



## SUFFIELD VETERINARY HOSPITAL: CANINE REPRODUCTION



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Welcome Breeders!

Whether you are fairly new to breeding, or have many years of experience under your belt, this packet has been designed to answer many common questions you may have regarding breeding of your prospective bitch and/or stud. The following packet contains general knowledge from a multitude of sources, as well as protocols specific to SVH. This packet is not meant to replace specific medical recommendations from your veterinarian. Please do not hesitate to call or email with any additional questions!

Sincerely,

The SVH Reproduction Team

- ❖ Dr. Ann Huntington, Dr. Emilie Laston, Kathy, Amber, And Ali S.

## SUFFIELD VETERINARY HOSPITAL POLICIES:

- Information provided by: SVH

The following is a list of recommendations and requirements specific to the Suffield Veterinary Hospital Reproduction Department. Failure to follow the requirements will result in reproductive services not being scheduled.

### Requirements:

- ❖ Pre-breeding exam to screen for health issues prior to breeding.
- ❖ Bitch and stud have been examined within 12 calendar months by a licensed veterinarian and records need to be submitted to SVH prior to any appointments being scheduled if services are not performed by SVH doctors.
- ❖ Bitch must be up to date on a heartworm/tick test (often called a SNAP or 4DX test) within 12 months of breeding and the results submitted to SVH.
- ❖ Bitch and stud must be up to date on rabies vaccination and a copy of the rabies certificate must be submitted to SVH (receipts are not a complete record).
- ❖ Bitch must be a minimum of 18 months (1.5 years) old for reproductive services.
- ❖ Stud must be a minimum of 18 months (1.5 years) old for reproductive services.

### Recommendations:

- ❖ Stud be up to date on heartworm/tick test within 12 months of breeding and the results submitted to SVH.
- ❖ Brucellosis testing for bitch and stud within 30 days of breeding (minimum of once a year) with results submitted to SVH.
- ❖ Bitch and stud be up to date on distemper vaccination, as well as Lyme/Lepto/Bordetella if the owner/breeder so chooses.



## BREEDING CHECK LIST:

➤ Information provided by: SVH

We have prepared the following checklist/schedule to assist you in the planning and care of your stud and/or bitch and her litter. We suggest that you follow this list of good breeding practices.

- We strongly recommend all breed health clearances be completed prior to breeding any stud or bitch. If you are breeding a combination of breeds that do not have parent club or list of guidance's, we recommend screening of hips, elbows, thyroid, eyes, and heart.
- Prior to your bitch coming into season, we require both the stud and bitch to be up to date on vaccinations, annual exam, heartworm/tick testing, and recommend they be free of internal and external parasites.
- We strongly recommend year-round flea, tick, and heartworm prevention. During breeding and pregnancy, there are certain products that have been studied to be safe and efficacious. We can recommend specific products to you based on your needs.
- It is highly suggested to schedule a pre-breeding consult prior to adding a new dog into your breeding program or to ensure that the dog is a good candidate for your breeding program.
- Schedule vaginal cytology and/or progesterone test once your bitch has come into heat. This will help with proper timing of ovulation and the optimal dates for breeding. Once we have the first progesterone results our reproduction team will guide you on when the next progesterone testing or breeding should occur.
- We strongly recommend Brucellosis testing 30-60 days prior to your bitch's anticipated heat cycle. We recommend this testing for both the bitch and stud. This testing should be repeated before each breeding to ensure their health.
- Prior to breeding, we recommend deciding on which form of insemination you would like, i.e., naturals, AI's, TCIs, or SI's. The different methods of timing can affect what type of breeding is possible. If you need SVH's reproduction team to help, please let the technician know at your bitch's first progesterone appointment or pre-breeding appointment.
- We recommend all studs have a semen analysis with an in-estrus teaser prior to his first breeding, and then annually thereafter. To schedule a semen analysis please ensure to schedule in advance. Remember that a teaser bitch is suggested to ensure that the stud provides the best sample. Teaser bitches are not provided and it is your responsibility to find a teaser.
- Schedule an ultrasound for a pregnancy check 28-32 days after last breeding date. We recommend scheduling these appointments the day breeding occurs to guarantee doctor availability.

