
HYPOTHERMIA – Are they warm enough?	19
Why don't you feed a cold puppy?.....	19
How do you know if your puppy is too cold?	19
How to keep them warm	20
HYPOGLYCEMIA – Is blood sugar too low?	20
Symptoms.....	21
Treatment	21
Frequency of Treatment.....	21
Maintenance Mode	21
HYDRATION – Are they dehydrated?	22
Causes and Symptoms.....	22
Testing Methods	22
Treatment	22
Infection.....	23
Symptoms & Treatments.....	23
Chapter 4 - HOUSING - PUPPIES	24
HOUSING BOTTLE BABIES – birth to 3 weeks	24
Housing Options	24
Bedding	25
Temperature Control	25
HOUSING PUPPIES – 3 WEEKS AND BEYOND	25
General Discussion	25
Housing Options	26
Bedding & Zones	26
Temperature Control	26
Chapter 5 - FEEDING	27
FEEDING BOTTLE BABIES – BIRTH TO 3 WEEKS	27
How often to feed?.....	27
What to feed?	27
Feeding Tool Options.....	28
How do I feed them?.....	29
How much?.....	33
Tracking Feeding and Growth.....	34
FEEDING PUPPIES – 3 WEEKS AND BEYOND	34
Weaning.....	34

Puppies weaned from a mom	35
Bottle babies weaned from a bottle	35
Mastitis.....	37
Causes & Symptoms	37
Treatment	37
Chapter 6 - PEEING AND POOPING	38
GENERAL DISCUSSION	38
STIMULATION.....	38
CONSTIPATION & GAS.....	38
DIARRHEA	39
Chapter 7 - HEALTH AND WELLNESS.....	40
PUPPY – DEVELOPMENT STAGES	40
DISEASE PREVENTION - Puppies.....	40
Vaccines -DHPP	40
Routine Worming.....	40
TREATMENT SCHEDULE AND DOSAGE	41
Parvo.....	41
Roundworms	41
Tapeworms, Hooks, Rounds, Whips	41
Giardia.....	41
Coccidia	41
Appendix A: Whelping Supplies	43
Appendix B: Homemade Puppy Formula Recipe	44
Appendix C: Medications and Dosing.....	45

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Chapter 1 - PREGNANT DOG CARE

HOUSING

In short, your pregnant dog doesn't need any special accommodation until she begins to deliver her puppies. I do encourage you to have the mom-to-be spend time in her whelping area and box, especially if you have a few days before labor kicks in. This can make her feel comfortable and safe in this space so when the time comes she is more likely to want to go and STAY there.

FEEDING

Ensure mom is well fed and hydrated. Provide unlimited access to a high-quality puppy or an active dog food. Both are high in calories and tend to be more nutritious than regular dog food. I have used Purina Pro Plan Sporting Dog 30/20 for years for both mothers and their puppies with good results. Probiotics, such as FortaFlora or Benebac can be a good addition as well.

VACCINES AND MEDICATIONS

There are risks with vaccinating and treating during pregnancy. Not so much for mom but in some cases, vaccines may harm her unborn puppies. For instance, Rabies is safe but most vets advise against vaccinating for Distemper and Parvo during pregnancy.

Figure 1: Vax & Treatment Schedule

Pregnant	Days	Vax/Treatment	Notes
	1-40	Rabies, Pyrantel	Rabies vax and Pyrantel at this stage is safe
	40	Panacur	Panacur may be used for worming between Day 40 and delivery
	57-63		Normal gestation period
Whelping	Week	Vax/Treatment	
	1-5 wk	DHPP	Mom may be vaccinated after whelping but suggest waiting until she is fully recovered from delivery. A few days at least.
		Amoxicillin	May be used for infections (moms and babies) and to treat Lyme disease in moms that are symptomatic. Doxycycline IS NOT recommended for lactating mothers.
		Panacur, Pyrantel	Safe during lactation. Panacur for puppies over 5 weeks. Pyrantel for puppies over 2 weeks
		Metronidazole	Check with your vet before using while mom is nursing. NOT recommended for puppies normally.
Weaning	Week	Vax/Treatment	
	6-8	All	Post-weaning mother dogs may receive all vaccines and medications as normally given with the exception of Doxy if still nursing puppies



Some medications, such as Panacur are safe and are recommended be given during the last few weeks of pregnancy and through whelping to help protect puppies from the parasites that may pass to them both in utero and through milk.

Figure 1 provides some guidance on when it is safe to vaccinate and medicate while pregnant, lactating and weaning. Consult your vet for additional information if in doubt.

See Appendix C for more information.

X-RAYS

As a general practice I do not get X-rays in advance of whelping. In part because other than getting an idea about how many puppies are going to be born, most vets are not going to be able to accurately estimate a whelping time frame. And for the cost of an x-ray, it doesn't seem worth it.

However, I do believe there can be benefits to an x-ray for small dogs. Specifically concern that a small female could be carrying puppies too large for a safe delivery. Since we rarely have any idea about the father of the puppies and we know it is possible for a large breed male to breed with a small breed female, I do feel it is worth the cost if feasible. While it may not be possible to tell how far along a dog is, comparison between skull size and the pelvis of the female should be possible by a practiced vet. This may allow for decisions or plans to be made for a C Section if the puppies appear too large for natural delivery.

TEMPERATURE MONITORING

A drop in body temperature in a pregnant dog is a common sign that labor is approaching because as a mom nears birthing, progesterone levels decline, which triggers a decrease in body temperature. Early contractions may also contribute to a temperature drop. A pregnant dog's normal body temperature is between 100.5°F and 102.5°F. It is thought that a drop of 1 to 3°F is considered significant and could indicate that labor is within 24-48 hours. Although the due date may be difficult to guess, you can begin charting her temperature well before delivery. It is suggested that you should do so both morning and at night. A simple table like the one below can be helpful. Note the RED temps that can alert you to when labor may be approaching.

CYCLE DAY	57	58	59	60	61	62	63	64
	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7	DAY 8
	AM / PM	AM / PM	AM / PM	AM / PM	AM / PM	AM / PM	AM / PM	AM / PM
101.4								
101.2								
101.0								
100.8								
100.6								
100.4								
100.2								
100.0								
99.8								
99.6								
99.4								
99.2								
99.0								
98.8								
98.6								
98.4								
98.2								
98.0								
97.8								
97.6								
97.4								

PLAN ON A NIGHTTIME WHELP

While not always the case, plan for nighttime whelping. Not only is it my typical experience, but this behavior is deeply rooted in a dog's evolutionary history. In the wild, birthing in a secluded, quiet location during the night provided greater protection from predators and a safer environment for vulnerable newborns. Also, there is some belief that certain hormones influencing labor may be more active during the evening and night hours.

Chapter 2 - WHELPING

BASIC RULES OF HOUSING

While there are basic requirements for all situations, housing needs can vary based on the size of the pregnant dog (small, medium and large dogs), size of puppies, and the overall size of the litter.

The following are rules that apply to all regardless of whether you have a pregnant dog, newly whelped litter or orphan bottle babies.

Sanitizing

The foster space must be easy to sanitize.

- No carpet, poorly sealed/gapped flooring that could hold and harbor germs, upholstered furniture, rugs, or other porous surfaces that can't be properly disinfected.
- All bedding, blankets, toys, bowls, etc. should be either machine washable or made of a non-porous material that can be cleaned with a bleach solution.
- Walls, cages, crates, boxes, whelping boxes, playpens, etc. that are used for containment should also be able to be sanitized.

Quarantine

NOTE: Parvo will be the main focus of my discussion and recommendations here because of the deadly nature of this virus and the challenges of treating it.

Your fosters should stay quarantined until they are fully vaccinated. For adults that's usually after one vaccination. For puppies, that's after at least three or four shots and over 16 weeks of age. Quarantine should include the following considerations:

- They should be kept separated from other animals, people, and things that may have been exposed. In particular, to Parvo.
- They should be isolated to a space that protects them from casual contact. Such as the nose of a neighbor dog through fencing, hands reaching over fence or into a kennel by well meaning strangers, etc.
- Keep in mind that people and the mother dog can carry Parvo into the quarantined area on their feet, hands, clothing, etc.
- Traffic into the quarantine area should be done with care. Being aware of where you or others entering the space have walked. It is wise to keep a spare pair of slippers or socks just outside the housing area that you wear only in this space.

Exceptions to Quarantine

- If you have no history of Parvo in and around your home, it may be safe to allow the mother dog and puppies to be loose throughout your house. Recommend a good mopping with a bleach solution (1 part bleach to 32 parts water).
- If you know that you've had no Parvo in a fenced yard that is not accessible by other animals, that too may be safe. But use extreme caution until puppies have received at least two vaccines.
- Hard surfaces outside such as pavement, sidewalks, and blacktop that are less porous and are exposed to the sun are safer for puppy traffic. As heat and sun (24 hours of exposure) deactivates Parvo virus. It can be safe to allow puppies outside in these areas in a playpen or kennel.
- After puppies have received at least three vaccines and are 16 weeks old, it is safe for them to be in public places, on the grass and dirt and even be around other dogs.

Puppy Proofing

Ensure that you have properly puppy-proofed all areas that puppies will have access to. Especially after 4 or 5 weeks of age when puppies become mobile and begin using their mouths to explore the world. Items such as kids' toys, plants, power cords, or other such items all can be a danger if within reach of your puppies. Any item that is left out is "fair game" to a puppy.

HOUSING DURING & AFTER DELIVERY

General Discussion

First the most important consideration before actual physical housing is providing a quiet, private space for your pregnant dog and/or new mother. Whether it is an unused bathroom, laundry room, a box in a bedroom with the door closed, a kennel or playpen in your garage or basement, the important thing for having a happy mom is that she has her own space.

Preferably a private space separated from other animals, people and activity in your home. If a pregnant dog feels unsafe or stressed in her environment, she may even try to suppress her labor and delay delivery until she feels she is in a safe place.

Quiet and private are the ideal qualities of good housing. If you can't offer her an isolated space, try to provide at least visual privacy, such as hanging blankets or visual barriers around her area. Blankets can be hung over a kennel or crate and secured with clothes pins, chip clips, or paper binder clips. Blankets over the kennel or crate is better than being out in the open.

NOTE: Do not hang blankets inside of a crate or kennel. The mother dog may, in her nesting pull them down and create an area where puppies may get trapped and/or hurt.

Keep in mind your home is always going to be less stressful than a shelter so don't let not having the perfect space available stop you from fostering a pregnant dog.

Housing Options

Actual housing can vary depending on your space and home. It also can vary depending on the size of the mother dog and impending litter. But having something to contain the puppies once born and as they grow over at least the first few weeks is important. Partly for their safety and to contain the mess they will make.

