



# Breeding & Whelping Manual

(541)826-9220

[breeding@dogsforbetterlives.org](mailto:breeding@dogsforbetterlives.org)

# TABLE OF CONTENTS

The Making of a Breeder Dog .....	3
Before Breeding .....	3
Health Requirements .....	4
Breeding Timeline .....	6
Nutrition.....	9
Pregnancy Timeline .....	10
Setting Up the Whelping Room .....	15
When it is Nearly Time .....	16
Whelping .....	17
Complications .....	19
Post-Whelping.....	25
Puppy Weight Chart #1 .....	26
Puppy Weight Chart #2 .....	27
Lactation Guideline .....	28
Emergency Contact List.....	29
Whelping Bullet Points .....	30



# THE MAKING OF A BREEDER DOG

## Introduction

Whelping (birthing) and raising puppies can be a joyful and enlightening experience. However, it is essential for those involved - especially those doing it for the first time – to gain advanced knowledge about the process to understand what is normal (thus avoiding undue concern) and to be prepared to effectively respond to those rare times when problems arise.

There are five stages involved in this process:

1. Breeding
2. Pregnancy
3. Whelping (pre-labor, labor, and delivery)
4. Lactation
5. Weaning

This manual has been prepared to make whelping and raising puppies a happy and successful experience. The Breeding Coordinator at Dogs for Better Lives will be involved throughout the entire experience and will be available and present when possible, during the whelping to assist you in any way needed. Please feel free to contact us with any question or concerns! We want to make sure this experience is as stress-free and enjoyable as possible, for both you and your breeding dog. Please take some time to review this material well before whelping.

## Before Breeding

No dog will be bred before the age of 18 months, when physical maturity has been attained. The previous 18 months is an important phase in the dog's life where socialization, nutrition, obedience training, and proper veterinary care ensure the dog's future success in the Dogs for Better Lives breeding program.



# Health Requirements

To be eligible for the Dogs for Better Lives breeding program, dogs must receive a clean bill of health from the veterinarian as well as acceptable results on various health checks.

## Health Tests are as Follows:

- **Eye Exams:** Breeding stock will have yearly eye exams with a Board-certified ophthalmologist. DNA testing for Progressive Retinal Atrophy (PRA) will be done one time, between six months and 18 months of age.
- **Hip X-rays:** a PennHip x-ray will be done at approximately one year of age to detect abnormalities in the hips.
- **Elbow and Shoulder X-rays:** will be done at 2 years of age and submitted to the Orthopedic Foundation for Animals (OFA) to detect abnormalities in the elbows and/or shoulders.
- **Heart Test (echocardiogram):** a board-certified cardiologist will perform an echocardiogram at approximately 12 months of age.
- **DNA Testing:** DNA will be collected via mouth swab and submitted to a laboratory to test for multiple genetic disorders including, but not limited to Exercise Induced Collapse (EIC), Centronuclear Myopathy, Hereditary Nasal Parakeratosis etc.
- **Blood Draw:** A simple blood draw to rule out the presence of brucella, a bacterium that is harmful to the brood and the pups before breeding. And a blood draw 1 week before whelping to check for any unseen underlying problems.
- **A Health Exam:** A physical exam done by the current DBL breeder vet to further ensure the health of the brood prior to breeding. This can potentially be skipped if the brood has recently been to the vet and came back with a clean bill of health.

Additional health tests may be required depending on breed history and/or specific health concerns related to the dog. Any dog that does not pass the health screens for any genetic disorder will be spayed or neutered.

## Heat Cycle (Estrus)

Un-spayed female dogs will reach sexual maturity and experience their first heat cycle, or estrus, at approximately 6 to 8 months of age (sometimes later) and roughly every six to eight months after that. The average heat cycle for a brood (female used for breeding) will last approximately three weeks but shorter or longer heat cycles are not unusual.



The onset of a heat cycle, called proestrus, is marked by a swollen vulva and a red tinged vaginal discharge (the discharge will last anywhere from 14 days to 4 weeks). **It is imperative**

**that you inform your Breeding Coordinator at the first sign of discharge**, even if a breeding is not planned.

At this stage you may notice your brood is significantly clingier to you. She may have increased urination, change in her appetite, and increased licking of her vaginal area. Some broods exhibit a temporary significant change in their overall temperament. At this stage, your brood will attract males, but she will not be receptive to them and may become aggressive if they try to mount her. This stage usually lasts about 9 days but can be up to 17 days.

After proestrus, your brood will go into estrus commonly known as “standing heat”. This stage will last anywhere from 5 to 13 days. Your brood’s discharge will lessen and may even stop. It will change from a red color to a yellow/straw color. Your brood is ready to mate and will most likely present herself to any available dog especially if they are intact. Some broods will accept more than one male and you can have a dual sired litter.

- Unplanned breeding’s happen frequently and very quickly so it is important to be aware of your brood’s surroundings when she is in heat, especially if there are other dogs around. It is preferred that the brood stay in her breeder caretaker home that she is familiar with, however, kenneling at Dogs for Better Lives may be an option for certain circumstances. Please contact your Breeding Coordinator for more information.

Whether your brood was bred or not she will enter the next stage called diestrus. This is where she will either continue with the pregnancy, or her body will return to rest. Her vulva will return to normal size and the discharge will stop completely. This stage generally lasts 30-90 days.

The final stage is anestrus. During this stage there is no sexual or hormonal behavior present, and the uterus begins to repair itself. This will last anywhere from 90-150 days before the proestrus stage starts again.

## Stud Dogs

Dogs for Better Lives will have sole discretion when choosing a stud dog. Dogs will be matched on health, temperament, and conformation with the aim of producing the highest quality assistance dog puppies. We will aim to have local stud dogs or artificial insemination done at our local veterinarian’s office. However, for some breedings the Breeder Caretaker may need to travel with your brood to a stud dogs location.