- Elective cesarean sections are scheduled 63 days from ovulation as indicated by the bitch's progesterone levels (+/- 1-2 days). At SVH, we will hold a 3-day (72 hour) window for elective c-sections that have been appropriately timed, confirmed to be pregnant via ultrasound (through SVH), and we have been involved with either the timing or breeding. We do not schedule elective cesareans for patients that did not have timing or breeding services and a pregnancy ultrasound at SVH.
  - Schedule x-rays for a litter count 5-7 days prior to cesarean/whelp date.
  - Start taking your bitch's rectal temperature twice daily starting 1 week prior to due date. We expect most bitches to be between 99<sup>F</sup>-102<sup>F</sup> during pregnancy. Please keep record of all temperatures. When the rectal temperature drops more than 1 degree, whelping is expected within 24 hours. If planning on a cesarean, call SVH to alert the reproduction staff of this temperature drop.
  - Call for assistance if:
    - There is any bloody, pus-like, or green discharge prior to labor
    - There is no labor within 24 hours after significant temperature drop
    - The 1<sup>st</sup> stage of labor lasts more than 24 hours
    - Firm, regular contractions do not produce a puppy within 45 minutes
    - The interval between puppies exceeds 5 hours – Even if the bitch seems comfortable
    - The bitch goes more than 2 days beyond her due date (based on progesterone timing)
  - Schedule removal of dew claws and/or tail docking 2-3 days after delivery.
  - Schedule first vaccinations at 7-8 weeks of age. We recommend making this appointment soon after the puppies are born to guarantee the most flexibility in the schedule.
- ❖ Please make all appointments well in advance. This will ensure that the SVH staff can effectively care for your pet and provide you with our reproductive services.



## WHAT TO CONSIDER BEFORE BREEDING:

- Information provided by:
  - American Kennel Club – <https://www.akc.org/breeder-programs/breeder-education/akcs-guide-responsible-dog-breeding/>
  - SVH Staff

Canine breeding can be a very rewarding experience. Before choosing to breed, it is best to understand the breed standards and all health testing requirements for the breed you choose. Breed standards and health testing are vital to producing the highest quality puppies, as well as improving on previous generations. Dog breeding is not always easy and may expose difficult decisions along the way.

### ❖ **Knowing your breed:**

We recommend researching your breed's standard and related health concerns through the: OFA.org, American Kennel Club (AKC), United Kennel Club (UKC), and/or a specific breed parent club. Each of the breed parent clubs will have list of recommend health clearances and general breeding information available to you. Your breed standard, as set forth by the parent club, is a detailed description of what makes your breed unique. This description details how they should look, act, and what the breed was initially bred to do. These are the standards of which dogs are judged at dog shows. Health concerns that run within your breed are important to be aware of. These health concerns should not be continued to be bred into the lines of your breed. Proper health testing should be done to avoid heartache and stress, as well as passing on less desirable traits. Some examples of the more common health tests are:

- Eye exams by a vetted ophthalmologist to screen for conditions like blindness, cataracts etc.
- Heart exams to screen for murmurs and arrhythmias
- Thyroid function to screen for hypothyroidism
- Hip and Elbow radiographs to screen for dysplasia

There may be more and/or different tests that can be run for you to ensure that you are being a responsible breeder and are breeding to improve your breed. In most cases, these tests can provide insight into inherited diseases which will help you make informed decisions regarding the appropriate pairing of stud and bitch. We are happy to help you interpret these test results if you need assistance. Testing provides breeders with the tools to breed the highest quality puppies for their respective breed.

### ❖ **Evaluating your dog:**

Not every dog is an ideal candidate for breeding. Before breeding, we recommend seeking the advice of a veterinarian and establishing a relationship with a breeder mentor that is familiar with your breed. These advisors will provide an honest evaluation of your dog. Attending dog shows is a way to see breed standards as well as provide you a chance to get acquainted with other

breeders. Your veterinarian's evaluation will educate you on whether or not your dog(s) is an ideal candidate for breeding, as well as evaluate for any health concerns. Some questions to consider are:

- Are you established at a regular veterinary clinic for regular care?
- Has your dog had an annual exam within the last 12 months?
- Is your dog up-to-date on all vaccinations?
- Has your dog been tested for heartworm, Lyme disease, Ehrlichiosis, or Anaplasmosis? If yes, were they negative?
- Does your dog meet or exceed health testing requirements?
- Has your bitch/stud ever been evaluated for temperament?
- Does your bitch/dog have any current significant health issues?
- Has your bitch had regular heat cycles?
- Is your dog at least 2 years of age?
- Have you completed any health testing or evaluations?