Ideally a whelping box works great to contain the litter for the first few weeks. More on whelping boxes in a moment. I use large 5x10 kennels with a whelping box filling half of that kennel for large dogs in my garage.

For small or toy breed mothers, you don't need much space at all and in fact, not only is it unnecessary but not optimal. During the first several weeks you want mom to be confined with their puppies. As such you can use a small playpen in a spare bedroom or bathroom. A basement, laundry room, etc. would also work well as long as they aren't heavily trafficked. Playpens work well for smaller dogs, most can be modified to be smaller or expanded as needed and are available in variable heights.

The whelping container will serve as the home for your mom and litter hopefully for the first 3 weeks or more. Of course, as often is the case, this will depend on the size of your puppies and how many there are. At some point, usually around 3 weeks, I may need to remove the pig rails (see Figure 5) to provide more space IF I feel confident that they were not at risk of being squished into a corner or side of the box by mom. Also puppies

progress at different rates and while some puppies will barely be up on their legs and walking at 3 weeks, others may be trying to crawl out of the box. See [Puppies – 3 weeks and beyond](#) below.

Whelping Box Options

The nesting or whelping area should be large enough for mom to comfortably lay to nurse and have sides high enough to prevent young puppies from escaping. At the same time you want sides low enough for mom to comfortably get in and out. She won't want to go to the bathroom inside the area where her puppies are, so you need to provide her the ability to get out for bathroom breaks.

This can be a simple plastic kiddie pool (Figure 1) or specifically designed whelping box (Figure 2). Raised garden planters like Figure 3 can also serve as great whelping boxes and for smaller dogs, a plastic underbed storage bin, Figure 4, can work very well too.



Figure 2: Kiddie Pool



Figure 3 - EzWhelp Whelping Box



Figure 4: Planter



Figure 5: Storage Bin

There are pros and cons to each container but all are options I've used successfully. All are normally available through local resources or online, can be cleaned and bleached between litters and are fairly durable.

Kiddie pool (Figure 2):

Pros: Inexpensive, lightweight and actually can be found in various sizes from small to quite large anywhere from Dollar General to Walmart.

Cons: Not the easiest to store or transport. They can crack and break over time. The biggest con though is that they don't allow for a pig rail. A pig rail is literally a rail around the inside of the container to protect puppies from being accidentally stuck against the wall and smothered by the mother. These rails are installed just above the floor of the whelping box and create a safe space beneath the mother where the pups can retreat. See Figure 6.

Whelping Box (Figure 3):

Pros: These boxes are very durable, can be taken apart and stored easily, most can be made into various sizes and shapes, and most also come with pig rails to protect puppies.

Cons: Expensive (From \$100 to \$400 depending on manufacturer and size) and they're only available online. No local source.



Figure 6: EZWhelp box with pig rails

Garden Planter (Figure 4):

Pros: Also durable, are less expensive (\$70ish) than specialized whelping boxes, are fairly lightweight and can be disassembled for cleaning and storage. You can sometimes find them at local hardware and big box stores. Available via Amazon.

Cons: While more readily available than manufactured boxes, with the cost of the planter (\$70ish) and the need to buy and build your own pig rails, Figures 7 & 8, the cost is about the same as the less expensive manufactured boxes.



Figure 7: Pig rails made from PVC pipe



Figure 8: Pig rails in a garden box

Storage Bin or Tub (Figure 5):

Pros: Inexpensive, readily available, easy to store, and clean. Some variations in size and for toy/small dogs, they are pretty durable.

Cons: No pig rail with these boxes but could be made easily enough and for the small size, likely very affordable.

Bedding

While mom and babies will need much the same bedding as I described already for newborn puppies, the fact that your foster is going to give birth in the box changes suggestions a little. At least initially.

During whelping, DO NOT be concerned about providing comfortable bedding! It's going to be messed up. Either because mom is going to nest which will entail pacing, scratching and digging at it. Or because of the fluids and mess that will be made during the actual birthing process.

A large washable potty pad, a fitted sheet that I put under the sides of my whelping box to attempt to hold it place, large disposable potty pads, or a single blanket that I clip to the side of the whelping box or pool are all good options. Worth a try but moms can be relentless in their destruction or creation of their nest so don't be frustrated if your bed is quickly unmade.

Once the puppies are all born, you'll want to try and get clean bedding down underneath mom and babies. At a minimum I want to rid the box of wet bedding. Replacing with a single blanket or large washable potty pad are preferred. Nothing that can get easily bunched up or that a puppy can get tangled in.

Temperature Control

Providing a warm environment for newborn puppies who, are unable to regulate their body temperature from the time they are born until around 3 weeks of age, is crucial. The difference with having a mom and a litter is that mom will help to provide warmth to the puppies. But I still try to keep the room or area as warm as possible and always put a heating pad in one area of the whelping container underneath the bedding.

If your floor under your container is cold, you might put flattened cardboard boxes underneath it for insulation from the cold. Also the egg carton style of foam mattress toppers can also be an excellent foundation under your bedding. They work better than blankets or tarps for this problem.

See **Hypothermia** for more information on this very important part of bottle baby care.

LABOR AND DELIVERY

Whelping Supplies

At a minimum have on hand the following:

- Calcium
- Cotton towels or hand towels
- Heating pad
- Karo or similar source of sugar
- Suction bulb
- Scissors

See Appendix A for a comprehensive list of supplies and why you may need them.

Whelping Phases

1. Approximately 3 to 7 days prior to whelping, behaviors may begin to vary.
 - a. May experience first signs of nesting, anxiety, digging, panting and unusual tiredness.
 - b. May have small contractions, like Braxton Hicks type contractions.
2. Within 24 hours of whelping she may not be interested in eating or eat less than normal.
3. Within 12 hours of whelping her puppies, she begins real contractions.
 - a. May seek a quiet space or become clingy.
 - b. Pay attention to her now as you don't want her to go off to whelp on her own in some unplanned location.
4. This first stage of labor can last hours.
 - a. Cervix will dilate. You should notice swelling and possibly even a little water bubble to protrude from her vagina. Don't break it.
 - i. This bubble is the outer amniotic sac of a puppy nearest vagina. May be clear or greenish – both colors normal. This confirms dilation.

NOTE: Green fluids are common and normal. Mustard yellow is not normal.

 - ii. You need not do anything at this time. All normal.
 - iii. She won't be pushing at this stage. Bubble may stay out or go back in.
5. Once she is completely dilated, she will begin hard contractions. Pushing puppies from the uterine horn into the birth canal.
 - a. This however can take hours.
 - b. She may pace or sleep or have short little pushes.
6. Pushing will intensify. May be a couple of pushes and arched tail and puppy delivery. Or pushing can take an hour or more.
 - a. If pushing takes a long time, you can offer her water or ice cream to help keep her energy up and her hydrated.

- b. She may twist around towards her vagina and begin licking even before the puppy is presented.
7. Whether you allow mom to chew thru the umbilical cord or you assist by clamping and cutting the cord (you can tie off with dental floss) is a personal choice.

The Whelping Pause

- It is not unusual for a mother dog to have one or more puppies and then seems to stop contracting. This is completely natural. It allows her a chance to rest and for the other puppies to move into the birthing canal. This is not an emergency.
- The cessation of contractions can last hours. As long as the mother is not pushing and straining but simply resting, there is nothing to be concerned over.
- She may eat, drink, clean up all her puppies and herself, nurse the puppies, potty, and sleep. Feel free to offer her food, ice cream, or water. Anything she might show interest in.
- If she seems comfortable, give her the time to progress as nature tells her.
- Only if she is whining, pushing, straining, etc. for an hour without results is it necessary to get to your vet for help.

Eclampsia, Calcium Deficiency and Dosing

Eclampsia

First know that Canine Eclampsia is not the same as human Pre-Eclampsia.

Eclampsia, originally called "milk fever" as it associated with the production of milk and the cause is either a shortage of calcium or the mechanisms in her body that work to release calcium from her bones where calcium is stored no longer function properly.

Do not give any extra calcium during pregnancy. If needed, only during labor and/or after delivery of her puppies. While there can be some benefit to calcium during labor to help move contractions along, that is not eclampsia and is not the urgent reason to give calcium during whelping.

Eclampsia can occur at any time during nursing, but it is most likely to occur during the first 3 weeks of lactation, which begins within minutes after birth. Eclampsia occurs most commonly in small dogs with large litters, but it can occur in ANY dog after whelping.

Symptoms

The onset of symptoms can be rapid and death can following an hour or so. So do not delay treatment.

- Shows little or no interest in her puppies.
- May initially be restless and pacing. She will eventually reach a point where she can no longer walk. She may stagger or drag her feet and legs. And eventually she may be unable to walk or stand at all
- Panting constantly and profusely
- Run a high temperature and will feel hot to the touch.
- She may go into shock and if so her temperature will drop below normal.
- Facial muscle twitching

Treatment

The treatment is calcium and you can begin treatment as soon as you notice and verify the symptoms. Give calcium by mouth in dosages as described below. The dog is not likely going to willingly eat anything offered so you will need to either force feed by placing it on her tongue or in her mouth, closing her mouth and stroking her throat. If using Tums, you can dilute in water and put into a syringe.

Supplementing calcium orally and giving more at the first sign of restlessness can help to prevent possibly eclampsia. And it is easier to prevent than treating once full blown.

Calcium Dosage

If you see symptoms as described above, you should give the mother a dose of calcium every 30 to 60 minutes until the symptoms abate. Depending on the size of your mother, each dose should be:

Calcium Dosage

- Small Breeds - 600 - 800mg of oral calcium - each dose
- Large Breeds - 1000 - 2000mg - each dose
- Giant Breeds – 2000 mgs - each dose

Even after the symptoms stop, you should continue to supplement for the duration of her nursing to prevent its possible return. The dose will essentially be the same but with the following changes.

- She'll receive the dose for her size for each puppy in her litter over the course of the day.
- So if you have a large breed mom (50 pounds or more) who has 8 puppies. She'll need 8000 mg of calcium per day.
- Assuming you feed her 4 times per day, she will get 2000 mg each feeding.
- Over the weeks of her nursing, you'll slowly decrease this down to zero.

Sources of Calcium

- Calsoorb
- DocRoy's Healthy Bones
- OralCal Plus Breeder's Edge
- Tums (dissolved in water and given with a syringe)
- Calcium Citrate

Calcium Deficiency

While it is not always known why it occurs, some mothers will become calcium deficient during and after whelping. The results can be behaviors that are not simply bothersome but dangerous. Symptoms may include:

- Anxiousness; moms constantly up and down, unable to relax their bodies
- Not allowing nursing because of extreme anxiety
- Laying on their tummies instead of their sides, preventing babies from eating
- Overprotectiveness towards you or her puppies. To the point of killing and even eating their babies

Calcium supplementation is necessary at the first signs of the above behaviors and as with eclampsia, daily through weaning. You should continue calcium while the mother is nursing and slowly wean the amount down over time until she stops feeding her puppies.