## Breeding Timeline

### Timeline for Breeding and Whelping

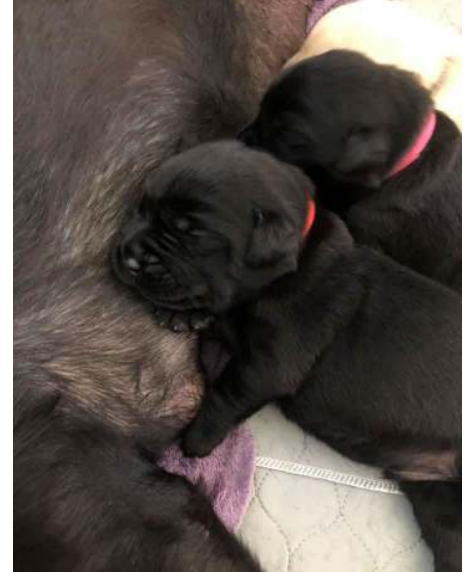
*Note: if brood is in Southern Oregon, Breeder Coordinator will help make appointments and take brood to and from the appointments. If not in Southern Oregon, the Caretaker will be responsible for all appointments.*

- ☐ Stud dog and method of insemination have been determined by DBL staff before breeding.
- ☐ A few weeks before brood is due to go into heat an appointment with DBL's current breeding veterinarian for a health checkup will be set. If the brood has been seen by their primary vet in the last month this may be skipped.
- ☐ About a month before heat cycle Caretaker starts brood on 5mg/day folic acid supplement.
- ☐ Caretaker lets Breeding Coordinator know brood is in heat.
- ☐ Appointment for first progesterone test 5 - 7 days later, arranging to take brood to vet if Caretaker cannot. *(See chart below for progesterone levels)*
- ☐ Subsequent progesterone tests are scheduled and handled.
- ☐ Brood is taken to stud dog (if local), artificially inseminated, or surgically implanted on appropriate day of cycle. Both Breeding Coordinator and Caretaker will attend breeding if possible.
- ☐ Ultrasound scheduled between 30<sup>th</sup> and 35<sup>th</sup> day after insemination.

- ☐ 2 weeks before broods due date the whelping box needs to be set up, perform inventory of whelping kit/supplies, towels, blankets, and bedding. *Reach out to Breeding Coordinator ASAP if anything is missing.*
- ☐ Caretaker will start encouraging brood to go into the whelping box and will start feeding brood in there.
- ☐ X-ray and blood draw (just as a precaution to see if there are any unseen underlying problems) scheduled for 1 week before whelping.
- ☐ Breeding Coordinator will remind Caretaker to start taking brood's temperature starting at least 3 days before the due date.
- ☐ Caretaker will call Breeding Coordinator when brood's temperature drops to 98° - 99° and prepare whelping area with large potty pads, large trash bags, whelping kit, towels. Whelping will occur within 24 hours.
- ☐ Caretaker will call the reproduction veterinarian office to give them a heads up that brood's temperature has dropped, and whelping is imminent (in case of emergency).
- ☐ Caretaker will call Breeding Coordinator as soon as active labor starts.
- ☐ If possible, Breeding Caretaker will assist through the whole whelping.
- ☐ Weigh pups, check for cleft palates or any other birth defect, place color collars around necks and write down: weight, collar color, sex, and puppy color (if applicable).

IDEXX Progesterone Table		
<b>Below 1.0 ng/ml</b>	No ovarian activity	Test every 3-4 days
<b>1.0 to 2.0 ng/ml</b>	Rise indicates active ovary	Test again in 2 to 3 days
<b>2.0 to 4.9 ng/ml</b>	Active ovary	Test every 24 hours until 5.0 ng/ml
<b>5.0 ng/ml</b>	Ovulation	Breed in 2 to 3 days
<b>5.0 to 6.0 ng/ml</b>		Breed in 2 to 3 days
<b>6.0 to 11.0 ng/ml</b>		Breed in 1 to 2 days
<b>11.0 to 19.0 ng/ml</b>		Breed today
<b>Over 19.0 ng/ml</b>	LATE	Only breed if brood is receptive





## When your Brood is Ready

- Broods that are ready to be bred are said to be in 'standing heat'. A brood in standing heat will likely not be bleeding any more, will flag her tail (hold to one side or straight up), and her vulva will be noticeably swollen. She will appear flirtatious, attempting to get the stud dog to play with or chase her and she may even back up to the stud dog.
- When the progesterone tests indicate ovulation will occur in the next 24 hours, the brood will be taken to the stud for a natural breeding. A natural breeding will be repeated the next day. In the event the stud dog is unavailable, unable to breed naturally, or is too far away, an artificial insemination (AI) will be done by the veterinarian on the day the brood ovulates. AI's are done in one of three ways:
  1. Live sperm is collected from the stud dog and implanted in the brood via pipette.
  2. Chilled semen that has been collected from the stud in the last 24 hours and then shipped is implanted in the brood via pipette.
  3. Frozen semen that may have been collected and frozen years before is shipped and either implanted via pipette or surgically implanted.

## Confirming the Pregnancy

Between the 30<sup>th</sup> and 35<sup>th</sup> day after breeding the veterinarian will perform an ultrasound on the brood. This procedure will let us know if the brood is pregnant and provide a general overview of their health. An x-ray will be done in the last week of pregnancy, this helps determine the number of puppies to expect during whelping. Having an idea of the numbers of puppies to expect will make it easier to know if you need to bring your brood into the vet during whelping.



### **False Pregnancy**

Sometimes broods which have experienced a heat cycle may exhibit signs of pregnancy such as mammary gland enlargement (with or without milk production), lethargy, and periodic vomiting. This may happen even if breeding was not attempted and usually starts four to nine weeks after previous heat cycle. Generally, false pregnancies are not anything to worry about and does not require any treatment. If your brood experiences a false pregnancy, contact your Breeding Coordinator so they can put this in your brood's record.