Of course, everyone thinks that their dogs are the cutest, sweetest, and best dog ever. Your personal attachments need to be set aside and you need to honestly evaluate your dog to its breed standard. Does your dog look like those pictured on official club websites? The objective should always be to improve your breed.

#### ❖ **Being prepared for the commitment:**

After all the research you have done on your breed, getting to know your breed and its standard, it is time to prepare for breeding, whelping, and raising a healthy litter. Once your bitch has come into heat, progesterone testing has determined when she ovulated, and breeding has occurred; the next step is managing the pregnant bitch, whelping, and caring for the litter. The road is long and may present many obstacles, but it takes time to create a proper breeding program with sturdy, healthy pedigrees, which is very rewarding when successful!



## STUD MANAGEMENT:

➤ Information provided by: SVH

While most breeding concerns are centered around the bitch and puppies, stud dog health is a small, but important component of successful breeding. The following are some recommendations to maintain a healthy stud and maximize conception rates.

- ❖ Keep all stud dogs up to date on all vaccinations and annual exams
- ❖ Screen for heartworm and tick-borne diseases annually (SNAP tests)
- ❖ Control parasites with a year-round parasite prevention program
- ❖ Have studs tested for Brucellosis at least every 6 months to a year, if not prior to each breeding, depending on how frequently the stud is used
- ❖ Have an annual semen analysis done to monitor for changes to semen health
- ❖ Consider annual bloodwork to monitor all internal health parameters as systemic disease can affect spermatogenesis
- ❖ Feed a balanced diet and talk to your veterinarian about starting any nutritional supplements



## ESTRUS CYCLES IN CANINES:

- Information provided by:
  - Estrus Cycles in Dogs: Breeding, Care and Wellness: by Cheryl Yuill, DVM, MSc, CVH - <https://vcahospitals.com/know-your-pet/estrus-cycles-in-dogs>

Some important questions are:

- ❖ When does a female dog have her first estrus cycle?
- ❖ How often does a female dog come into heat?
- ❖ How long does an estrus cycle last?
- ❖ At what stage of the estrus cycle is a bitch able to get pregnant?

To find the answers to these questions please see the attached link for more information.





## PROGESTERONE TIMING:

➤ Information provided by: SVH

Progesterone timing is becoming increasingly important for the general breeding management of canines. There are many different types of progesterone machines on the market, and unfortunately, they are not all created equal. The two most important aspects of progesterone timing in the bitch, is that the individual managing the timing is familiar with the machine being used, and the trend of the progesterone results. Remember, no single progesterone number is 100% accurate.

- ❖ Some of the more common progesterone timing equipment comes from Idexx, Antech, MiniVidas
- ❖ We strongly recommend timing be done on a single machine, as the trend is more important than individual numbers. Using multiple machines may result in inaccurate timing and failure of the bitch to conceive
- ❖ We recommend progesterone timing in conjunction with behavioral changes and vaginal cytology testing to determine appropriate breeding dates
- ❖ Progesterone testing is not required for natural breeding if the stud and bitch are compatible, and an elective c-section is not expected
- ❖ Progesterone timing is about finding a trend over time. We like to get the first measurement prior to ovulation, while showing signs of heat (usually a value between 1 and 4 on the Idexx scale), a measurement at or just after ovulation, and finally a number that has gone at least 3 points in less than 48 hours after ovulation. For example, a very well-timed cycle could look like this:

Date:	Progesterone Number:
2/16	0.2ng/ml
2/18	1.5ng/ml
2/21	4.3ng/ml
2/24	9.8ng/ml
Date:	Progesterone Number:
5/3	1.9ng/ml
5/5	4.2ng/ml
5/8	15.9ng/ml

- ❖ In both above examples, we can see that we have a point in time where we can approximate when the bitch was around 2 and around 5. On the Idexx scale, the LH surge is around a progesterone of 1-2, and ovulation occurs around a progesterone of 5. On the Idexx machine, values over 5 are not very accurate. Since it does not matter what the number is after 5 (other than we want to see at least a 3-point increase from the previous reading), we are not worried about the accuracy above 5. Other machines may be more accurate or the users may be more familiar with them, resulting in just as good timing as with an Idexx unit. Bitches who progress slowly and never experience a “jump” in their progesterone values are likely to experience an anovulatory cycle and can be a reason for a bitch to not conceive.



