

Breeding your Dane?

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Introduction

Breeding a litter of puppies is a task to be taken very, very seriously. You are producing life of your own volition for a wide variety of reasons. Some of those reasons will be good ones, some will not. But this decision should be thought through very, very carefully. Before reading further, please read the Breeding your dog FAQ (we posted them for your viewing). Also, this document should be taken only as a starting point. If after reading this document, you still want to breed your bitch, I strongly suggest that you get and read at least some of the books listed in the resource section. (for anyone interested, we can refer you to a couple of books written by certified vets and available for sale at local Vet clinics).

Further, I recommend you consult with your bitch's breeder for guidance in this matter. Dogs should be bred for one reason and one reason only: To improve the breed. If you are reading this with the intention of breeding to make a quick buck, educate the children, or to fulfill your bitch's feminine needs, please don't breed your dog! Seriously, as you'll learn as you read on, done properly, breeding is rarely a money-maker; more likely a money drain! Children can become educated much more fully than you intended when something goes wrong in a breeding. Losing the bitch and all her puppies is probably not the lesson you intended but it happens all too frequently. And, of course, as to the last one, most bitches really want to be your beloved companion 24 hours a day, so if you really want to make your dog happy, spay her and spend more time with her! But, if you are determined to go on, then please read this FAQ thoroughly. It covers the responsible breeding of dogs to produce quality puppies and give them the best start in life.

If you have a dog that is pregnant right now, please do not use this FAQ as your sole source of information. Look for a qualified veterinarian in your area to assist you with whelping the puppies.

The information in this FAQ has been obtained by my own experience, research through the literature and by talking to knowledgeable breeders. Many thanks go to Vicki Blodgett and Terri Herigstad for being so willing to share their hard won expertise. Also, I'd like to thank Cindy Moore for her support of my first solo FAQ project.

Preparing the Bitch

What do I need to do before I breed my bitch?

This is really two questions. What should I do before I decide to breed my bitch and, then, once that decision is made, what do I do next.

Okay, what do I do before I decide to breed my bitch?

Before you breed a dog, you need to decide whether or not that dog is an appropriate candidate for breeding. First of all, no bitch should be bred before the age of 2. They are just not physically mature enough yet. Let them grow up and develop before they go through the physical strain of breeding, carrying, and whelping puppies. This shouldn't be a problem however, because you'll be plenty busy during those two years. Your dog will be in preparation for breeding for the first two years of her life. Everything you do for her, including providing quality nutrition and health care, obedience training, showing, working, and loving will make her a better mother and help her to produce a healthier litter.

I can see why nutrition and health care are important concerns, but how do those other things make her a better brood bitch?

They are all important in different ways. The most important is probably the last one. Pregnancy, delivery, and puppy raising are very stressful on a dog and knowing that you love her really does make her job easier. For one thing, she'll trust you to help with the puppies, rather than feeling that she needs to defend them. The obedience training comes into play in the strangest ways. Sometimes a female will get overly anxious when her new puppies start crying: being able to put her on a down stay so that she is giving them ready access to what they want (food!) will give you great peace of mind. These are just a few examples of why all this preparation is important.

Okay, but what about showing and working, how can those have any effect on her qualities as a brood bitch?

There are two reasons why a brood bitch should "get out of the house." First of all, she'll be a happier dog if she has activities in her life and gets to go places with you and do fun things. If she's happier, she'll be a better mother. It's that simple. Secondly, you need to have some way of knowing that your bitch is worthy of breeding. That sounds very judgmental, but I'll remind you that we are discussing responsible breeding here. That means that we are breeding to better the breed. The best way to ensure that you are improving the breed is to only breed quality animals to other quality animals with an eye to minimizing faults and strengthening good qualities. We'll discuss more on choosing a stud dog later, however, you also need to choose your brood bitch. If you are starting out with your first dog, you'll need to look long and hard at her and decide if she's worthy of breeding. This has nothing to do with how much you love her -- obviously you do -- this has to do with bettering the breed. This can be a difficult decision to make when your

heart is involved. Hearts tend to fuzz up our vision so that faults are minimized and good qualities are enhanced. This is where the idea of showing and testing our animals originated. These events give us a better idea of whether or not our dogs are worthy of breeding. But, keep in mind, everyone has their own standards and they won't all agree. Some people won't breed a bitch until she's a Champion in the show ring. Some people don't consider a bitch worthy of breeding until she's got her Master Hunter title or her Utility Dog title. You have to make these decisions yourself, keeping in mind the idea of bettering the breed. At the minimum, you should have her evaluated by another, more knowledgeable pair of eyes. Her breeder would be an ideal choice, however, that's not always possible. Any experienced breeder in your particular breed should be able to help you evaluate your bitch honestly and without the rosy glow of love changing your perspective.