### **The Whelping Window**

It is very important to get progesterone testing or LH testing as soon as your brood starts her estrus, to find out when your brood ovulates, so you have a good timeline for whelping. Most females will whelp 63 days after ovulation. However, they can whelp safely anytime between 58 and 65 days, so it is best to clear your calendar and be prepared beforehand and be familiar with the signs of labor. Stay in contact with your Breeding Coordinator.

## **Nutrition**

### **Diet for the Brood**

A brood should be maintained at her ideal weight. Obesity can lead to complications in breeding such as dystocia (difficulty delivering puppies) and smaller litter size, as well as being detrimental to her health, overall.

Once pregnancy has been confirmed, your Breeding Coordinator may switch your brood to a performance food, depending on her weight and the amount she is gaining during the pregnancy. Performance foods have higher calories and will give your brood the support she needs developing her puppies.

During the last four weeks of gestation your brood will need even more calories to feed the developing pups and start producing her milk. Her daily intake will need to increase 15 to 25%. She may be fed multiple times per day to facilitate the larger amount of food being fed. Your Breeding Coordinator will be your guide with this process.

### **Supplements/Treatments**

Roughly one month before your brood is due to start her estrus cycle, she should be supplemented with 5mg/day of folic acid. Studies show that breeders can ensure a 50-70% reduction of cleft palates and other midline deformities by using folic acid.

When your brood is pregnant, she will receive a dose of [fenbendazole](#) (Panacur) daily from the 8<sup>th</sup> week of pregnancy to the 2<sup>nd</sup> week of lactation. This is to prevent parasites and giardia. Flea and tick medication is discontinued until her puppies are fully weaned. Heartguard can continue throughout pregnancy and lactation.

# Pregnancy Timeline

## Week One (Days 1 – 7)

### DEVELOPMENT OF THE PUPPIES

- Fertilization occurs.
- 2 cell embryos are in the oviduct.
- Embryo is fairly resistant to external interference in development.

### CHANGES IN THE BROOD

- Possible morning sickness
- Possible personality changes

### CARE OF THE BROOD

- Normal feeding
- Normal exercise

### TO DO LIST

- Nothing this week

## Week Two (Days 8 – 14)

### DEVELOPMENT OF THE PUPPIES

- Cell division. Embryos start out the week as four cells and end the week as 64 cells.
- Embryos enter the uterus.

### CHANGES IN THE BROOD

- Possible morning sickness

### CARE OF THE BROOD

- Continue as with week one.

### TO DO LIST

- Nothing special this week.



## Week Three (Days 15 – 21)

### DEVELOPMENT OF THE PUPPIES

- Day 19: implantation of the embryos in the uterus

### CHANGES IN THE BROOD

- Possible morning sickness

### CARE OF THE BROOD

- Continue as with week one.

### TO DO LIST

- Nothing special this week.

## Week Four (Days 22 – 28)

### DEVELOPMENT OF THE PUPPIES

- Development of eyes and spinal cords
- Faces take shape.
- Fetuses grow from 5 – 10 mm to 14 – 15 mm (about as big as a hazelnut)
- Organogenesis (organ formation) begins; embryos are at their most susceptible to defects.
- Can be seen by ultrasound.

### CHANGES TO THE BROOD

- Possible clear vaginal discharge
- Mammary development begins.

### CARE OF THE BROOD

- Limit strenuous activity (such as working, jumping, long runs)
- Start increasing food intake and supplement per the instructions of the Breeding Coordinator.
- Start maternity massage, do this in the room she will be whelping in - <https://www.youtube.com/watch?v=66JAFZ8UHec>

### TO DO LIST

- Work with Breeding Coordinator to schedule ultrasound with the vet.

## Week Five (Days 29 – 35)

### DEVELOPMENT OF THE PUPPIES

- Development of toes, whisker buds, and claws
- Development of skin pigment
- Fetuses begin to look like dogs
- Eyes (previously open) now close
- Fetuses grow from 18 mm to 30 mm (about the size of a prune)
- Organogenesis ends; embryos are fairly resistant to interference with development.

### CHANGES IN THE BROOD

- Swelling of belly becomes noticeable.
- Loss of 'tuck-up'
- Weight will start to increase.

### CARE OF THE BROOD

- Continue maternity massage – once daily if possible.

### TO DO LIST

- Nothing special this week.

## Week Six (Days 36 – 42)

### DEVELOPMENT OF THE PUPPIES

- Gender of fetuses can be determined.
- Fetuses should weigh about 6 grams and be about 45 mm long.
- Fetal heartbeats can be heard with a stethoscope.

### CHANGES IN THE BROOD

- Nipples darken and enlarge.
- Abdomen continues to enlarge.
- Vaginal mucous may start to be visible.

### CARE OF THE BROOD

- Continue maternity massage.

## TO DO LIST

- Nothing this week

## Week Seven (Days 43 – 49)

### DEVELOPMENT OF THE PUPPIES

- Growth and development continues.
- Fetuses' skeleton is complete and can be seen clearly on ultrasound and x-ray.

### CHANGES IN THE BROOD

- Abdominal hair will start shedding so puppies can find nipples easier to feed.
- Brood will start to look very pregnant.



### CARE OF THE BROOD

- Slightly increase food in each meal, per Breeding Coordinator's instructions
- Continue maternity massage – start doing this in her whelping box.

## TO DO LIST

- Assemble whelping box in area where brood and pups will be for at least the next three weeks.
- Stop any roughhousing or jumping.
- X-rays possible to determine number of pups.
- Start washing brood's nipples with warm water and soft cloth to toughen them up.

## Week Eight (Days 50 – 56)

### DEVELOPMENT OF THE PUPPIES

- Fetal movement can be detected when brood is at rest.

### CHANGES IN THE BROOD

- Milk may be expressed from nipples.
- Brood will be very large.

### CARE OF THE BROOD

- Continue to follow the feeding schedule provided.

- Continue maternity massage.
- Continue to wash brood's nipples with warm water and soft cloth.

## **TO DO LIST**

- Give your brood a bath, trim her nails and trim any long hairs away from her nipples and vulva.
- Have the whelping kit provided by the Breeding Coordinator and emergency phone numbers handy.
- Make sure your vehicle is gassed up and ready to go in case of emergency.