## ARTIFICIAL METHODS OF INSEMINATION:

### ❖ Information provided by:

- American Kennel Club – <https://www.akc.org/register/information/artificial-insemination/>;
- American Kennel Club - <https://www.akc.org/expert-advice/dog-breeding/deciding-best-method-artificial-insemination/>

### ❖ Vaginal AI (Artificial Insemination):

The most common, and least invasive method, of artificial insemination is trans-vaginal insemination. In this technique, an insemination pipette is used to deposit semen into the vaginal canal just in front of the cervix. This technique should only be used with good quality semen (fresh or fresh-chilled) and in a bitch with good fertility. Many will use this technique when breeding cannot be accomplished due to location of the bitch and/or dog, physical inability, or behavioral issues that would prevent natural breeding. Since the semen is not pushed through the cervix (as with natural mating), the bitch's hindquarters are elevated for 5-to-10 minutes after the semen is deposited to help encourage semen pooling and increased litter sizes.

### ❖ TCI (TransCervical Insemination):

Transcervical insemination (TCI) is a technique that is popular because it can be used with any form of semen (fresh, fresh-chilled, and frozen). It is one of two recommended insemination techniques for frozen or poor-quality semen. It is a good option for large and giant breed dogs and when only one breeding can be performed. This technique requires the use of a specialized endoscope to help visualize the cervix and allow catheterization of the uterus with a special catheter. Sedation is typically not needed, as most bitches will stand for the procedure. This procedure does involve the use of specialized equipment and a trained inseminator, which can add additional cost.

### ❖ SI (Surgical Insemination):

Surgical insemination is a technique that can also be used with any form of semen (fresh, fresh-chilled, and frozen), although we recommend reserving SI for bitches that have had difficulty conceiving, for poor quality semen, or for frozen semen breeding's. It is also a good choice for older females, females with poor fertility, and those with uterine pathology. However, this is the most invasive procedure for insemination. This procedure does require the use of general anesthesia. An incision is made into the abdomen, and the uterus is identified. Semen is then injected into the uterine horns using a soft catheter.

- ❖ Normal conception rates for all forms of breeding vary from 65% - 95% depending on the bitch's health, the semen quality, the appropriate progesterone timing, and the accuracy of the doctor or technician performing the procedure.



## PREGNANT BITCH CARE:

### ❖ Information provided by:

- SVH
- Pregnant Dog Care: by Wendy Brooks, DVM, DABVP-  
<https://veterinarypartner.vin.com/default.aspx?pid=19239&id=4951916>

### ❖ Exercise:

Regular walking helps the expectant mother keep her strength, but extensive training, showing, or even obedience schooling can be too stressful. Obesity is a dangerous problem for all dogs, but especially mothers, as it can affect blood sugar regulation, affect the weight placed on the mother's joints, and can put the litter at risk. If the expectant mother is overweight before pregnancy, striving for weight loss during pregnancy is not appropriate. However, weight maintenance and slower gain towards the end of pregnancy is very reasonable.

We strongly recommend quarantining bitches as soon as they are bred. We do not recommend showing or competition for any dog or bitch in the household while a bitch is pregnant, as it is an opportunity to introduce pathogens that may put the pregnancy and/or litter at risk.

The last 3 weeks of pregnancy, the mother should be isolated from all other dogs. This means no walks in public and no contact between any other dogs in the home who are exposed to other dogs. The reason for this step, is to prevent transmission of infectious diseases that could result in abortion of the litter. This isolation should continue to 3 weeks after the pups are born.

### ❖ Vaccinations:

We require bitches to be up to date on rabies prior to breeding, and we strongly recommend bitches also be up to date on Distemper, Lyme, and Lepto vaccination prior to breeding. This will allow maximum immunity to be passed to the puppies. During pregnancy an expectant mother should not be vaccinated. The mother will pass on her immunity to her pups in the first milk she produces, called colostrum. Thus, during lactation and pregnancy it is best for the antibody levels to be at their peak.