The Unsettled Mom (aka Meanie Moms)

While struggling with the best title of this section, the point of it is to educate people to the realities of caring for moms and newborns. And one unpleasant reality is that a mother may kill one or more of her puppies. We often never know why. It could be the result of calcium deficiency or eclampsia as described earlier. Or something else.

Whatever the cause, it must be taken seriously for the benefit of mom and puppies. Calcium can help head those issues off.

You should be especially vigilant in the first few hours and days after whelping to the mother's attitude towards her puppies. Beyond the potential of an accidental killing where she might step on, lie on or smother a puppy, there are other reasons to be watchful that include:

- It can happen simply as a result of the mother feeling unsettled with her environment and/or new puppies. The result of stress or anxiety.
- A mother may also act out towards her puppies because she may not recognize them as her own. This is more common but not exclusive with C Section deliveries.
- While less emergent, she may also totally ignore her puppies and not provide necessary care willingly. While she may not be acting ugly towards them, she may demonstrate a disinterest in cleaning and caring for them including letting them nurse.
- Last but not least, there are instances where the death of a puppy is a deliberate act that may occur because the mother senses a puppy is sick, disabled or injured. Sufficient experience has taught me that mothers know things we cannot. In even a domesticated mom's mind, a weaker puppy may prove to be a risk to her entire litter. While obviously not living in the wild, this behavior is still an inherent instinct in mother dogs.

During these early days, you will need to stay close by or have a baby cam trained on the mom so you may observe how she is responding to and handling her puppies.

NOTE: If she is trying to harm a puppy, you must remove the puppy from mom and only allow it to be with her when you are present and supervising. You will need to bottle raise them until they are older.

In all these cases, I recommend supplementing with calcium as described for preventing eclampsia. With the same sense of urgency and dosing during the episodes of concerning behavior and then through weaning.

After Whelping Expectations

Just some other things to expect post-whelp.

- Some moms will not eat for a few days after they deliver. Others will eat during delivery. Definitely encourage her to drink.
- Expect to see some very nasty poop from mom when she does go after delivering her puppies.
- Moms will have discharge for days if not weeks after delivering her puppies. It can be stringy, bloody and dark. I've had moms have such discharge as long as 6 weeks after delivering their puppies.
- Also expect that she may not want to go to the bathroom for a day or two after delivery. She may not want to leave her litter but also will not want to defecate in the area around her puppies. This may require taking her outside or away from the whelping area, even if it means forcing her outside to use the bathroom if she hasn't gone for 48 hours.

NOTE: Keep in mind she might act like she needs to go to the bathroom while she is delivering her puppies. If you elect to let her go out, please do so on leash and take a towel. It is not unusual that the act of using the bathroom can turn into a puppy being born.

Got Milk?

Hopefully your mother has plenty of milk or will within a few days. But sometimes moms do not and need help. Both with encouraging their milk to come in and also in feeding her puppies until she is able.

Puppies sucking will be the best thing to help bring mom's milk down. Even if it is nonproductive for them, it isn't in vain. Their suckling action stimulates the release of a hormone called oxytocin in the mother dog's body, which triggers the "milk let-down" reflex, causing the milk to flow readily from her mammary glands.

There are other things you can do to help:

- Make sure your mother dog is eating plenty of a quality food and getting plenty of water. If she is not eating well, encourage her by adding canned food to her food or if not drinking well you might offer her some low sodium beef or chicken broth.
- Fenugreek capsules, available at drug stores or online. 2-3 capsules, 3-4x a day sprinkled over your mother's food.
- There are Mother's Puddings that are also recommended and recipes available online.

While you await her milk to come in, make sure you are supplementing with formula focusing on the smallest puppies in the litter or those that appear to feel less full.

If mom has plenty of milk, you'll need to do virtually nothing for them except a daily touch test and take good care of mom. You should expect that with sufficient milk the puppies may nurse for 45 minutes at a time or longer. Don't be concerned if it seems that the puppies are sleeping all the time. In the first week, puppies should sleep about 90% of the time and eat the remaining 10%. Enjoy this lull in the action.

Newborn Monitoring

During the first week to 10 days I make it a point to touch every puppy every day to check and swab cords, and to feel for good body mass, hydration and to get a look at their tummies to see if they feel and look full. Otherwise, my handling of them is minimal.

Daily Newborn Check

- Body mass and weight gain
- Umbilical cords – To minimize potential of infections, swab with a simple antiseptic every day until cord dries and falls off
- Bellies and feet for discoloration (see Infections below)
- Temperature
- Hydration
- Discharge from nose
- Listen to lungs – do they sound clear or crunchy or congested

Supplies to keep handy

- Thermometer

- Scales
- Heating pad or other heat source
- Karo or other sugar source
- Bottle and formula
- Feeding Tubes
- Betadine or iodine - antiseptic
- Neosporin
- Fluids/syringe



Chapter 3 - NEWBORN PUPPY CRITICAL CARE FACTORS

The following are the most critical factors that you need to be on alert for after puppies are born and essentially for the first several weeks of life. Those weeks when they are most vulnerable.

1. Hypoxia – breathing
2. Hypothermia – body heat
3. Hypoglycemia – blood sugar levels
4. Hydration
5. Infection

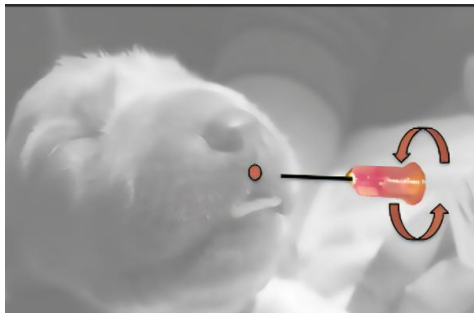
HYPOXIA – BREATHING

What to look for:

- Not breathing or labored breathing
- Pale gums and/or flat/grey tongue
- Low activity and mobility – just too quiet

What to do:

1. Stimulation through rubbing
 - a. Vigorously rubbing back, body and sides
 - b. Head down at a 45 degree angle
2. Acupuncture –inserting a small, fine gauge needle (typically a 25-gauge) into the nasal philtrum (the area between the nostrils), can stimulate breathing in a struggling puppy



3. Suctioning - using bulb
 - c. Bulb syringe nose and mouth
 - d. Squeeze bulb to expel air out BEFORE putting into puppy's mouth – this creates the suction needed to pull fluids out
 - e. Release bulb once deep inside of throat area to suction out fluids
 - f. Repeat for each nostril.
4. Suctioning using a DeLee mucus trap
5. Caffeine – a drop of coffee or 5 Hour Energy can help perk up a listless puppy
6. Accordion stretch
 - a. Always keep head pointed down at like a 45-degree angle
 - b. Stretch the puppy to its fullest length as it takes in air. Count to 4
 - c. Push the puppy's head toward the hind end to expel fluid in lungs.
 - d. Repeat the STRETCH – WAIT – PUSH sequence 14 to 16 times per minute.
 - e. WAIT – STOPPING PUSHING if after 3 or 4 pushes no fluid is forth coming.

- f. IF the fluid is being expelled, continue on until no more fluid is seen coming out of the puppy,
7. Oxygen

Do not give up trying to get a puppy breathing just because you aren't successful immediately. If their heart is beating, you can work on a puppy for as much as 30 minutes. Don't give up too soon. Also don't be too gentle. You can't kill a dead puppy so if you're going to lose them, being too rough isn't going to hurt them.

If things are hectic with other puppies, place the puppy in a container and tilt the container so that their head is below their butt. Puppy's head down the 'slide'. This position alone can help fluids drain and sometimes make them mad so that they cry and fuss. This can help clear airways.

NOTE: If their tongue is curled and pink, keep working. Flat and grey – not likely to survive.

NOTE: Puppies are born in breech position – butt first - commonly. In fact, 40% of the time. Puppies may start breathing while their head is still in the sac during birth, inhaling fluid into their lungs as the mother licks and stimulates the part of their body which is already out.

HYPOTHERMIA – ARE THEY WARM ENOUGH?

Attention to temperature control for newborn puppies is something that cannot be overstated. And the process begins right from the moment puppies are born.

Puppies will vary in size, shape, hair length, etc., but in general all puppies are unable to regulate their body temperature from the time they are born until around 3 weeks of age. And while the need for warmth seems obvious, it is critical to understand that this requirement goes beyond just them being physically comfortable.

Why don't you feed a cold puppy?

When a newborn puppy's body temperature falls below 93.2°F, it loses its ability to digest. Bottle-feeding under these circumstances means the milk would just sit in the stomach, potentially leading to bloating and the risk of false aspiration, which is dangerous. Which is why you NEVER FEED A COLD PUPPY!!!

A critical point to note is that the suckling reflex stops when their body temperature drops too low. But even if a puppy would be willing to suck on its own or if you were planning on tube feeding, it is not safe if the puppy's temperature is below 93.2°F.

When a puppy is cold, their body prioritizes staying warm over digestion. It takes energy to stay warm as well as to eat but a puppy will try to generate warmth. And so left to their own devices a cold puppy will not eat on their own. If forced to eat, they won't be able to properly absorb nutrients and in fact this may lead to hypothermia and dehydration.

How do you know if your puppy is too cold?

You'll need a thermometer. Using a human baby thermometer rectally with small puppies can seem scary but with a little Vaseline on the tip, inserted just to the metal tip of the thermometer, you can quickly get an accurate temperature with minimal discomfort to even the smallest puppy.

While obviously less accurate, the visible signs of temperature stress in puppies can include excessive whining, lethargy, or reluctance to feed. On the other hand, a comfortable litter of puppies will be quiet, sleep peacefully, and have a good appetite.

Normal Neonatal Temperatures

Week 1: 95 – 99 °F

Week 2 & 3: 97 – 100 °F

Week 4: 99 -101 °F

How to keep them warm

While in a litter of puppies with a mother they may be able to sustain proper body temperatures through contact with their littermates and their mother in normal home conditions, that may not always be the case. Orphan puppies will absolutely need outside help to stay warm.

If the puppy is very young and very cold, immediately wrap the puppy in a hand towel or blanket, leaving only the face exposed. Do NOT take the puppy out of the towel to adjust or check on it—this lets critical heat escape. Do this while you prepare other longer term means to warm them up.

The whelping box or nest where newborn puppies are kept should be heated at around 84 to 89°F. And as puppies grow older and as their ability to regulate their body temperature gradually improves, you may likewise gradually decrease the environmental temperature.

Obviously if you can maintain the heat of the room or space where the puppies are housed, that makes it easy. Using supplemental heat sources tends to be common practice. Such sources may include rice bags, warming discs, heating pads, radiant heaters and infrared or smart heat lamps.