Okay, I'm satisfied that she's a quality bitch, worthy of breeding, what's the next step?

Hold on there! Not so fast! This is a long process, remember? There is another reason you need to wait until your bitch is over two years of age. Health Checks! You'll need to have various health checks done in order to determine whether or not your dog should be bred. The necessary health checks vary from breed to breed and you should consult a good book on your breed or a knowledgeable breeder to determine what tests you'll need to have done.

The most common tests are:

Joints: Have a veterinarian x-ray your dog's hips, elbows or other joints and submit those x-rays to the OFA (Orthopedic Foundation for Animals) for evaluation. If your dog's hips are rated Fair, Good, or Excellent, your dog is normal and can be bred. If they are rated dysplastic, please discuss this diagnosis with your vet and spay your bitch as soon as possible. Hip Dysplasia is an often painful joint disorder that can be treated in various ways. It is hereditary and no dog that is dysplastic should be bred.

Eyes: In many breeds, a disease called PRA (Progressive Retinal Atrophy) is a serious problem. A board-certified veterinary ophthalmologist can examine your pet's eyes and ensure that they are normal. This test must be done on an annual basis. Since PRA is a progressive disease, a dog can be fine one year and show symptoms the next. Eye examinations can then be sent on to CERF (Canine Eye Registry Foundation) for certification which must be renewed annually. There are other eye diseases (such as cataracts) common to different breeds as well; you will need to research to find out what is applicable for your breed.

Others: Your breed may well have its own genetic time bombs. You will need to research your specific breed in order to know what testing you need to have done before considering breeding your bitch.

Brucellosis: This is a canine venereal disease that can be transmitted in other ways as well. Even virgin dogs or bitches should be tested prior to breeding. Most stud dog owners require recent brucellosis tests before allowing breeding to occur. They will generally have tested their dogs within the last six months. If they haven't tested their dogs in the last six months, ask that they do so before breeding to your bitch!

You should require all of the same testing from the stud dog owner as well as providing it to them. More on choosing a stud dog, below.

Choosing a Stud Dog

Choosing a sire for your litter is as important a decision as choosing your bitch was originally. You need to spend some time and effort on this decision. This is a good time to get some expert advice. If at all possible, you should consult with your bitch's breeder and ask them to spend some time with you going over the various options so that you understand why one dog would be better for your bitch than another. If your breeder or another expert isn't available to spend some time with you, then you'll need to do the research on your own so you can make a knowledgeable decision.

The first thing you'll want to do is take the information you've gathered over the years about your bitch and analyze her strengths and weaknesses. Does she have a weak top line but a nice front? How is her rear angulation? What about her coat texture? Her temperament? You can see how why getting your dog out and showing and/or working her can be helpful in this process. If you don't know what's wrong with your bitch, you don't know what you want to fix in a future generation. And, that's really what you are trying to do -- improve the breed by improving on your bitch. So be brutally honest with yourself. You know you love your bitch, that's not in question here, but if you can't be honest about her flaws, then you can't fix them in a future generation. You'll want to focus on one, maybe two, problems that you'd like to see improved and look for a stud dog who is strong in those areas without being too weak in some other area. It can become a delicate balancing act -- of course, with no guarantee of success.

There are two main theories in breeding that you'll want to understand. The first one is probably the simplest: breeding like to like. This means that you take the overall look of the bitch and find a stud dog that physically compliments her look. The theory is that if you breed like to like, you'll get like.

The second way to approach a breeding is more complicated. It's called line breeding. It involves analyzing the pedigrees of your bitch and the potential stud dogs to choose a good match. There are several ways to approach line breeding. First of all, you need to understand several terms.

Line breeding is similar to breeding like to like only instead of collecting physical similarities, you are collecting the genes of a particular dog. *Inbreeding* is an extremely

close line breeding. When you are starting out in breeding, you want to keep away from inbreeding as it is risky unless you are very sure of the pedigrees involved. The last type of pedigree-breeding is an outcross. An outcross breeding will have a pedigree where there are no, or at least very few, dogs in common. This often happens when you are breeding like to like. Most breeders practice some form of line breeding, generally focusing on one of the important studs in their breed.

Of course, you want to make sure that the dog you are concentrating on is worthy of the honor. If you line breed on a mediocre dog -- or a dog with a particular health problem -- you'll get what you asked for. This type of breeding is particularly tricky and you want to make sure that you have carefully researched the dogs in your bitch's pedigree so that you know where you'd want to go with the line breeding.