## **Week Nine (Days 57 – 65)**

### **DEVELOPMENT OF THE PUPPIES**

- Growth and development continue.

### **CHANGES IN THE BROOD**

- Nesting behavior may be seen, either in whelping box or elsewhere, including outdoor den-digging
- Brood may appear distressed, including panting, pacing, acting uncomfortable.
- Brood's temperature will be between 100 and 101 degrees.
- Temperature will drop one or two degrees within 24 hours of labor.
- Appetite may decrease or disappear as whelping approaches.

### **CARE OF THE BROOD**

- Start taking the brood's temperature three times a day.
- Take the brood for three 10-minute walks a day. Go at pace of brood.
- Continue maternity massage.

## **TO DO LIST**

- Notify Breeding Coordinator when brood's temperature drops.
- Record brood's temperature and behavior
- Double check that emergency numbers are readily available.
- Monitor your brood 24/7



## Setting Up the Whelping Room

Place the whelping box (provided by Dogs for Better Lives) in a quiet, draft free area where there will be as few distractions as possible. Get the brood acquainted with the whelping area and box well before she whelps, or she may choose another area less to your liking! Start encouraging her to spend time in the whelping box at least a week before her due date. Feed all her meals in the whelping box, start giving her maternity massages in the box, place her bed in it, and anything else that might make her like the box. If she is used to sleeping in the same room as you it might help if you start camping out in the whelping room with her.

Ideally, the room you choose will be isolated from the rest of the house and have direct access to the back yard. If this is not possible pick somewhere in the house, you can easily limit access to. Your brood will, more than likely, not feel comfortable if the whole household has easy access to her whelping area. No matter how comfortable she is with everyone she will want her privacy while birthing and rearing her puppies for at least the first two weeks. Have all the supplies you will need for whelping, brood care, and puppy care easily accessible in the whelping room. Since you will need to be with the brood during whelping, and for the first two weeks of the puppy's lives make sure the whelping area is comfortable for you as well. Someone needs to be up with the brood and puppies or sleeping in the whelping room for the first two weeks. Therefore, it is highly recommended that you have a bed or somewhere to sleep available to you. Remember – the brood and her pups are going to be in this area for at least the next three weeks, so choose wisely.

## Supply List for Whelping Kit

- Emergency bottle
- Emergency formula
- Bottle brush
- Tube feeding supplies
- Feeding syringe
- Bulb syringe
- Benebac
- Extra puppy documents
- Fecalyzer
- Thermometer
- Alcohol Pads
- Unwaxed dental floss
- Lubricating jelly
- Disposable gloves
- Betadine
- Vet wrap
- Colored ID collars
- Scale and batteries
- Flashlight
- Stethoscope
- Tea towel
- Pen and paper
- Hemostats
- Round tipped scissors

## The Whelping Box

Set the box up in your chosen whelping room in an area that is easily accessible to your brood, and yourself. The box will have [whelping](#) box liners and towels in it during the whelping for cleanliness. Once the entire litter has been whelped and all mess has been cleaned, a single layer of reusable piddle pads, and/or blankets and towels (with no holes) will be used. Non-slip

rug backing will be provided so puppies have good traction when they start to move around more. As the puppies become more mobile you will use rolled up towels and blankets to create obstacles for the puppies to climb over. They will also get a designated “nest” area. It is instinctual for puppies to move away from their sleeping area to potty. If there is one area in their whelping box that is designated for sleeping, they will naturally start climbing out of their nest area to do their business, starting the potty-training process. Have several sets of bedding so you will always have a spare when one set needs laundering. **It is very important to keep the whelping box clean and sanitized.**

For the first 10 days after whelping the most common causes of death in puppies is chilling and dehydration. Newborn pups are unable to regulate their body temperatures, so a heating pad needs to always be available on one side of the whelping box (placed in such a way that everyone can get away from it if needed). Ideal temperature in the whelping box is 72°-75°F. However, you want your brood to be comfortable as well, keep an eye on her to make sure she is comfortable and willing to be in the whelping box. If she is too hot and avoiding the box, adjust. Keep in mind the puppies need to always have an outside heat source available to them. Cold puppies huddle together and may be restless. Puppies that are too hot will sprawl apart. You want a happy medium where puppies are loosely grouped together. It is normal for puppies to twitch in their sleep.

## When it is Nearly Time

### Taking the Brood's Temperature

Twenty-four hours before the brood whelps, the corpus luteum (the yellow body that is the remains of the egg and produces progesterone, a hormone that maintains pregnancy in the dog) degenerates. When the progesterone level drops to the pre-ovulation level, the brood's temperature drops as well. The temperature at this point will be 98° or 99° and will stay that way until whelping, usually within 24 hours. Start recording the brood's temperature two-three times a day few days before the due date and record your results. Since temperatures typically fluctuate throughout the day (lowest in the morning, rise around mid-day, then drop slightly at night) you will have a better idea of when the temperature drops.

The temperature should be taken rectally using the digital thermometer in the whelping kit. Coat the thermometer with lubricating jelly (also included in the whelping kit), insert 1" in anus and wait for the beep announcing the temperature. Be sure to clean the thermometer with soapy water every time you use it and put it back in its case. **Get a hold of the Breeding Coordinator immediately when the brood's temperature drops.**

## Other Possible Signs of Labor

- Lack of interest in food about 24 hours before whelping.
- Brood may stick close by you.
- Licking the vulva or looking at it.
- Restlessness, panting, and/or digging.
- May want to go out repeatedly to relieve herself. Keep her leashed as she may whelp a pup and leave it, not knowing what to do.

## Whelping

### Puppy Birth

Dogs can deliver their puppies from many different positions: lying down, sitting, squatting, and standing. Some dogs may grunt, whine, cry, or howl while they push, while others will stay silent. You cannot help her at this point; just be there for support and remember to stay calm and let her do it.