NOTE: Keep in mind that puppies should always have the option to remove themselves from the heat if they wish. Specifically, the housing for the puppies should provide spaces void of direct contact with the heat.

Incubators are a great thing to invest in if you plan on regularly fostering young puppies (and kittens). They allow you to control the temperature of the environment more precisely. And most offer variations in temperature inside the box so that the puppy can move from warm to cooler spots.

Ideal environmental temperatures:

- Wk 1: 84 - 89° F - Humidity should be 55% +/- 10%.
- Wk 2 & 3: 80 ° F
- Wk 4: 69 - 75° F

HYPOGLYCEMIA – IS BLOOD SUGAR TOO LOW?

Young puppies (as well as toy breeds) do not have fully developed bodies to store and regulate blood sugar. Young puppies also use a great deal of energy doing everything. Staying warm. Eating. Moving. And as such they use up energy that depletes their blood sugar rapidly. Additionally, if they are cold, they also are using more energy and making them even more susceptible to hypoglycemia.

Symptoms

Without testing you may not know for sure. But with very young puppies you may see one or more of the following symptoms:

Hypoglycemia Symptoms

- Lethargy
- Labored breathing
- Pale gums or tongue
- Tremors, shivering or trembling
- Seizures
- Loss of appetite

Treatment

Even without obvious symptoms, treating with a source of quick sugar can be the difference between life and death of the puppy. And while there are specific products for animals like Nutracal, you may use other items that you likely have in your home.

Safe forms of sugar for puppies

- Karo syrup
- Honey
- Sugar or sugar water (1:1 ratio)
- Maple syrup
- NutraCal

Frequency of Treatment

If it is obvious that a puppy is crashing from low blood sugar and the puppy is warm enough, begin administering three drops of Karo syrup, honey or sugar water (1:1 ratio) orally every three minutes.

Treating a crash: 3 drops of Karo syrup, honey or sugar water (1:1 ratio) every 3 minutes.

Use a syringe if available or your finger to rub the sugar source on the puppy's gums or tongue.

It may take an hour or more for your puppy to come out of its crash and start to act normally again, so it is vital to keep at it. Know that even with perfect treatment, some puppies will not make it.

Maintenance Mode

If the puppy recovers from the crash but is weaker than normal or other puppies in the litter, continue to provide the sugar treatment before every feeding to ensure their systems are boosted. Especially if they are a small breed or smaller puppy. This routine maintenance every couple of hours can help avoid crashes in weaker puppies since they will use so much energy while eating.

NOTE: Sometimes you may notice a puppy shiver after eating. The process of digestion can temporarily alter their body temperature, causing a slight chill that manifests as shivering; this is usually normal, especially if the puppy is still young. This is also common in puppies during weaning when they are adjusting to a new diet.

HYDRATION – ARE THEY DEHYDRATED?

Causes and Symptoms

Dehydration can cause puppies to feel lethargic and disinterested in eating. It can also cause their urine to be clear when it should be pale yellow. Also their gums may be pale and tacky. A young puppy that has had diarrhea or been vomiting can easily become dehydrated. Being chilled can likewise cause dehydration.

Testing Methods

There are two methods for checking your puppy's hydration.

Skin Test

One method is to pull up the skin at the base of your puppy's neck. When you release the skin, it should "snap" back into place within 1-2 seconds. A delay or "doughy" feeling of the skin may suggest dehydration. Please note that this method can be less accurate for very young puppies whose skin elasticity is variable.

Gum Test

A more accurate method is to check your puppy's gums for color and moisture. A well-hydrated puppy's gums will be pink and moist to the touch. Pale gums or gums that feel dry or tacky to the touch suggest dehydration. You can also assess capillary refill time by pressing gently on the gums. The gums will initially turn pale and then return to normal in 1-2 seconds. If it takes longer than this for the color to return, this is a sign of poor blood circulation which suggests dehydration.

Treatment

Dehydration should be addressed quickly, especially with very young puppies through:

- Nursing
- Bottle feeding
- Tube feeding
- Fluids – SubQ or IV (1ml of fluids per ounce of puppy weight)
- Pedialyte and/or liver water

Bottle or Tube Feeding - If the puppy has been vomiting or having diarrhea that may be a reaction to formula or milk and they are dehydrated, substituting electrolytes (aka Pedialyte) for milk until those problems resolve will allow you to rehydrate them. Preferably children's unflavored Pedialyte. There are also dog or puppy versions of electrolyte available on the market. Breeder's Edge makes one called Puppy Lyte or you can make your own.

Homemade Pedialyte

- 1 Cup Water (boiled or distilled)
- 1 T. Salt
- 2-3 T. Sugar

You can bottle feed or tube feed electrolytes as you would formula and at similar amounts to their normal feeding volume. Again, 1 ml (cc) per puppy weight in ounces. See [FEEDING](#) below for more details.

SubQ Fluid Administration - If the puppy is not eating on its own, is not warm enough to be fed (DO NOT FEED A COLD PUPPY) or is so dehydrated that it needs immediate help, SubQ fluids is the quickest and safest way to rehydrate. You should only use Lactated Ringers or Saline Solution. For very young puppies, Saline is the recommendation but if you only have Ringers, that is certainly acceptable.

Fluids should be warm. Body temperature warm. You can warm them in the microwave, in hot water, or even with a heating pad. Normally for a young puppy, you do not need a drip bag to administer but rather can be given with a syringe. Drawing up the amount needed in a syringe and letting the syringe sit in hot water until warm is usually the easiest method.

The quantity to give is really based on the size of the puppy and the level of dehydration. I will normally start with a small amount, see how the puppy absorbs that and if needed, give more. If I have a 300 gram puppy, I will start with just 3 cc (ml) of fluids. Give between the shoulder blades creating a bubble of fluids under the skin and I recheck the puppy frequently (every 10 to 15 minutes) to see how much of the fluids have been absorbed. If the bubble is gone quickly, it indicates pretty serious dehydration and I immediately administer again.

INFECTION

Symptoms & Treatments

Umbilical infection – Symptoms would be red, warm, swelling but an infection may not even appear to be present. Recommend treating each and every newborn puppy's umbilical cord immediately after birth and each day until the cord dries and falls off. Swab the cord liberally and repeatedly for a few days until cord dries and falls off.

Here are the things that you can use to treat the cord.

- Hand sanitizers (if nothing else available)
- Betadine
- Iodine
- Alcohol
- Hibiclens (Over the counter - chlorhexidine Topical Antimicrobial)

Blue skin on belly, legs or feet can be a sign of infection or sepsis. Internal injury caused during whelping. In this instance, see your vet as soon as possible.

Pneumonia – Lungs will sound crackly or raspy. May see discharge from nose. Will need antibiotics (Clavamox) at a minimum and may benefit from humidifier, nebulizer treatments and/or oxygen. Again, see your vet as soon as possible. Watching closely for dehydration and keep especially warm.

Eye infections – Check eye areas (even before they open) for swelling or puffiness. You may even see puss from the corner of the eye when you apply a very gentle pressure. VERY GENTLY using warm compresses make small circular motions in one direction, then rewarm compress and go the other way. Do this until a tiny crack opens up where the puss can then drain from the small crack. Once no more puss is present, you'll need an eye ointment and antibiotics (likely Amoxi).

Chapter 4 - HOUSING - PUPPIES

If you have not done so, please read Whelping, [Basic Rules of Housing](#) .

HOUSING BOTTLE BABIES – BIRTH TO 3 WEEKS

Housing Options

Unless you're feeding a large number of puppies, you can normally keep puppies in containers that are not much larger than the puppies themselves. At least for the first few weeks. Small spaces are perfectly adequate for housing and often best to help keep puppies confined and warm.

Options for containment include but are not limited to a bathtub, plastic or rubber storage tub (Figure 8), a small dog cage or crate (Figure 9), a critter cage (Figure 11). Of course, an incubator is a wonderful tool to have but not everyone is going to invest in an incubator for fostering. But Figure 12 and 13 are two models that I've used and can recommend.



Figure 9: Storage Tub



Figure 10: Dog Cage



Figure 11: Critter Cage



Figure 12: Brinsea Incubator



Figure 13: Curadle Pet Brooder Incubator

Whatever you choose to use, it is important to consider whether or not it can:

- Safely keep the puppies contained. It needs to be sturdy enough, with sides high enough, and if using a wire crate or cage ensure that bars or holes are small enough that a puppy could not squeeze through.
- Be cleaned and sanitized. You will need to clean and bleach the container often. So it should be made of materials that will not absorb odors, germs and not be harmed by cleaning and bleach.
- Keep the puppies warm within container. Wire crates and cages can be used but keep in mind they do allow drafts and they don't hold in the heat like closed containers.

Convenience can be important if you are going to need to take the puppies with you. A bathtub is great, except they're not mobile. The same is true of incubators. While they aren't heavy, they are bulky and not so easy to transport as a plastic tubs or small crates that are easy to clean, inexpensive and mobile.

Bedding

While the tendency is to create a deep fluffy bed for your tiny babies, keep in mind that newborn puppies can get caught up in soft cloth or folds of material. They may find themselves entangled and unable to breathe. So keep it simple. A light soft fleece blanket or a folded potty pad works well.

Newborns also will urinate and poop in their bedding. Using materials that wick moisture is advisable to help avoid urine burns on bellies, legs and paws.

Temperature Control

More important than the container itself or even the bedding is the absolute necessity to provide a warm enough environment for newborn puppies who are unable to regulate their body temperature from the time they are born until around 3 weeks of age. This topic is discussed in detail in the previous section [Hypothermia](#) but in general you will need to provide a source of heat for newborns through at least the third week to help them maintain their body temperatures.

You should also provide a way for them to move away from the heat. A practical and safe method is to place a heating pad in one half of the bottom of the chosen container.

Heating pads can be purchased that do not have auto-shut off features. I recommend those otherwise you'll need to keep turning the pad back on every 2 hours.

HOUSING PUPPIES – 3 WEEKS AND BEYOND

General Discussion

By three weeks the puppies not only have opened their eyes, but they've begun moving about. Depending on whether they were bottle babies in a small tub or in a whelping box with mom, they may soon be outgrowing their first home and in need of a new one.

Unless you're using a container with high sides or have toy puppies you may soon need to add a playpen, kennel, gate, or a room that can hold the puppies inside. But while they are starting to become more mobile, they're still not ready for too much freedom.

The good news is at this age they have greater ability to maintain their body temperature, so temperature control is less important. You don't want them too cold or too hot but whatever you're comfortable in is probably good for them too.