In practice, you'll probably want to employ a combination of these two techniques. You'll want to find a pedigree that is complimentary to your bitch and a dog that is physically compatible as well. Again, this is a really good time to seek the advice of knowledgeable breeders. Choosing a stud dog is also a really good reason to become active in the breed's activities while your bitch is young. This will allow you to be familiar with various stud dogs before you bitch comes in season.

Once you've narrowed your choices down to two or three likely candidates, you'll want to call the stud dog owners and interview them about their dogs. Most stud dog owners will be honest with you about what their dogs are producing, their strengths and weaknesses, and what you can expect. If they aren't forthcoming about the problems as well as the benefits of their dogs, you should probably steer clear of them.

At some point in the process, you'll have to make a decision about which dog will be best for your litter. No one can make this decision for you but if you've done your homework and been honest with yourself about your bitch, then you'll probably find a compatible dog. Then you are ready to enter the genetic crap shoot and see what you get. Because we know so little about the complicated genetics behind our dogs, you really are making a shot in the dark. Even the most experienced breeder makes mistakes -- this is why you want to be very careful and thorough in your research.

Once your decision is made, you'll want to notify the stud dog owner about when you expect your bitch to come in season so that they can make their own plans. You will probably want to get your bitch to the stud dog within the first week of her season so that she has time to adapt to her new surroundings before being bred.

Paperwork

Keep the following information on file for each bitch/litter you produce:

Heat Record

1. Name of bitch
2. Litter Number (way to differentiate between litters at your kennel)
3. Date of onset
4. Interval
5. Smear date and results
6. Progesterone Test date and results
7. Breeding dates and comments on breeding
8. Palpitation dates and results
9. Ultrasound date and results
10. X-ray date and results
11. Notes on pregnancy
12. Track weight gain weekly
13. Track temperature from day 58-65, 3 times daily
14. Date and time whelping began
15. Date and time whelping ended
16. Notes on whelping

Litter Record (as required by the AKC)

1. Breed
2. Registered name and AKC number of dam
3. Registered name and AKC number of sire
4. Sire's owner's name
5. Date mated
6. Date litter whelped
7. Number of male puppies born
8. Number of female puppies born
9. AKC Litter Number
10. Sex, Color/Markings, Puppy ID number, Date Sold, Date Died, Name and address of person to whom sold, Dates when following paperwork was supplied: registration application or certificate and bill of sale; name and AKC number of puppy.

Additional Litter Information

1. Time each puppy was born
2. Ribbon color or other identifying mark
3. Color of puppy
4. Sex
5. Weight at birth
6. Length at birth
7. A description of any problems
8. Whelping date
9. Sire and Dam
10. Time whelping started and ended
11. Notes on whelping

Puppy Record

1. Ribbon color
2. Call Name
3. Registered Name
4. Sex
5. Color
6. AKC Litter #
7. AKC Registration #
8. Date of Birth
9. Sire and Dam
10. Weight at Birth and when sold
11. Vaccinations Given (Date and Type)
12. Owner (include address and telephone numbers)
13. Date sold
14. Conditions of sale
15. Price
16. Notes on Development and Temperament
17. On the back of this form, track the weight of the puppies daily until they are three weeks old and then weekly thereafter.

Litter Registration Application

Contact AKC and request this form. Once puppies are whelped, complete this form and have stud dog owner sign the form. Send the completed form with appropriate fee to AKC. It's nice to send a self-addressed stamped envelope with the application to the stud dog owner so they can mail it on to the AKC without delay. Litter registration applications must be received by the AKC within six months of date of whelping in order to register puppies with the AKC. However, you should submit this form as soon as the puppies are whelped so that you can deliver the correct paperwork to the puppy buyers when they pick up their puppies.

Puppy Registration Forms

For each puppy listed on the Litter Registration Application, you will get a registration form to give to the puppy buyers so that they can register their puppies with the AKC. Technically, the puppy buyer can name the puppy anything they want. In reality, most breeders insist on their kennel name being the first word in the dog's name. Additionally, some breeders have themes for their litters and require the name of the puppy to fit into that theme. Make any special requirements known to the buyers well in advance so they can pick out an appropriate name for their puppy.