The first puppy is often the most difficult to pass. She may strain quite a bit and moan.

When the puppy is passed through the pelvic canal, it will usually be covered in a thin, fluid filled membrane called the amniotic sac. Your brood should remove this membrane but be prepared to intervene if she does not. If your brood does not seem interested in the puppy try to encourage her to break the sac on her own. If she is still not interested don't worry, break the membrane at the head end and clean off the puppy's face. Use the bulb syringe to aspirate the puppy. Vigorously clean off the puppy's body simulating the mom licking the puppy with a clean towel (always preferable to have mom do this, if she will). If the puppy is not making any sound at this point, refer to the section 'Complications' at the end of this chapter.

If your brood has not severed the umbilical cord use the hemostats about an inch above the puppy's belly to cut off blood circulation, use the disinfected scissors provided to cut the umbilical cord on the placental side of the hemostats. Keep the hemostats on the cord for a minute or so to stop blood flow. If the cord is still bleeding after removing the hemostats use the unwaxed floss to tie off the cord.

The puppy may then be placed with the brood to nurse. Placing the puppy on the brood to nurse will produce oxytocin in the brood which helps stimulate more contractions to whelp the rest of the puppies. As soon as your brood starts contractions or gets restless place all the other puppies onto a covered heating pad in a laundry basket or box. If there is time between each puppy, put all the puppies back on mom to nurse. If there is not time, try to at least let the newest addition nurse before the next puppy is born. Don't worry if there is no time between

puppies, they will have a chance to nurse when all puppies have been whelped. If brood wants to toilet between puppies go ahead and bring her outside on leash and pay close attention just in case she whelps a puppy while outside.

Ideally each puppy will have had a chance to nurse on mom within the first hour of their birth. Mom produces colostrum which is full of all the antibodies a newborn puppy needs for about 24 hours. The highest amount of colostrum is produced in the first 4 hours after the first puppy is born.

The placenta is usually passed quickly after the puppy but is occasionally passed with the next puppy. Keep track of the placentas making sure the brood passes one for each pup. A retained placenta can result in infection. It is normal for the brood to eat the first few placentas, but you'll want to dispose of the rest of them after that, eating too many of them may cause diarrhea. Don't worry if your brood is too quick and eats all the placentas. *If you can, please retain a placenta in a baggie or container in your refrigerator for a week.* We keep one for a week just in case there is an infection or something else that pops up, the veterinarian may be able to get some answers from the placenta.

Weigh the pup and record the weight, sex, color of puppy, and collar color. Check each puppy for birth defects.

Tidy up the whelping pen between deliveries. It is normal to have a lot of amniotic fluid, some blood, and some mess from the placentas.

The time between deliveries is variable. Often, two puppies are delivered within 10 to 20 minutes of each other. If your brood settles and allows her puppies to nurse, there's no need to worry. Time between puppies can be as long as 6 hours in a normal delivery. However, if the brood is restless or straining for more than a half hour with no progress, try taking her for a short, *leashed* walk (always have a leash, towel, and flashlight with you while walking your brood in active labor, she may deliver a puppy while out on the short walk). **If she continues to be restless and strain for an hour with no progress, she will need to be seen by the vet.**

Remove the first pup and place it on the heating pad in the container when the birth of the next pup is imminent. Removing the puppy from the brood at this point protects the puppy by keeping it out of the brood's way when she is distracted. Make sure the puppy stays warm and dry.

Repeat the weigh, record, check for birth defects, and collar procedure for each. The brood may be offered water, "mothers pudding" (recipe at end of manual), vanilla ice cream, or yogurt in between deliveries, all pups should be encouraged to nurse. For pups that do not readily nurse, squeeze your brood's nipple until a little bit of colostrum/milk is visible, place your finger

inside the pup's mouth to open it and place the open mouth over the nipple with visible colostrum/milk.

## Complications

### Weak Pups

If the pup is moving or breathing, or you hear a heartbeat when you check with a stethoscope, try any or all these methods to stimulate and strengthen it.

First, vigorously rub the puppy with a towel while removing any fluid in the airway. While keeping the puppy's head tilted downward, use the suction bulb syringe to remove fluid from the puppy's mouth.

- Before inserting the syringe into the puppy's mouth, squeeze the bulb to remove the air from inside it.
- Insert the tip of the suction bulb into the puppy's mouth. The tip should reach the back of the puppy's mouth, but don't force it too far into the throat, since doing so could cause injury to the puppy's airways.
- Once the syringe is positioned, gradually release the squeezed bulb. The suction should draw fluid from the mouth and throat into the bulb.
- Remove the bulb from the puppy's mouth and squeeze it again to evacuate fluid and air. Repeat two or three more times, or until you stop drawing fluid out.

**Breeder's Edge® Nurture Mate** – Gel that is rich in colostrum, protein, and other beneficial nutrients. Provides newborns with the energy to nurse aggressively and obtain their needed nutrition. An alternative source of colostrum, it helps support a strong immune system. Comes in calibrated syringes for accurate dosing.

**Stimulants** - Weak pups can be boosted with a chemical stimulant, such as caffeine or glucose. Newborn puppies cannot gag so you need to use an eye dropper to give ONE drop at a time on their tongue, wait for them to swallow before giving the next.

- **Coffee.** Caffeinated coffee can stimulate weak or fading puppies. Put a drop of body-temperature, strong coffee on the pup's tongue. Repeat only 2 or 3 times.
- **Karo Syrup/Frosting.** The sugar in these products can revive neonatal pups that are struggling. Put a drop of Karo syrup or a small dab of frosting on the pup's tongue. Repeat no more than twice. After that, use the Karo syrup/Pedialyte solution.
- **Karo Syrup/Pedialyte Solution.** Make a five-percent glucose solution by adding one teaspoon of white corn syrup (light Karo syrup) to four tablespoons unflavored Pedialyte. Give weak puppies five to six drops using an eye dropper for every 100 grams (3.5 ounces) of body weight. Be sure to give the glucose one drop at a time on the puppy's tongue, making sure it has swallowed each drop before giving the next. If

the puppy is still not nursing, repeat this Karo syrup/Pedialyte solution every four hours, weighing the puppy each time to be sure to use the correct dose of glucose solution. Once the pup gains weight, offer glucose every eight hours until it is 48-hours old. Do not force the puppy to drink the glucose if it does not want to. Most will take hold of the dropper eagerly after the first dose or two.