### ❖ Parasite Control:

The pregnant mother should be on heartworm prevention year-round, and she may continue it through pregnancy. All heartworm products available are approved for use during pregnancy and lactation. Flea control is important during pregnancy, though it is more important after the pups are born. It is important to find a safe product to use during pregnancy. Please seek advice of your veterinarian on which product is best. Internal parasites, like roundworms and hookworms, can be transmitted from the mother to her pups. There are several deworming protocols to control these infections. Please seek advice from your veterinarian as to what protocols there are and which dewormer's are safest.

❖ Appointments:

A female dog or bitch is pregnant for 63 days from ovulation. If no progesterone timing is performed, a bitch's pregnancy can appear to last from 58-72 days. At 30 days after breeding, the bitch should be brought in to your veterinarian for a pregnancy ultrasound. At 5-7 days prior to the bitch's expected due date, an x-ray should be taken to count the number of pups expected. During the first 5 weeks of pregnancy the bitch may experience a bit of nausea and appetite loss similar to morning sickness. This should resolve, if symptoms persist longer than the 5 weeks or are accompanied by lethargy, please consult your veterinarian to ensure this is not something more serious.



## NUTRITION FOR A PREGNANT AND NURSING BITCH:

- ❖ Information provided by:
  - Pregnant Dog Care: by Wendy Brooks, DVM, DABVP - <https://veterinarypartner.vin.com/default.aspx?pid=19239&id=4951916>
  - Dog Whelping: The Complete Guide: By Dr. Greer and the Revival Education Team - <https://www.revivalanimal.com/learning-center/dog-whelping-the-complete-guide-revival-animal-health>
  - Birthing Puppies: By Wendy Brooks, DVM, DABVP- <https://veterinarypartner.vin.com/default.aspx?pid=19239&id=4951546>

Proper nutrition is important for optimizing the outcome of pregnancy and lactation. Late gestational growth of puppies and lactation are the most demanding nutritional periods in a bitch's life. Please refer to the links provided for further information.



## WHELPING/LABOR:

- ❖ Information provided by:
  - SVH
  - Dog Whelping: The Complete Guide: By Dr. Greer and the Revival Education Team - <https://www.revivalanimal.com/learning-center/dog-whelping-the-complete-guide-revival-animal-health>
  - Birthing Puppies: By Wendy Brooks, DVM, DABVP- <https://veterinarypartner.vin.com/default.aspx?pid=19239&id=4951546>

Around the 58<sup>th</sup> day of gestation, we recommend you start checking rectal temperatures twice daily and recording them. Temperature tracking should continue until labor begins. When the bitch's temperature drops by 1-2 degrees (normal canine temperature: 100<sup>F</sup>-102<sup>F</sup>), labor should be expected within 24 hours.

### ❖ Labor Stage 1:

Uterine contractions begin. The bitch may appear restless and may pace, dig, pant, or even vomit. These are all normal signs. We recommend that water is available at all times, and let the bitch be. This stage of labor is long, lasting between 6-12 hours. At this time, it is best to make sure she is urinating and defecating with short walks in your yard.

### ❖ Labor Stage 2:

This is the stage of labor in which the pups are expelled. Usually, a small greenish sac of fluid protrudes from the vulva first. The pups are born with membranes that must be removed immediately or the pups can suffocate. The mother will usually bite or lick these membranes away, if the mother does not do this after 1 to 2 minutes, then clean the pups. To do this you can use a clean towel to wipe away the membrane. The umbilical cord may be tied in a knot or dental floss or a thread can be used to tie it off, about 1 inch from the pup and after the knot it can be cut with clean scissors. Be careful not to pull the umbilical cord as this can injure the pups. Some pups are born tail first, this is abnormal and the mother may need some gentle assistance in expelling the pup from the birthing canal. Expect 1 pup every 45-60 minutes with 10 to 30 minutes of hard straining. It is normal for bitches to take a rest partway through delivery, and she may not strain at all for up to 4 hours between pups. If she is straining hard for over 1 hour or if she takes longer than a 4-hour break, please consult your veterinarian.