Breeding Timeline

Pre-Season

- Choose your stud dog ahead of time. Let the stud dog owner know when you expect your bitch to come in season. They'll let you know about any requirements they have.
- You should choose a backup as well, just in case your first choice isn't available
- Have your bitch examined by a veterinarian to ensure she is healthy. Have a brucellosis test done as well.
- As soon as you see first signs of your bitch being in season, contact the stud dog owner. If your stud dog is out-of-the-area, you'll want to discuss shipping arrangements at this time so that you'll be able to make all the necessary arrangements.
- If this is your bitch's first breeding, you'll want to know when she's ready to be bred. See your veterinarian about smears and/or progesterone testing. This will help you pinpoint the right time to get your bitch to the stud dog. This will typically be between days 10 and 15 but could be much earlier or later.
- You'll also want to schedule a brucellosis test so that the results will be current for the stud dog owner.

When the bitch is ready

- Contact the stud dog owner and let them know when and how the bitch will be arriving.
- If you are shipping the bitch, the stud dog owner will pick the dog up at the airport and will need all the information. You should send all the paperwork with the bitch. You can just tape an envelope to the crate.
- If you are delivering the dog yourself, get good directions and bring all your paperwork.

When the bitch comes home

- Your bitch will stay with the stud dog owner for a week or two.
- When your bitch comes home, you should get some paperwork with her from the stud dog owner, including a contract, copies of the stud dog's health clearances, the stud dog's pedigree, and information on when the bitch was bred.

Pregnancy Timeline

Week One

DEVELOPMENT OF THE PUPPIES

- Fertilization occurs

- 2 cell embryos are in the oviduct
- The embryo is fairly resistant to external interference in development

CHANGES IN THE BITCH

- Possible morning sickness
- Possible personality changes

CARE OF THE BITCH

- Normal feeding
- Normal exercise -- if she didn't normally get exercise before pregnancy, she should start getting moderate exercise every day
- Check any and all medications with vet prior to administering
- No insecticides (i.e., flea treatments)
- No live vaccines

TO DO LIST

- Put together pedigree on litter
- Write contract
- Contact AKC for litter registration application
- Start taking puppy reservations

Week Two (Days 8-14)

DEVELOPMENT OF THE PUPPIES

- Embryo will be 4 cell at start of week and 64 cell by end of week
- Embryo enters the uterus

CHANGES IN THE BITCH

- Possible morning sickness

CARE OF THE BITCH

- 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 embryos in uterus

CHANGES IN THE BITCH

- See above

CARE OF THE BITCH

- See above

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
- Organogenesis begins-- Embryos are at their most susceptible to defects
- Days 26 - 32 are the best days to palpitate (i.e.. feel for the puppies)

CHANGES IN THE BITCH

- Possible clear vaginal discharge
- Mammary development begins
- After Day 26, palpitation may be possible to diagnose pregnancy

CARE OF THE BITCH

- Limit strenuous activity (such as working, jumping, long runs)
- Add 1/4 cup cottage cheese or a hard boiled egg to food on alternating days

TO DO LIST

- Schedule ultrasound or palpitation with vet if desired

Week Five (Days 29-35)

DEVELOPMENT OF THE PUPPIES

- Development of toes, whisker buds, and claws
- Fetuses look like dogs

- Gender can be determined
- Eyes (previously open) now close
- Fetuses grow from 18 mm - 30 mm
- Organogenesis ends -- embryos are now fairly resistant to interference with development

CHANGES IN THE BITCH

- Swelling becomes noticeable
- Loss of "tuck-up"
- Weight will start to increase

CARE OF THE BITCH

- Slightly increase amount of food and switch to puppy kibble. If you feed one meal a day, add a small extra meal. If you feed twice a day, slightly increase one of the meals.
- Add daily multi-vitamin for dogs
- Palpitation no longer possible due to fluids in uterus

TO DO LIST

- Nothing special this week

Week Six (Days 36-42)

DEVELOPMENT OF THE PUPPIES

- Development of skin pigment
- Fetuses should weigh around 6 grams and be 45 mm long
- Fetal heartbeats can be heard with stethoscope

CHANGES IN THE BITCH

- Nipples darken and enlarge
- Abdomen continues to enlarge

CARE OF THE BITCH

- Add cottage cheese or hard boiled egg to food daily
- Increase the amount of food in the extra meal
- Bitch should start sleeping in whelping box

TO DO LIST

- Assemble whelping box

- By this time you should be fairly sure that the bitch is pregnant. Notify the people on your puppy list. Let them know when you expect delivery.

Week Seven (Days 43-49)

DEVELOPMENT OF THE PUPPIES

- Growth and development continues

CHANGES IN THE BITCH

- Abdomen hair will start shedding
- The bitch will start to look pregnant at this point

CARE OF THE BITCH

- Slightly increase both meals

TO DO LIST

- Stop any roughhousing or jumping
- Radiographs (X-rays) possible to determine number and size of puppies

Week Eight (Days 50-57)

DEVELOPMENT OF THE PUPPIES

- Fetal movement can be detected when bitch is at rest
- Puppies can safely be born from now on

CHANGES IN THE BITCH

- Milk may be squeezed from nipples
- The bitch will be very large.