Ideally environmental temperatures based on the age of the puppy are:

Wk 1:	84 - 89° F
Wk 2 & 3:	80 ° F
Wk 4:	69 - 75° F

Housing Options

- Small breed puppies may still be fine in a tub or baby pool for several more weeks. Possibly through weaning if they are tiny. You may find a small room with a baby gate a good option for 2 or 3 puppies and/or small breed puppies.
- A playpen, plastic or metal, set up preferably on a nonporous floor. A tarp, a piece of scrap linoleum (check with flooring stores for scraps), or playroom or garage floor matting that is water resistant can protect flooring.
- Metal kennels meant for outside use are great in a garage or a basement where space permits. They come in different sizes, and heights and some are easy to disassemble and store away. A great investment if you intend to foster long term.
- While puppies may be ready for more space, mom too may need more space soon. I install a divider that is high enough to keep puppies in but low enough to let mom out. I use ClosetMaid shelving cut down to size and use spring clips to attach to each side of the wire kennel.

Bedding & Zones

As puppies become stronger and more mobile, you can safely add more bedding if you want. Even small beds (they will likely chew them), blankets, toys, etc. They are less likely to get caught up in blankets and now have the strength and coordination to free themselves. I do avoid blankets with holes. Amazingly a puppy can somehow find a puppy head sized hole and get stuck in it very easily.

As the puppies develop, the use of paper potty pads can prove to be nothing but a chew toy and don't provide much traction for mobile puppies. While more expensive, washable puppy pads are a great addition to the tool kit. They usually come with a waterproof backing, can be bleached, provide more traction, and aren't easily destructible.

Around 4 or 5 weeks is the time you also should begin to create zones for them in their living quarters. Zones should be provided for:

- Food/water
- A potty area – puppy pads in that area
- Sleeping zone – with beds or extra blankets
- Play zone – where you can provide some safe toys



Temperature Control

Again, the temperature in their area can now be the same as your home and they should no longer need auxiliary warmth. But not too cold and not too warm. Just right.

Chapter 5 - FEEDING

While it may be your plan to care for only pregnant dogs and their puppies and don't plan on having to bottle feed or tube feed, please don't skip this section. The truth is that at some point you'll have a litter of puppies that, even with a mother, may need some help. Sometimes moms don't have enough milk initially. Or you have a large litter and maybe a smaller weaker puppy that can't fight their way to the front of the line and get a nipple as often as others. Supplemental feedings may be necessary. And while the information that follows around bottle babies is lengthy and detailed, it may prove useful to you in the future.

FEEDING BOTTLE BABIES – BIRTH TO 3 WEEKS

A reminder again that you are never to feed a cold puppy. Most puppies that are too cold are not going to suck but if you're tube feeding, they won't have a choice as to whether to consume milk or not. No puppy with a temperature below 93.2 should be fed.

Normal Neonatal Temperatures

Wk 1: 95 – 99 ° F

Wk 2 & 3: 97 – 100 ° F

Wk 4 - 99 - 101° F

How often to feed?

Puppies naturally eat small, frequent meals. Bottle babies will require round-the-clock feedings. Of course that includes through the night. As a rule, puppies should be fed on the following schedule.

Week 1: Every 2 to 3 hours

Week 2: Every 3 to 4 hours

Week 3: Every 4 to 6 hours

However, like all things puppy, there may be some variations to your feeding schedule.

- Small or weak puppies may need more frequent feedings than larger, healthier puppies
- I find some formulas to be richer and more filling than others. When I made homemade formula, (Myra Savant's formula recipe found in Appendix B) that formula was richer than canned or powdered on the market. As such, puppies on that formula did not want to eat as often.
- If a puppy over eats at one meal, they may not be hungry at the next scheduled one. Or may not eat as much as normal.

What to feed?

Formula options that I would recommend include:

- Dogzymes PuppyBac – Amazon (my preference)
- Breeders Edge Foster Care - Amazon
- Esbilac – Pet stores, Tractor Supply, PetSmart
- PetLac – Walmart, Tractor Supply, PetSmart
- PetAg Milk Replacer – Walmart
- Goatmilk – in an emergency and short term only

- Homemade – Myra Savant Harris recipe in Appendix B.

Carefully follow the directions for mixing and storing formula that are provided on the label of each. Unused formula once open, mixed or made should be kept refrigerated and discarded after 24 hours.

At 3 to 4 weeks old, you can usually begin to introduce them to formula at room temperature in a bowl. You may also try mixing formula with a quality canned puppy food blended into a smooth gruel.

Feeding Tool Options

- Bottle
 - Animal baby bottle – Pet stores, Tractor Supply, Walmart
 - Human baby bottle – Walmart, online, baby stores
- Tube
- Syringe
- Miracle Nipple on a syringe or bottle - online
- Eye dropper

Baby Bottle - My preference is a human baby bottle rather than a pet baby bottle because I don't feel that the shape or feeling of the nipples provided with the pet bottles resemble in any way a mother dog's nipples. I find that most puppies tend to latch more readily to a human bottle with a soft silicone nipple. My current favorite is a Comotomo with a SLOW FLOWING nipple. But I've used many others and you'll develop your own preference too over time and trial.

Small Animal Nurser Bottle – These bottles are readily available and can be useful for tiny breed puppies.



Figure 115: Comotomo baby bottle



Figure 16: Small Animal Nurser Bottle

Syringe – you may use a syringe to drop feed a newborn puppy in an emergency but keep in mind puppies need to suck and dropping even one drop into their mouths when not sucking could result in aspiration.

Syringe w/ a Miracle Nipple – If you're having trouble getting a puppy to latch you might try a syringe with a miracle nipple attached (you'll have to order these online) is a much better option than just a syringe. It does allow for some sucking and also for you to assist by SLOWLY pushing the syringe plunger to move milk into the baby's mouth while they suck.



Eye dropper – Only in a dire emergency when you have nothing else. Difficult to control the flow or amount dispensed.

Tube feeding – Tube feeding is the preference when either have many puppies to feed or having puppies that are neither strong enough or inclined to eat. Premature puppies should only be tube fed.

Tube feeding scares many people but truthfully, tube feeding is safer than any of the other options in terms of avoidance in aspiration. It also allows you to feed a puppy quickly and you can easily control the amount consumed. Tubes normally must be ordered online from vet supply stores and Amazon, and come in different sizes for different sized puppies. Don't rely on your vet in an emergency as most don't have them in stock in my area.

Premature puppies should always be tube fed as they do not have a suck/swallow reflex and aspiration is very likely with any bottle or device other than tubing.

This is an excellent video on tube feeding. <https://youtu.be/Z2sdSSmbDCw>

How do I feed them?

Detailed instructions are provided for bottle and tube feeding only.

Bottle Feeding

Prepping the Bottle

Keep in mind that the size of the hole in the nipple is very important. Baby bottle nipples already have a hole in them, and I only use slow flow nipples. When filled and turned upside down, the nipple should release a drop of formula one at a time very slowly and often will not release even a drop without a little pressure put on the bottle. Anything faster, is too fast.

If you use an animal bottle, you'll need to poke a hole by heating up a needle and inserting it into the nipple. You know that you have made the nipple opening just big enough if, when the bottle is held upside-down, the formula drips slowly from it. Too small an opening will make the puppies work too hard to get their formula, tiring them out before they've had enough to eat. Too large an opening will force too much formula into them, too quickly. This can cause a puppy to aspirate.

The bottle should require a light squeeze (simulating a puppy suckling) for milk to drip out.

Formula Prep

The formula should be fed at a temperature similar to the puppy's body temperature. The best way to warm the formula is by placing the bottle in a hot water bath or using a baby bottle warmer. If mixing formula from a powder, you may use warm water to make the formula. Microwaving of formula is not recommended but can be done in an emergency.

Test the formula temperature by squirting a few drops onto the inside of your wrist; it should feel warm but never hot. A puppy will tell you quickly if the formula is too cool or too hot by refusing to suckle.

Positioning the puppy for feeding

People (and puppies) may have different preferred feeding positions. Some people feed on a table or countertop while others feed on their laps. Puppies should be fed in a position that mimics how they would naturally be nursing from mom; all four feet pointed towards the ground and their heads level or tilted slightly

upward to the bottle. However, some puppies may prefer to nurse pushing up from their hind legs and their front feet up towards the bottle.



Regardless, puppies should be kept in a mostly horizontal position with feet towards the ground. **NEVER feed a puppy on its back like a human baby— this is dangerous!**

Some puppies will need little assistance other than you holding the bottle for them while others may need help getting started. They may need support for their head and encouragement with the bottle to get going. Holding the bottle in your right hand and the puppy in your left on a flat surface, clasp the puppy's head in the palm of your left hand with your forefinger on one side of the mouth and the thumb on the other.

You may apply a little pressure with those two fingers to open the puppy's mouth and place the tip of the nipple on their tongue. If they don't begin suckling, try petting them down the back; this replicates a mother dog grooming and can be an effective stimulant. Pull lightly on the bottle to encourage vigorous sucking or try moving the nipple back and forth on the puppy's tongue to get them started.

Always hold the bottle at a 45 degree angle. This keeps formula moving down their throats. Holding the bottle at too low of an angle makes it easier for the puppy to aspirate formula into their lungs. Go slowly and allow them to suck and swallow regularly. If they cough, gasp or choke immediately stop feeding, and burp them to clear their lungs.

NOTE: If you have a puppy that is interested in eating but does not seem to have a strong latch you can place your forefinger and thumb on either side of the puppy's open mouth and press in lightly when the nipple is inserted. Applying a soft pressure to increase the suction around both sides of the mouth can help the puppy create a better latch.

Burp after feeding by thumping softly on the babies back as you hold them in an upright position. You can also encourage a burp by holding their back legs and rearend in the palm of your hand and while holding the puppy upright, wiggle the puppies butt back and forth to loosen the stomach and create space for air to move upward and out of the lungs.

Problem Latching to Nipple

Things that may contribute to a poor latch

- May be too cold to eat. Check temp.
- May need to poop. Or even constipated.
- May be gassy or need burped.
- Formula is not the right temp. May be too cool or too hot
- Nipple is clogged

- Puppy may have begun sucking before you put the nipple positioned in the mouth and has actually sucked their tongue to the roof of their mouth. Stop and take a break and wait for puppy to relax and release their tongue

Tube feeding

Supplies:

- Feeding tube
- Syringe (3 to 10 ml)
- Sharpie
- Formula



Prepping the tube

You'll first need to measure and mark the tube for the size puppy you're feeding. To make certain you have the tube in the stomach, having a visible mark on the actual tube is essential. But keep in mind if you are feeding puppies for very long, a week or more, you'll need to remeasure the tube and adjust the mark as the puppy grows.

To mark the tube, lay the puppy on their side and lay the end of the tube along the puppy's abdomen down to the last rib as shown in Figure 12. That is where the stomach will be.