## Warming

Low body temperature is one of the greatest risks to newborn puppies. They are damp from birth and cannot control their body temperature. The normal body temperature of newborn puppies is 96-97° F (35.6-36.1° C). Take the pup's temperature rectally with a digital thermometer and KY Jelly. If a pup has gotten chilled, you **MUST** warm it before allowing it to nurse or supplementing it with formula since chilled pups cannot digest milk. If you think a pup is chilled, put it in your warming box at 100+° F (50-60% humidity, if possible) or put it directly on a warming pad covered by a towel. Continue to dry it vigorously with a dry, clean towel.

*Revival of apparently dead puppies:* If a puppy appears to not be breathing take clean towels and wipe away all residues. **Remove remaining airway fluid using a suction bulb syringe.** While keeping the puppy's head tilted downward, use the bulb syringe to remove fluid from the puppy's mouth.

- Before inserting the syringe into the puppy's mouth, squeeze the bulb to remove the air from inside it.
- Insert the tip of the suction bulb into the puppy's mouth. The tip should reach the back of the puppy's mouth, but don't force it too far into the throat, since doing so could cause injury to the puppy's airways.
- Once the syringe is positioned, gradually release the squeezed bulb. The suction should draw fluid from the mouth and throat into the bulb.
- Remove the bulb from the puppy's mouth and squeeze it again to evacuate fluid and air. Repeat two or three more times, or until you stop drawing fluid out.

You can do what is known as the "accordion method" to help get the fluid out of the lungs and to the mouth for suctioning. This can be an effective way to remove fluid from a puppy's lungs.

- Hold the puppy in both hands with its belly down and its head to the right.
- Hold the pup's front end in your right hand with your fingers over the top of the puppy. Thus, your right hand over its shoulders with your thumb on its shoulder, pinkie under its neck and middle and index fingers holding the other shoulder and foreleg.
- Your left hand will hold the hindquarters with your hand arched over the pup's rump.
- Your thumb will hold the thigh, the pinkie will be curled by its anus so it can't slip backwards, and your other fingers will hold the other thigh.



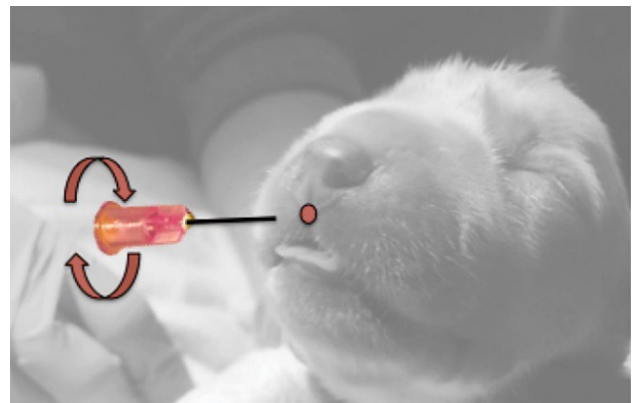
- Pretend the puppy is an accordion. Your hands on the fore- and hindquarters are holding the “accordion’s handles.” Gently stretch the puppy to its full length.
- WAIT two or three seconds in that position for the lungs to fill with air.
- Push the puppy together to its shortest possible length. The air should be heard leaving the lungs and often fluid is seen coming out of the mouth and/or nose. Keep the puppy at the 55-degree angle with the head down.
- Use the suction bulb syringe to remove any fluid from the puppy’s mouth.
- Repeat the STRETCH – WAIT – PUSH sequence about 12 to 14 times per minute.
- The movements should be gentle but strong enough that the puppy is visibly lengthened in the stretch portion and visibly compressed, and the ribs rounded up in the push portion.

Vigorously rub the puppy with clean towels in between suctioning.

Do not swing puppies to revive or stimulate them! This old-fashioned method has been known to cause “shaken baby” in dogs.

**Advanced Resuscitation** - If a pup is still struggling—isn’t moving, is gasping, has blue or pale gums, cannot nurse—there are advanced resuscitation steps you or your vet can take.

- **Acupoint Stimulation.** You can try to revive a seemingly lifeless or very weak pup by stimulating of Ren Zhong acupoint (GV 26) with a 25-gauge needle inserted into the nasal philtrum at the base of the nostrils until you hit bone and then rotating the needle. It may seem scary to do this but if your puppy is non-responsive after 10 minutes of working on it, you have little to lose in giving this a shot.
- **Dexamethasone.** A prescription drug that can be used as a last-ditch effort to save a struggling puppy. Dexamethasone is used to save neonates in other species but has little research in dogs. Although it is purchased as an injectable, give it orally to your pups. Just give a few drops on the newborn's tongue.



If the puppy does not respond in 20 – 30 minutes, it should be considered stillborn. **If you are the only one available, only work on this puppy until your brood or the other puppies need you.**

## Stuck Puppy

Here's some information about the Woods Maneuver, also known as the Wheelbarrow Maneuver:

1. Place brood on her back. If she's small enough she can be in a helper's lap, or she can be supported by blankets or pillows on the ground.
2. You'll want to move her legs in circles to enlarge the pelvic opening and help "unstick" a puppy that may be hung up on the pelvic bones. Hold each leg by her upper thigh. Bring each leg far apart then rotate them up toward her head so that it adjusts her pelvis.
3. If you are comfortable doing so, you or a helper can help gently push the puppy by placing your hand on her abdomen where her pubic bone is (It's below her belly button) and gently pushing on the side of the puppy farthest from the dam's vulva while you rotate her legs (do one leg at a time if you don't have a helper).