### ❖ Labor Stage 3:

This stage is the expulsion of the placentas and afterbirth. The mother may eat the placentas, but this may cause the mother to vomit later on. You can clean the placenta away from the mother, it



is not required for her to eat it. There is much debate over how many placentas to let a bitch consume. We do not have specific recommendations other than allowing the bitch to consume at least 1-2 placentas as this will help keep her energy up.

❖ Post-whelping:

Expect normal vaginal discharge after whelping. This discharge should be odorless and may be green, dark red, brown, or bloody. Small amounts of this discharge may last up to 8 weeks. If your bitch is experiencing large volumes of bleeding after birth, she may have sub-involution of her placental sites and may need treatment to reduce the hemorrhage. Seek veterinary care if this occurs.



## POTENTIAL HEALTH ISSUES:

### ❖ Information provided by:

- SVH
- Birthing Puppies by Wendy Brooks DVM, DABVP -  
<https://veterinarypartner.vin.com/default.aspx?pid=19239&id=4951546>

### ❖ Call your veterinarian if you see:

- 30-60 minutes of strong contractions occur with no puppy being produced
- 6 hours of weak, intermittent contractions with no puppies being produced
- She fails to go into labor within 24 hours of her temperature drop
- There is a greenish-black discharge and no labor or puppies within 3-4 hours. This discharge is normal if it is soon followed by the delivery of a puppy.
- Greater than 65 days of gestation have passed.

### ❖ Metritis (Inflammation of the Uterus):

Signs of this condition are as follows:

- Fever
- Foul-smelling vaginal discharge
- Listlessness
- Loss of appetite
- No interest in the puppies
- Decreased milk production

If these signs are noted, usually within 24-48 hours of delivery, a veterinarian should be consulted. Your dog may have retained a placenta or have suffered trauma during delivery. Dogs who require assistance with delivery are often predisposed to metritis. Your dog may need to be spayed afterwards.

### ❖ Eclampsia:

This condition results when the bitch has trouble supporting the calcium demand of lactation. Calcium supplementation prior to whelping predisposes a bitch to this condition. Usually affected dogs are smaller breeds, but all breeds can be potentially affected.

The signs are:

- Nervousness
- Restlessness
- Stiff, painful gait
- Reduced mothering behavior/aggression towards puppies

These signs progress to:

- Muscle spasms
- Inability to stand
- Fever
- Seizures

This condition usually occurs during the first 3 weeks of lactation and a veterinarian should be consulted immediately.

❖ Mastitis (Inflammation of the mammary glands):

Normal nursing glands are soft and enlarged. Diseased glands are red, hard, and painful. The bitch may be sore and discourage the pups from nursing, however, it is important to keep the pups nursing the affected glands. This is not harmful to the puppies and it helps flush out infected material. Warm compresses and manual milking may help the mother to pass some of the infected material. Most mothers are excellent and problems are few. The basic rule is to seek veterinary care if she seems to feel sick or if she ceases to care for her young. Puppies nurse until they are about 5-6 weeks old and then may be fully separated from their mother.

❖ Agalactia (No milk production):

Milk production and secretion (let down) is essential for the puppy's nutrition. If the puppies are nursing but it appears that the milk is simply not flowing, there are a few simple things to try at home before going to the veterinarian. First, make sure the puppy is not too warm and the mother has plenty of food and water and that she seems to be healthy in other respects. If these issues seem controlled, the next step is to determine if milk is being produced and not let down or simply not being produced. There are different hormones that affect each process. Your veterinarian will need to intercede with treatment for the mother. The first milk produced is colostrum, and is vital to puppy health. Colostrum contains essential nutrients and antibodies that are required for puppies to survive. If no colostrum is present at the time of delivery, your veterinarian will likely draw blood from the mother (or another healthy, fully vaccinated adult) and spin it down to collect the serum. The serum is given as injections to boost puppy immunity.



## WEANING:

- ❖ Information provided by:
  - SVH
  - The Important Role of Breeders in Getting Puppies Off to a Healthy Start:  
<https://www.akc.org/expert-advice/dog-breeding/important-role-breeders-getting-puppies-off-healthy-start/>
  - How long should puppies stay with their mother? :  
<https://www.vet.cornell.edu/departments-centers-and-institutes/riney-canine-health-center/health-info/how-long-should-puppies-stay-their-mother>

- ❖ When should you start weaning puppies?