Figure 12 Measuring the tube

Lay the tube along the puppy's body, up the neck and to the mouth. With your right hand, hold the spot on the tube where it meets the mouth, mark there either with a Sharpie or a piece of tape. (Medical or surgical tape works best.)

This marking is the first key to ensuring you have the tube in the stomach and not in the lungs. Since the lungs are nearer to the front legs (almost directly behind the puppy's elbow), if you insert the tube into the puppy and it stops before the mark on the tube reaches the mouth, you very likely have the tube in the lungs.

An additional sign of having the tube in the proper location is that if the puppy can cry or squeal you are in the right place. You can pinch the puppy's paw or ear to test for a cry after you've inserted the tube.

NOTE: Weak puppies may not be able to react to the cry tests. Thus, the tube marking is key.

Prepping the formula and syringe

Warm formula using a bottle warmer, warm water bath, or mixing dry formula with warm water. Test the temperatures of the formula by shaking a few drops onto the inside of your wrist. It should feel warm, not hot. Close to your body temperature of 98° F.

Draw up the required volume of formula based on the weight of your puppy directly into the syringe.

Check for air in the syringe by holding it upright (plunger at the bottom, tip towards the sky) and remove any air by pushing the plunger until all air is gone. Now the syringe can be connected to the feeding tube and the plunger pressed until a small drop of feed comes out of the end of the tube.

Puppy Position and Feeding

- The puppy should be positioned horizontally either on a flat surface or your lap. I prefer to use a kitchen counter type height surface and place the puppy on a non-slippery surface by adding a potty pad, towel or blanket under the puppy's body.
- Similar to bottle feeding, you'll use your thumb and forefinger of one hand at the corners of the mouth to gently press to make the puppy open its mouth.
- Then with the other hand begin inserting the tube tip into the puppy's mouth. You may need to use the forefinger holding the puppy's mouth to help expand the jaw a little to allow you to more easily move the tube into their mouth.
- Try not to extend or bend the puppy's neck. But rather keeping it in a natural position as the tube tip is gently inserted into the mouth. If the puppy's neck is extended or flexed, it is much harder to place the tube correctly into the esophagus.



- The tube should glide easily from the mouth and down into the throat and esophagus. You may lightly wiggle the tube as you gently push it down until you reach either the mark or tape at the puppy's lips. Upon reaching the mark, you know you're in the correct place.

NOTE: If you're gliding the tube along the tongue, it's more likely to go into the trachea. Attempting to place the tube with the neck flexed will also make tracheal entry more likely.

- Once the tube is all the way down into the stomach and the marker is at the lips, you can now slide your forefinger and middle finger around the tube at the mark near the mouth to keep it securely in place. The puppy may be wiggly, so you will need to hold it firmly to keep it from slipping out.



- Failing to hold the tube in place will permit the tube to work its way back up the esophagus during feeding and risk the milk entering the lungs.
- Now is when you can do a pinch test to see if the puppy can cry or squeal if you're unsure about if you have the tube in the proper position.
- Squeeze the syringe plunger slowly. Around 1 ml. per every 10 seconds is a good rate.
- After the syringe is empty, leave the tubing and syringe in place for a couple of seconds before extracting it to avoid dripping formula from the tube when you pull it out.
- Bend or pinch the tubing during extraction to avoid any formula remaining in the tubing leaking out as you extract it.



- Burp your puppy. While you may have done an excellent job of clearing any air out of the syringe and the tubing prior to feeding, it is always recommended to burp the puppy after feeding. Upright just like a baby with light pats on the back.

How much?

The rule is 1cc per 1 oz. baby weight. If you're bottle feeding you will need to weigh your bottle before and after feeding to gauge how much your puppy has eaten. It is too hard to gauge the proper amount from the markings on the bottle. With tube feeding you know exactly how much your puppy is receiving.

I usually weigh the puppies every day for the first 2 weeks to help me adjust how much formula they should be getting.

Overfeeding bottle babies is as dangerous as underfeeding! Neonates are still developing, and their digestive systems can only process so much at a time based on their individual size. Refer to the Puppy Bottle Feeding and Stomach Capacity Chart from Maddie's Fund below for more information.

Puppy Weight (lbs, oz0	Puppy Weight (grams)	Amount of Formula Per Day (ml)	Amount Per Feeding (ml)	Feedings/Day Age Dependent
2 oz	57 g	13 ml	2 ml	6 to 12
4 oz	113 g	25 ml	5 ml	6 to 12
6 oz	170 g	38 ml	7 ml	6 to 12
8 oz	227 g	50 ml	9 ml	6 to 12
10 oz	284 g	63 ml	11 ml	6 to 12
12 oz	340 g	76 ml	14 ml	6 to 12
14 oz	397 g	88 ml	16 ml	6 to 12
16 oz (1lb)	454 g	101 ml	18 ml	6 to 12
2 lb	907 g	202 ml	36 ml	6 to 12
3 lb	1,361 g	302 ml	54 ml	6 to 12
4 lb	1,814 g	403 ml	73 ml	6 to 12
5 lb	2,268 g	504 ml	91 ml	6 to 12

Tracking Feeding and Growth



It is important to keep track of their feeding times, amounts, weights and also whether or not they pooped. It is important to track bowel movements, as there may be instances where knowing the last occurrence is necessary. Documenting this information in a log can be extremely helpful in catching potential issues early.

You'll need a scale. Food or postal scale are inexpensive and readily available at Walmart and online.

As a puppy grows, you'll need to up the amount they are fed. You should expect to see a puppy double their weight in the first 7 to 10 days. But you may also expect to see a weight loss in the first 24 hours of life. The loss should not be more than 4% of their total weight.

Below is a sample of a log that I use routinely to track all this information.

Page		Name			Name			Name		
		Collar Sex			Collar Sex			Collar Sex		
		Description			Description			Description		
Day	Time	Consumed	Poop	Wt	Consumed	Poop	Wt	Consumed	Poop	Wt
4/24/2022	2:30 a.m.	275		275	265		339	241		365
		265		285	241		357	224		382
		10		10	24		18	17		17

FEEDING PUPPIES – 3 WEEKS AND BEYOND

Weaning

Ideally, mother dogs will continue to nurse their babies past the third week of their lives but my experience has been that moms can be unpredictable in this area. I've had mothers stop letting puppies nurse as early as 3

weeks and others who were still willing to feed their puppies at 8 weeks. I've had puppies put their heads into their mother's food dish and begin eating at 3 weeks on their own accord and others who had to be coaxed to eat from the bowl at 6 weeks and beyond.

Regardless of whether they are eating exclusively from mom or a bowl, her contact with them is important for socialization and training. I always give moms the option to be with their puppies and also a means to get a break from them too.

As weaning approaches (and after) do not be alarmed by any of the following behaviors that mothers may exhibit, as they are perfectly normal.

- Spending less time nursing them
- Becomes more irritable when they try to nurse. May even growl or nip gently when they attempt to nurse
- Leaves her puppies for longer periods of time
- Actively encouraging them to eat solid food by regurgitating her own meal

Sorry to report that it is also common that once the puppies are eating food other than milk from their mother, that mom may cease to clean up after them. Not always, but again this certainly is common. Enjoy the help while it lasts.

Puppies weaned from a mom

At the point where the mother dog begins to display some resistance to feeding her puppies, I will begin offering the puppies a bowl. Normally, I will offer them either formula and canned puppy food made into a thick smooth gruel OR soaked kibble mixed with canned puppy food. Don't be alarmed though if puppies find their way into mom's food bowl and begin eating dry kibble as soon as their first teeth are breaking thru the gums at 3 or 4 weeks.

Once the puppies have the hang of the bowl and their teeth are fully through their gums, I will give them unlimited access to dry food at all times and offer wet food multiple times a day.

Bottle babies weaned from a bottle

Bottle babies can be a bit more difficult to get off the bottle since they have been raised so far in a very different environment than the norm. But just like babies with a mom, I will start offering them their formula in a dish as soon as they show the ability to stand up and balance sufficiently to find their way to the dish.

This is partly for me as I'm certainly ready to get out of the bottle baby feeding schedule after about 3 weeks. So selfishly I may push up weaning from the bottle sooner with such puppies than I do puppies with a mom.

Because they don't have a mom to copy as she eats from a bowl, I often have to show them how to get started.

- I'll do so by putting room temperature formula or formula mixed into a thin gruel with a soft canned puppy food. I like the Canine Mousse made by Royal Canine because it is very smooth and has a great deal of moisture in it. But any quality canned puppy food mixed in a blender with formula can be used. (room temperature) in a shallow small dish. Small to keep them from walking in it and from tipping it over
- Use care here to encourage the puppies to lick and not suck the mixture from the bowl. Normally, I will need to help them get interested in what is in the bowl. I do so by sticking a finger into the food and offering my finger to the puppy to lick it off. This may take a few times, even dabbing the formula on the lips of the puppy.

- Once they begin licking it off my finger, I will begin moving my finger closer and downward toward the dish of food. It may take several tries to get them to follow my finger with formula towards the dish but most will do so after just a few tries.
- When the puppy's mouth is near to the dish, I'll again offer the puppy my finger but leave it in the bowl and hope that puppy begins to lap at both my finger and the bowl of food beneath it. It's delightful when they do! All that being said, some will find the bowl and dig right in with little assistance.



If you have multiple puppies, you might use a muffin tin for their first bowl. It can work well to keep them from walking in their food, tipping it over and also helps to separate the puppies while eating.



Once they've gotten the hang of the bowl and are eating their formula readily from it, I'll start gradually adding more canned puppy food to the formula. As not to shock their digestive systems, I do so slowly over several days and also, I make sure that the canned puppy food is well blended until smooth and mixed well with the formula. Always served at room temperature.

After they have gotten very comfortable eating the gruel from the bowl, usually after 4 or 5 days, I will further reduce the formula in the canned food and begin adding soaked dry puppy kibble to the mix. Just as I do with puppies with mothers. Within a week or two, usually by 5 or 6 weeks, all puppies can be eating dry kibble exclusively.

NOTE: Eating may cause a puppy to shiver. Especially when you are changing their diet. This is not unusual. The act of digestion alters the body temperature in general and thus can cause the shiver, which is a mechanism they use to warm themselves. Also they may be fussy after they eat for a while after their stomach adjusts to eating a different food. Crying or acting as if they are gassy is not unusual. And in fact the act of eating from a dish rather than a bottle may cause them to inhale air while eating and cause some gas. So they may need burping for a bit as well.

MASTITIS

Causes & Symptoms

Mastitis is an inflammation of the mammary glands and can occur with or without infection but is typically caused by bacterial infection. Mastitis occurs postpartum and can be the result of weaning the puppies too quickly or because of bacteria getting into the teat. Most common the result of mom laying in dirty bedding.