All of this should be done in a way that doesn't hurt your brood and never so much that it can damage her joints. Also don't push so hard on the abdomen that you can harm the puppy or the brood. If you can do this along with one of her contractions, it's more effective.

If this does not work call the reproductive veterinarian and be ready to head to the veterinarian's office.

### **Deformities**

As you examine each pup, check for any deformities. The most common are cleft palate and absence of anus. Record these with the weight and sex.

The veterinarian may have to euthanize these pups, but early detection of some problems may save a pup! Reference photos are located at the end of this chapter.

### **Uterine Inertia**

Sometimes because of a large litter or large pups, or a very small litter the brood will not have adequate contractions to expel the pups. It is very important to get an x-ray the week before your brood's due date to see how many puppies you should be expecting. At times, your brood may be able to deliver some of her puppies, and then cannot deliver any more due to uterine inertia. She will need to go into the veterinarian where they may try to induce labor and failing this, a C-section will be performed.

**No Signs of Whelping After 65th Day.** The veterinarian may try to induce labor, but a C-section will probably be performed.

**Breech Birth.** Breech presentation (rear end first) is normal for dogs if the rear feet come out first. If the feet are up under the puppy this may present a problem. Be aware if the sac has been broken before the pup is expelled. In this case the pup may breathe in amniotic fluid. If the rear legs are out and the brood is having difficulty, grasp the legs firmly with a towel and ease the puppy out when the brood pushes. *Do NOT pull on the puppy between contractions.*

**Hemorrhage.** Excessive blood at any time (bleeding bright red blood for 10 minutes or longer) is considered a vet emergency – do not wait, bring your dog and any puppies that have been born to the vet ASAP.

**Vaginal Discharge during Whelping.** If you see light or spring green discharge before the first puppy do not be alarmed, however if you see **dark** green or mustard yellow discharge before the first pup arrives, be prepared to call the veterinarian. This could mean the puppy has broken out of the sac and may get stuck. If there is no puppy within 10 minutes of passing the dark green fluid, call the veterinarian. *Green discharge after the first pup is normal, this is just part of the amnionic fluid and placenta.*

**Vaginal Discharge after Whelping.** If your brood is having green and odorous discharge at any time after all the puppies are born call your Breeding Coordinator. This could be a sign of infection from a retained placenta or a retained puppy. Other signs of infection: repeated vomiting, lethargy, weakness, lack of appetite, and dehydration.

A brownish color discharge is normal after whelping, this could last for a few weeks.

**Contractions that Do Not Produce a Puppy.** Once all the pups are whelped, the brood will stop having contractions. If the brood strains for more than 1/2 hour without producing a pup, a call to the vet is indicated as a pup may be stuck in the birth canal.

**Single Puppy Litters.** Usually a single pup litter will be identified at the time of pre-whelping x-rays. A C-section will likely be scheduled as single puppies are often very large and there is a lack of contraction-causing hormones released.

**Orphan Puppies.** Sometimes, despite everyone's best efforts a brood may die in whelp. In this case, the role of the breeder caretaker becomes more difficult as the puppies will need to be bottle fed, stimulated to toilet, cleaned, and kept dry every 2 hours by you. If another nursing brood can be found, we will introduce the pups to her and hope she accepts them.

Always contact the Breeding Coordinator BEFORE you tube feed a puppy.

Tube feeding instructions - <https://www.youtube.com/watch?v=Z2sdSSmbDCw>

**No Cleft Palate**



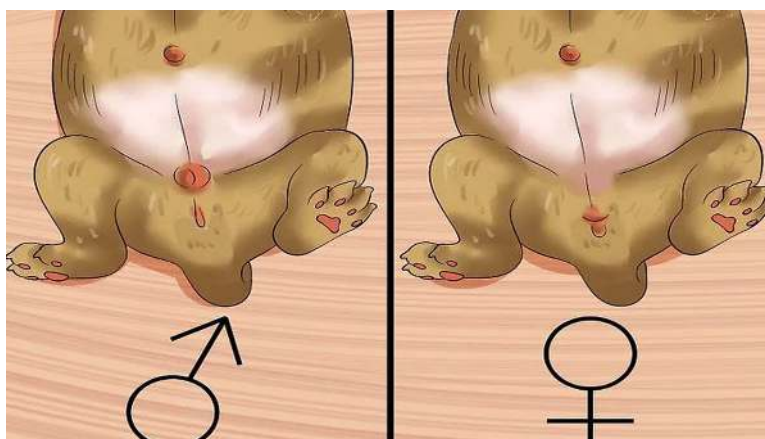
**Cleft Palate - Visible from the Outside**



**Cleft Palate - Must Look Inside the Mouth**



**Puppy with No Anus**



# Post-Whelping

## Post-Partum Visits

If the brood and puppies are in the Rogue Valley, Oregon they will be visited by the Breeding Coordinator daily for the first two weeks. The first two weeks are the most vital to the puppy's survival and it is very important to make sure they are all gaining weight and that their brood is happy and healthy.

Please see Brood and Puppy Care after Whelping manual for the next stage of this exciting journey!



# Puppy Weight Chart #1

Puppy Collar Color and Name \_\_\_\_\_

*Note: Puppies typically lose up to 10% weight post-birth, but should start gaining again*