The process should start at 3-4 weeks of age, once the puppy's teeth start to erupt. The discomfort of nursing teething puppies may cause the mother to pull away before her pups are completely satisfied. Hungry pups will naturally seek an alternative source of food. Weaning is a very important step in puppy development. As long as the bitch tolerates nursing, it is safe to allow her to continue. If she becomes aggressive towards the puppies due to pain from their sharp teeth, and the puppies are older than 6 weeks, then the puppies can be fully weaned.

- ❖ Step 1: Make Gruel:
- ❖ Step 2: Offer the gruel to the puppies:
- ❖ Step 3: Reunite the puppies with their mother:
- ❖ Step 4: Gradually increase the amount of solid food:

When you are beginning the weaning process, the puppy's diet should consist of only 10% solid food. The gruel should be transitioned to less liquid and more solid food until the puppies are able to eat the canned or dry food without diluting it. Then, you should gradually increase the amount each pup is getting each week until their diet is 100% solid food by the time, they reach 7 or 8 weeks of age.



## WHELP WISE INFORMATION:

- ❖ Whelping management has long been a process that people had to learn from mentors and/or other breeders or veterinarians, and was often a “wait and see” process. Whelping management and interventions by yesterday’s standards were frequently based on symptoms rather than accurate information on uterine contractions and fetal heart rates. Whelping decisions, when based on subjective symptoms rather than objective data places the breeder or veterinarian in a passive, rather than active, role in the whelping process. Using symptoms of panting, nesting and inappetence to determine that a bitch is in labor is a very inaccurate way to document a labor. Physical symptoms of a whelping-gone-wrong may not be present and are often a late indication of a problem. With the WhelpWise service, new standards are being established for canine reproduction that allows decisions to be made on uterine pathology (increased or decreased contraction strength, frequency etc.) and fetal heart rates, which encourages early intervention.
- ❖ For more information, please call Veterinary Perinatal Specialties at (303) 423-3429 or 1-888-281-4867. Web address: <https://www.veterinaryperinatspecialties.com/>. Please visit our web site for case studies.

**The WhelpWise™ service is offered exclusively by:  
Veterinary Perinatal Specialties  
[www.veterinaryperinatspecialties.com](http://www.veterinaryperinatspecialties.com)**



## INFORMATION PROVIDED BY:

1. Reproduction Doctors and technicians of Suffield Veterinary Hospital
2. Birthing Puppies by Wendy Brooks DVM, DABVP - <https://veterinarypartner.vin.com/default.aspx?pid=19239&id=4951546>
3. Dog Whelping: The Complete Guide: By Dr. Greer and the Revival Education Team - <https://www.revivalanimal.com/learning-center/dog-whelping-the-complete-guide-revival-animal-health>
4. Birthing Puppies: By Wendy Brooks, DVM, DABVP- <https://veterinarypartner.vin.com/default.aspx?pid=19239&id=4951546>
5. Pregnant Dog Care: by Wendy Brooks, DVM, DABVP - <https://veterinarypartner.vin.com/default.aspx?pid=19239&id=4951916>
6. American Kennel Club – <https://www.akc.org/register/information/artificial-insemination/>
7. American Kennel Club - <https://www.akc.org/expert-advice/dog-breeding/deciding-best-method-artificial-insemination/>
8. Estrus Cycles in Dogs: Breeding, Care and Wellness: by Cheryl Yuill, DVM, MSc, CVH - <https://vcahospitals.com/know-your-pet/estrus-cycles-in-dogs>
9. American Kennel Club – <https://www.akc.org/breeder-programs/breeder-education/akcs-guide-responsible-dog-breeding/>
10. The Important Role of Breeders in Getting Puppies Off to a Healthy Start: <https://www.akc.org/expert-advice/dog-breeding/important-role-breeders-getting-puppies-off-healthy-start/>
11. How long should puppies stay with their mother? : <https://www.vet.cornell.edu/departments-centers-and-institutes/riney-canine-health-center/health-info/how-long-should-puppies-stay-their-mother>
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