Bacteria enters the mammary gland through the opening in the teat and causes infection and often inflammation. Teats may be red, swollen, hard, hot, and mom may also run a temperature.

Thus, while the puppies are being weaned, you should be watching and checking mom for possible mastitis daily. The onset can be sudden and rapid and if not dealt with promptly, become a real problem.

Treatment

At home you can begin by using a combination of both warm and cold compresses and either put her puppies on her to nurse or manually express the milk. It is suggested to do warm compresses, then have puppies nurse or express the teats yourself and then apply cool compresses or cabbage leaves. See below.

Emptying teats frequently is important. Encouraging puppies to nurse frequently and even directing puppies towards any teats that show evidence of mastitis. If the puppies are disinterested, you will need to manually massage and express milk from mom to relieve pressure and backed up milk. Engorged, hard teats can actually lead to abscesses and rupture.

Warm Compresses

- Use a bowl of hot water and 2 handtowels.
- Wring out one towel (not too hot of course) and lay it on the boobs.
- When cool, remove and place the second one on. Then start at the base of the boobs, one at a time and express them into the towel to open them up.
- You may have to do this multiple times.

Cabbage Leaves

A well-known and common treatment is cabbage leaves.

- Start by putting cabbage leaves in the freezer for five to ten minutes
- Once cooled, lay them flat on the counter and roll over them with a rolling pin, cracking the veins in the leaves so the juice will be able to escape.
- Wrap the cabbage leaves on the affected mammary with ace bandage, do not use vet wrap, use ace bandage. Or hold them yourself for 20 or 30 minutes at a time.
- Do this three or four times per day for 30 minutes.

Antibiotics

If mom has a temperature or even if not, adding an antibiotic may be wise. Consult with your vet about which is safe and best for your mother. Clavamox is commonly used and is safe for nursing mothers.

Chapter 6 - PEEING AND POOPING

GENERAL DISCUSSION

Since mother dogs take care of stimulating and cleaning up after their puppies it may be weeks before you even see a bowel movement from your newborn puppies with moms. So the majority of the following information is intended for bottle babies only. But as always you may have a baby with a mother that needs some extra help or attention, so this information may apply to any young puppy through the first several weeks of life.

STIMULATION

For the first week or two, newborn puppies without a mother will need help going to the bathroom. And if not done before feeding, all bottle babies should be stimulated to urinate/defecate after every feeding. This is done by gently rubbing a damp cloth, tissue, baby wipe or cotton ball on your puppy's genitals and rectum until they eliminate. Puppies should urinate at every feeding and defecate about once a day.

After about the second week, these puppies will usually be able to go on their own without your assistance. Be aware that a mom would be constantly licking them so you will need to make sure that you are keeping them clean as well. Otherwise they may get urine burn on their stomachs, legs and feet. Use a moist wash cloth to bath them giving special attention to their lower bodies in particular which will drag thru urine and feces in their bedding several times a day. Or before or after each feeding.

A healthy puppy will have pale yellow urine. If it is clear, it can indicate they are dehydrated. Watching pee and poop is always valuable for analyzing the health of your puppy and catching potential issues early.

In the first couple weeks of life I find that puppy poop can range from being dark brown to yellow and from very formed and firm to very loose. For the most part if the puppies are having regular daily bowel movements, and eating well, I do not change anything.

If the poop looks seedy and yellowish, that usually is the result of overeating or the milk may be very rich. When bottle feeding I'll either reduce the amount I'm feeding a little or dilute the food with water just a bit to see if that helps. Not a big concern regardless.

CONSTIPATION & GAS

If your puppy doesn't have a bowel movement for a feeding or two, do not panic. But if they go 24 hours, they may be constipated or just have gas. If they stop eating or their bellies become hard and distended these can be signs that your puppy is constipated. It is not uncommon that babies like this can become constipated because of a change in their diet.

Gas

Sometimes as babies get stronger, in the second and third week of nursing or bottle feeding, they may be overeating or just sucking strongly and getting more air which can cause this uncomfortable gas.

It may be that they just have some gas which will make them uncomfortable to the point where they may act uncomfortable or unsettled, are whining or crying, their stomach may be distended and hard even like when constipated or may be so uncomfortable that they are reluctant to eat.

For gas, I usually try a finger of Karo syrup a few times over an hour or two. Also Gripe water or baby gas drops and/or a tiny drop of mineral oil. All gas medication should be checked to make sure it does not have Xylitol.

You can also help relieve gas by massaging their stomach or stretching their bodies out and then scrunching their head in towards their butts in a C curve.

Enema

Using a 1 cc. syringe with a tapered end can be used for giving an enema if the puppy is quite small. Google “soap suds enema” for detailed directions on giving an enema to a small puppy. Basically you're going to mix a little dishwashing soap with water until it feels greasy. Squirting about 1 cc into the puppies rectum and wait. If it doesn't help move things along within 30 minutes, repeat.

Also sometimes simply using a thermometer that is lubricated with a tiny bit of petroleum jelly or soapy water made with dishwashing liquid (it will just feel greasy) and inserted as if you were taking their temperatures, can be sufficient to get things moving along.

Oral Options

You may try adding a drop or two of mineral oil to their formula or if nursing from mom, give them a drop or two with a syringe.

Some other options are a little dab of maple or karo syrup every few hours or probiotics such as plain live culture yogurt, Benebac (a dog specific probiotic) or a similar product.

Milk of Magnesia is also very effective. So much so that you might expect diarrhea if you use too much. For a newborn, a drop on their tongue every 4 hours should relieve their constipation fairly quickly.

DIARRHEA

Diarrhea is common in puppies and may be caused by parasites, viruses, bacteria, food changes (e.g., formula that is too concentrated, a new brand of formula), stress, overfeeding and other causes. If the diarrhea is mild and the puppy is otherwise alert and vigorous, you can try giving less food more often and monitor the pup closely.

If the diarrhea is extremely watery, white or light colored this can indicate stomach upset. I may start with just diluting the formula with extra water for a few feedings to see if that helps. If it continues, I replace the formula with two parts Pedialyte to 1 part Karo syrup for a few feedings to allow their stomach to settle.

If diarrhea is severe, lasts more than three or four feedings, or contains blood or obvious parasites, you should see a veterinarian and take a sample of the fecal for testing.

Chapter 7 - HEALTH AND WELLNESS

PUPPY – DEVELOPMENT STAGES

Ears – 5 to 8 days

Eyes – 8 to 14

Walking – 14 to 21

Barking – 21 days

Teething – Around 21 days

Weaning – 3 to 4 weeks

DISEASE PREVENTION - PUPPIES

Keys to disease prevention include:

- Treat the mother as soon as safely possible to reduce the parasites that she might pass to her puppies through her milk.
- Be vigilant in your handling of the puppies, washing your hands, changing your shoes, and wearing clean clothing around young puppies. Especially if you've handled other animals before the puppies.
- You should limit the number of visitors who are in and around your puppies until they have had a least two vaccines. And limit the exposure to the outside and/or surfaces that might come into contact with parasites and Parvo.
- Make sure that all housing, blankets, bowls, toys, etc. have been thoroughly washed and disinfected.
- Routine vaccinations and wormings.

Vaccines -DHPP

Initially protection from Parvo is received through antibodies in the colostrum from nursing from mom in the first 24 hours. However as the puppies age, they lose that protection and need vaccinations to bolster their immunity. There is always a period where puppies are vulnerable to disease; they will no longer have enough maternal antibodies to give them protection from an actual infection, but they will have too many antibodies for a vaccine to be fully effective. Which is why they get multiple vaccines over the first 16 weeks. Starting at 5 or 6 weeks of age and then every 2 or 3 weeks until they are 16 weeks old.

Routine Worming

- Beginning as early as 2 weeks it is wise to worm for roundworms using Pyrantel. Every two weeks for at least 2 cycles.
- At or around 5 or 6 weeks age, treatment for other parasites using Panacur is advised. Panacur is effective for the treatment of Tapeworms, Hooks, Whips and Giardia.
- As Coccidia has been more common, at least one preventative treatment of either Albon or Toltrazuril for Coccidia is recommended. As early as 2 weeks but any time during the first 8 weeks is advised.

See below for details on both preventative treatment and dosage as well as symptoms and treatment protocols for each.

TREATMENT SCHEDULE AND DOSAGE

If a puppy is developing slowly, is lethargic, has an unusually bloated belly, is not eating well, has irregular stools, including but not limited to having mucus, water, or blood in their stool, they may have internal parasites. A stool sample should be taken to your veterinarian for testing.

Parvo

- **Symptoms:** Diarrhea, vomiting, lethargy, lack of appetite, temperature
- **Preventative:** DHPP vaccinations at 5 wks., 8 wks., 12 wks., and 16 wks.
- **Treatment:** Fluids (IV or SubQ), antibiotics, anti-nausea medications, Tamiflu OR Monoclonal Antibody Treatment

NOTE: If you think you have a puppy with Parvo DO NOT HESITATE to seek Vet testing and treatment. Act quickly!! Their life can depend on it.

Roundworms

- **Symptoms:** distended belly, diarrhea, coughing (when severe infection exists) and vomiting or pooping out spaghetti like worms
- **Preventative:** Pyrantel - @ 2, 4, 6, 8 wks. - 1 cc. per 10 pounds, 1x per day for 1 day
- **Treatment:** Pyrantel - 1 cc. per 10 pounds, 1x per day for 1 day; or Panacur (1 cc per 5 pounds) for 1 x per day for 1 day

NOTE: Roundworms are so common in all dogs and puppies who will get them from nursing from an infected mother, that we just automatically worm with Pyrantel every 2 weeks for 3 or 4 cycles.

Tapeworms, Hooks, Rounds, Whips

- **Symptoms:** diarrhea, vomiting, weight loss,
 - Tapeworm – tape or rice like segments in stool
 - Hooks - Dark and tar-colored diarrhea
 - Whips - Bloody and/or mucousy diarrhea
- **Preventative:** Panacur (Fenbendazole) - @ 6 wks. and 8 wks. - 1 cc. per 5 lbs, 1x per day for 3 to 5 days
- **Treatment:** Panacur (Fenbendazole) - 1 cc. per 5 pounds, 1x per day for 3 to 5 day

Giardia

- **Symptoms:** mucousy or greasy stool, is oddly colored and has a very offensive metallic odor
- **Preventative:** Panacur (Fenbendazole) - @ 6 wks. and 8 wks. - 1 cc. per 5 pounds, 1x per day for 3 days
- **Treatment:** Panacur (Fenbendazole) - 1 cc. per 5 pounds, 1x per day for 3 to 5 days

NOTE: Giardia preventative treatments are usually not recommended before 6 weeks. However, if fecal determines the presence of Giardia, treatment with Panacur for puppies 2 weeks of age or older is safe.