Day & Date	Time	Weight	Notes
Birth			
Day 1			
Day 2			
Day 3			<ul style="list-style-type: none"> <li>○ ENS</li> <li>○ Nails</li> </ul>
Day 4			<ul style="list-style-type: none"> <li>○ ENS</li> <li>○ Dremel vibration</li> </ul>
Day 5			<ul style="list-style-type: none"> <li>○ ENS</li> </ul>
Day 6			<ul style="list-style-type: none"> <li>○ ENS</li> <li>○ Nails</li> </ul>
Day 7 *Should be on track to double weight on this day*			<ul style="list-style-type: none"> <li>○ ENS</li> <li>○ Dremel vibration</li> </ul>
Day 8			<ul style="list-style-type: none"> <li>○ ENS</li> </ul>
Day 9			<ul style="list-style-type: none"> <li>○ ENS</li> <li>○ Nails</li> </ul>
Day 10 *Should have doubled birth weight*			<ul style="list-style-type: none"> <li>○ ENS</li> <li>○ Dremel vibration</li> </ul>
Day 11			<ul style="list-style-type: none"> <li>○ ENS</li> <li>○ Dremel vibration</li> </ul>
Day 12			<ul style="list-style-type: none"> <li>○ ENS</li> <li>○ Nails</li> </ul>
Day 13			<ul style="list-style-type: none"> <li>○ ENS</li> </ul>
Day 14			<ul style="list-style-type: none"> <li>○ ENS</li> <li>○ Deworm mom &amp; puppies</li> </ul>
Day 15			<ul style="list-style-type: none"> <li>○ ENS</li> <li>○ Nails</li> </ul>
Day 16			<ul style="list-style-type: none"> <li>○ ENS</li> </ul>
Day 17			<ul style="list-style-type: none"> <li>○ Dremel vibration</li> </ul>
Day 18			<ul style="list-style-type: none"> <li>○ Nails</li> </ul>
Day 19			<ul style="list-style-type: none"> <li>○ Dremel vibration</li> </ul>
Day 20			<ul style="list-style-type: none"> <li>○ Dremel vibration</li> </ul>
Day 21			<ul style="list-style-type: none"> <li>○ Dremel vibration</li> <li>○ Nails</li> </ul>



## Puppy Weight Chart #2

Puppy Collar Color and Name \_\_\_\_\_

Day & Date	Time	Weight	Notes
Day 22			
Day 23			
Day 24			
Day 25			○ Nails
Day 26			○ Dremel vibration
Day 27			
Day 28			○ Nails ○ Deworm mom & puppies
Day 29			○ Dremel vibration
Day 31			
Day 32			○ Nails
Day 33			○ Dremel vibration
Day 34			○ Dremel vibration
Day 35			○ Nails
Day 36			
Day 37			○ Dremel vibration
Day 38			○ Nails
Day 39			
Day 40			○ Dremel vibration
Day 41			○ Nails
Day 42			○ Dremel vibration
Day 43			○ Dremel vibration ○ Deworm mom & puppies
Day 44			○ Dremel vibration ○ Nails

# Lactation Guideline

This is a feeding guideline based on a brood fed 1 ½ - 2 cups/day of food pre pregnancy. Her food consumption may vary from the amounts listed here – **this is merely a guideline.** The Breeding Coordinator will advise you if you have any questions regarding feeding.

You may feed smaller portions up to 6x/day.



Stage Lactation	Litter Size	Amount	
Days 0-7	< 5 pups	1 ½ - 2C	2x/day
	5-7 pups	2C	2x/day
	8+ pups	2 1/2 C	2x/day
Days 8-14	< 5 pups	1 ½C -2C	3x/day
	5-7 pups	2C	3x/day
	8+ pups	2 1/2 C	3x/day
Days 15-21	< 5 pups	1 ½C - 2C	4x/day
	5-7 pups	2C	4x/day
	8+ pups	2 1/2 C	4x/day
Days 22-32	< 5 pups	2C	5x/day
	5-7 pups	2½C	5x/day
	8+ pups	3C	5x/day
Days 33-37	< 5 pups	2C	4x/day
	5-7 pups	2½C	4x/day
	8+ pups	3C	4x/day
Days 38-42	< 5 pups	2C	3x/day
	5-7 pups	2½C	3x/day
	8+ pups	3 C	3x/day
Days 43-47	< 5 pups	2C	2x/day
	5-7 pups	2½C	2x/day
	8+ pups	3C	2x/day
Day 48+		Transition to pre-pregnancy diet.	

# Emergency Contact List

## **Hannah Crane**

*Puppy Program Manager*

541-423-8330 M-F 8:00 am - 4:30 pm

907-209-9989 (cell)

## **Animal Medical Hospital**

*Reproductive Vet*

541-482-2786

## **Southern Oregon Veterinary Specialty Center**

*Emergency Vet*

541-282-7711

## Whelping Bullet Points

### *For foster in case of emergency and Breeding Coordinator is unavailable*

- 24 hours before the whelping, brood's temperature drops to 98° or 99°
- Every delivery is different: she may deliver lying down, sitting, squatting, or standing. She may grunt, whine, cry, howl, or stay silent.
- You can't help her at this point; just stay out of it and let her do it. The first puppy is often the most difficult to pass.
- If there is DARK green discharge before the first pup arrives, call the vet.
- **Breech birth** (rear end first)-**It happens sometimes, but it's not preferred.** If the rear legs are out and the brood is having difficulty, grasp the puppy's legs firmly with a towel and **ease the puppy out** when the mother pushes. **Do not pull** on the puppy between contractions.
- If mother doesn't remove the fluid filled membrane, break the sac **AT THE HEAD** and vigorously rub the puppy with a towel. Take the bulb syringe and suck out fluid from puppy's nose and throat. If this is not working, perform the accordion method on the puppy. Only work on this puppy until the mother or other puppies need your assistance.
- If mother does not immediately sever the umbilical cord, tie it off with dental floss about an inch from the puppy and cut it on the placenta side of the floss.
- Write down on paper the number of placentas making sure the number of placentas equals the number of puppies. It's normal and ok for the mother to eat placentas.
- Weigh the pup and record the weight, sex, etc. on the Whelping Record and place a colored collar on the pup. Allow pup to nurse ASAP.
- Check for deformities, such as cleft palate or no anus. Record this.
- If she strains for an hour with no progress, she will need to be seen by the vet.
- Offer mother broth, mothers pudding, yogurt, vanilla ice cream, or water in between puppies.
- If mother is restless, remove pups so they don't get stepped on and place them on the heating pad. Return pups to mother to nurse when she is settled. Repeat as needed.
- **When all pups have been whelped**, take mother outside on leash to toilet. Clean whelping pen and put down new linens.