Coccidia

- **Symptoms:** watery diarrhea, dehydration, abdominal distress, and vomiting
- **Preventative:** Toltrazuril - @ 2 wks. and 5 wks. - .18 cc. per lb. - 1x per day for 3 days
- **Treatment:** Toltrazuril - .18 cc. per lb. - 1x per day for 3 to 5 days

NOTE: Albon is an option for treatment but is not my preference

Cryptosporidium

- **Symptoms:** Watery, yellow diarrhea, lethargy, vomiting, loss of appetite, dehydration, weight loss

- **Treatment:** Tylan Powder and Clavamox
- **Dosage:** 1 cc per 10 lb. (Powder mix 1 t. in 2 ½ T. water)
- **Frequency:** Usually given **every 12 hours** (twice daily).
- **Duration:** Often prescribed for 7 to 14 days, though for chronic conditions, it can be much longer
- **Cleaning:** Ammonia solution (properly diluted - 1:9) OR High heat steam (200°F+)

Appendix A: Whelping Supplies

- **Calcium** – To prevent eclampsia, calcium deficiency and soothe anxious moms.
 - Calsorb
 - DocRoy's Healthy Bones
 - OralCal Plus (Breeders Edge pet product)
 - Tums - unflavored
 - Calcium Citrate
- **Premium Vanilla Ice Cream** – for replacement of fluids, energy and a little calcium too
- **Suction bulb** – like for a baby – if you have a puppy that may have aspirated fluid during delivery, be congested or not breathing well to suction out nose and throat
- **Rubber gloves** – like surgical – to handle pups or assist in delivery and you don't enjoy having fluids and blood on your hands. There is going to be both!
- **Cotton hand or bath towels** – Cotton towels are very handy for rubbing a puppy that needs a little help getting started or if mom is getting tired and needs a little help pushing a puppy out. The cotton gives you grip and would allow you to help mom by GENTLY pulling the puppy while she pushes. And then of course you can use them to clean up puppies if you like.
- **Hemostats** – optional but I have some that I keep handy just in case mom chews off the cord too close and its bleeding. Clamping the cord for a bit to stop blood flow keeps your hands free. If you don't have them, you'll be tied up for a bit pinching a cord to stop blood flow. Again, most of the time they are not needed.
- **Scissors** – Just in case you choose to cut cords rather than have mom chew them. I usually let mom do that job as it is natural but there is a little risk they will chew them too short. Depends on the mom too. Some moms don't want any help.
- **Dental floss** – good for tying off an umbilical cleanly and hygienically.
- **Iodine** or Betadine – Suggested to dab on all cords but if you have a short one that bled a good deal, certainly that one. Helps avoid possible infection.
- **Needle** – Any size – I always keep one available in case you have a puppy born that is not breathing.
- **Coffee or 5 hour energy** - A drop of either of these can help pep up a sluggish puppy
- **Karo** (or maple syrup, Nutra Cal, honey, sugar water)
- **Heating pad** – I always put a heating pad in one corner of the whelping box under the bedding. This allows puppies to move on and off a warm spot if they need to
- **Baby Cam**
- **Plastic storage tub or basket** – in case you need to temporarily move puppies out of the whelping area or just keep them out of mom's way during whelping – put heating pad inside of it
- **Pen and paper** to record birth time, note any issues to watch, document sexes
- **Puppy Milk Replacement**
- **Puppy colostrum**

Appendix B: Homemade Puppy Formula Recipe

(Myra Savant Harris Recipe)

Ingredients:

- One can of evaporated goat's milk, undiluted (You can substitute evaporated cow's milk if you can't find the goat's milk.)
- One cup of full fat yogurt (the fattiest and freshest you can find)
- 2 raw egg yolks (don't worry about the raw eggs)
- 1/3 cup of freshly made, strong liver broth made from boiling a piece of liver in one cup of water and then reducing the water to 1/3. You can substitute fresh beef broth if you just can't tolerate the smell of liver, but the liver is much better. Don't eliminate the broth.
- 1 Tablespoon of Virgin Olive Oil (you can use mayonnaise if you like, but remember it is acid based). Use 2 tablespoons to make this formula for kitties.
- 1 teaspoon of karo or corn syrup.
- 1 dropper full of baby vitamins that doesn't contain iron.

Directions:

Blend all ingredients in a blender or food processor.

It may be frozen and stored for a year.

It is a very rich formula and as such, depending on the conditions of your puppies, you may need to dilute it with water if too rich for your puppy's systems initially.

Appendix C: Medications and Dosing

Albon liquid – Coccidia

Symptoms: watery diarrhea, dehydration, abdominal distress, and vomiting

Cleaning: Ammonia – 1 cup per 9 cups water

Dosing: 1x per day for 3 to 5 days or until symptoms are gone for 48 hours

Safe for: Puppies and nursing moms

5 cc. per 10 lbs	1 st dose (.5 cc/lb.)
2.5 cc per 10 lbs	All subsequent doses

Amoxi Drops – Antibiotic URI/UTI

Symptoms – URI or UTI infections

Dosing for 50 mg/ml suspension: 0.1 cc per lb for 7 to 10 days (1.0cc/lb)

Safe for: Puppies and nursing moms

Cephalexin (dogs) - Infections

Symptoms: UTI, skin, URI, ears infections

Dosing: 2x per day

Safe for: Nursing moms

Dog	10 mg. per lb.
Cat	5 mg. per lb.

Clavamox Pills - UTI

Symptoms - UTI and skin infections

Dosing: 6.25 mg. per lb

Safe for: Puppies and nursing moms

1 lb	6.25 mg.
10 lb	62.5
20 lb	125
30 lb	175 mg

Clavamox (liquid) - URI

Dosing: 1 cc. per 10 lbs - 2 X per day

Safe for: Puppies and nursing moms

Doxycycline – Infections & Lyme Disease

Treatment: Lyme, bacterial infections, URI, UTI, wounds

Dosing: 1 or 2 x per day depending on condition treating

Safe for: Older puppies and adult dogs. **NOT safe** for nursing moms; For Lyme - use Amoxi if nursing and symptomatic

Dog's Weight	Low Dosage (2 mg/kg)	Medium Dosage (3 mg/kg)	High Dosage (5 mg/kg)
5 lb. (2.3 kg)	4.6 mg	6.9 mg.	11.5 mg
10 lb. (4.5 kg)	9 mg.	13.5 mg	22.5 mg.
20 lb. (9.1 kg)	18 mg.	27 mg.	45 mg.
30 lb. (13.6 kg)	27 mg.	40.8 mg.	68 mg.
40 lb. (18.1 kg)	36 mg.	54.3 mg.	90 mg.
50 lb. (22.7 kg)	45 mg.	68 mg.	113 mg.
Round the dose to the nearest whole number. Divide dose (2x per day) if using a higher dosage.			

Gabapentin – Chronic Pain

Treatment: Arthritis

Dosing: 2 mg. per pound

Rymadil – Pain (Arthritis and post surgical)

Dosing: 2 mg. per pound

Ivermectin – Demodex mange

Dosing: .6 cc per 25 lb. approx.

Metronidazole – Giardia

Symptoms: Diarrhea, metallic odor

Cleaning: Bleach – 1 cup per gallon of water

Dosage: 2 X Daily (Round DOWN if needed)

Safe for: Adult dogs. **NOT** recommended for young puppies – under 4 months age. Or for nursing moms

<5 lb	25 mg.
5 – 10 lbs.	62.5 mg (1/4 tab)
11 – 19 lbs	125 mg.
20 – 39 lbs	250 mg.
40 – 69 lbs	500 mg.
70 – 85 lbs	750 mg.
85 +	1000 mg

Liquid Metro – 100mg/ml

Dosage: .07 cc/lb.

Panacur - Giardia (also Tapes, Hooks, Whips)

Also known as: Fenbendazole, SafeGuard wormer

Symptoms: Giardia - Diarrhea, metallic odor; bloody stools

Dosing: 1 cc. per 5 pounds, 1x per day for 3 to 5 days

Safe for: safe for puppies and nursing moms

Tylan Powder – Cryptosporidium**w/ Clavamox**

Symptoms: Watery, yellow diarrhea, lethargy, vomiting, loss of appetite, dehydration, weight loss

Cleaning: Ammonia solution (properly diluted - 1:9) OR High heat steam (200°F+)

Dosage: 1 cc per 10 lb. (Powder mix 1 t. in 2 ½ T. water)

Frequency: Usually given **every 12 hours** (twice daily).

Duration: Often prescribed for 7 to 14 days, though for chronic conditions, it can be much longer

Toltrazuril – Coccidia

Symptoms: watery or mucousy diarrhea, dehydration, abdominal distress, and vomiting

Cleaning: Ammonia – 1 cup per 9 cups water

Dosing: 1x per day for 3

Safe for: puppies and nursing moms

Preventative - @ 2 wks and 5 wks

.18 cc. per lb.	3 days
.91 cc per 5 lbs	3 days

Wormers**Cestex – Tapeworms****Drontal – Tapes/ Rounds/Hook/Whip (cats)****Panacur – Whips/ Tapes/Rounds/Hooks**

Dosing: 1 cc. per 5 pounds (safe for puppies and nursing moms)

Pyrantel - Roundworm/Hooks (both)

Dosing: 1 cc. per 10 pounds (safe for puppies and nursing moms)

89-132lbs	4.02 cc
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Parvo

- *Convenia shot*
- *Tamiflu*
- *Cerenia (vomiting)*
- *Amoxi and Baytril (if really bad- antibiotics)*
- *Monoclonal Antibody Treatment*
- *Fecal Transplant protocol*

Capstar – Live fleas only – dogs

Dosing: Pill by size

Revolution – fleas/ticks

Dogs

Less than 5 lb.	.13 cc
5 – 10 lb.	.25 cc
11- 20 lb.	.5
21-40 lb.	1 cc
41-85 lb.	2 cc
86-130 lb.	3 cc

Cats

Less than 5 lb.	.13cc (topically)
5 – 15 lb.	.38 cc

Flea and Tick

Puppies younger than 4 weeks - *Should not receive topical treatments; can be given a Dawn bath*

Dawn Bath:

- *Put a ring of Dawn around the neck to keep fleas from moving up the body to the head during bath.*
- *Immerse in water to the neck. Avoid getting head, ears, and eye wet*
- *Lather w/ Dawn to kill live fleas*
- *Let stand with Dawn/water on fur for at least 5 minutes.*
- *Rinse thoroughly and dry.*

Advantage – fleas/ticks

1 – 10 lbs.	.25 cc
11- 20 lbs.	.5 cc

Frontline – fleas/ticks

1 – 22 lbs.	.67 cc
23-44 lbs	1.3 cc
45-88 lbs.	2.68 cc