CARE OF THE BITCH

- Add moderate lunch

TO DO LIST

- Gather whelping kit (see below)
- Prepare phone list for help/support. It should include your vet's phone number, the emergency clinic's phone number, the number of any friends who will be offering support during whelping, and anyone else you might

need to contact before, during, or after whelping (like your office to let them know you won't be in!)

- Make sure your car is gassed up and ready for a possible emergency trip to the vet's office.

Week Nine (Days 58-65)

DEVELOPMENT OF THE PUPPIES

- Growth and Development continues

CHANGES IN THE BITCH

- Nesting behavior may be seen
- Bitch may become distressed (panting, pacing, acting uncomfortable)
- Temperature should be around 100.2-100.8 degrees Fahrenheit
- When temperature drops to around 98-99.4 degrees Fahrenheit, puppies should be born within 24 hours
- Appetite may disappear as whelping approaches

CARE OF THE BITCH

- Start taking temperature three times a day

TO DO LIST

- Notify vet or emergency clinic when temperature drops so that they will be ready if you have any problems
- Keep detailed records on temperature and behavior of bitch
- Double check that whelping supplies are ready

Post Partum

- Make sure each puppy gets some of the bitch's colostrum (first thin milk) within first 24 hours. Colostrum is loaded with antibodies to protect the puppies from disease. It also helps to condition their tummies to accepting food.
 - Lochia (vaginal discharge) should be reddish to reddish-brown (green is okay on first day). If you see black discharge, contact your vet immediately!
 - Within 5-6 hours of last puppy's birth, take bitch and puppies to vet for check up. The vet will ensure that the bitch hasn't retained any puppies or placentas and that the puppies are in good health. Ask your vet to check the puppies for cleft palates and what options are available. This vet visit is something that should not be skipped. If the bitch has retained a placenta or puppy, she could quickly develop a serious infection which could prove deadly.
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Preparing Your Whelping Kit

Car

Have your car ready in case you have to make a quick trip to the vet's office. Ideally, you'll have someone to drive while you sit with the bitch. Take some towels with you because it is very common for the bitch to start delivering with the motion of the car. You should protect your car's carpeting or upholstery with a sheet or blanket that can be washed. Make sure the car is gassed up and ready to go. If you need to make the trip, you don't want to have to delay for things like that. If you don't have someone to help with driving, make sure you have a large crate to safely contain the bitch and any puppies that are born on the trip.

Whelping Box

A box with sides large enough for the bitch to stretch out comfortably. She and the pups will live in the box for the first few weeks. The whelping box should have guard rails (also called pig rails) extending from the sides to protect the puppies from their mother rolling over on them. The size of the box will depend on the size of your dog.

Newspapers

Keep a good supply of newspapers on hand to line the whelping box during the actual whelping. As the papers become messy, you can just put a new layer down and clean the whole thing up when the whelping is over.

Trash Can

Keep a trash can on hand for use during the whelping and while the pups are growing up. Trust me -- puppies are messy!

Paper Towels

See above!

Incubator Box

You'll need a smaller box on hand to put the puppies in when Mom is delivering another puppy. You don't want the pups to get cold so line it with a towel and keep it near a heat source or put a heating pad under the towel. A clean laundry basket works well for this -- and is easy to carry when you need to take the pups to the vet for their first checkup.

Sharp Safety Scissors

For cutting the umbilical cord.

Quick Stop Powder

To stop bleeding, if there is any, after cutting umbilical cord.

Betadine

For cleaning umbilical cord end after cut.

Hemostat forceps

For clamping off the umbilical cord prior to cutting it. You can use two and tear the cord as an alternative to cutting it. This helps inhibit bleeding.

Dental Floss

For tying off the umbilical cord after cutting it.

Surgical Gloves

Use if you have to help deliver the puppies.

Digital Thermometer

- For checking the bitch's temperature in the day's before her due date.
- Bulb Syringe**
For helping clear out puppies who are born with problems.
- Flashlight**
Puppies always seem to come in the middle of the night and if you need to let your bitch go outside, you'll need to keep a close eye on her. A good strong flashlight will make that easier.
- Leash and flat buckle collar**
Same reason as above. If you take her out on a leash, she's less likely to disappear into a dark corner and leave a puppy there without your knowledge.
- Clock**
For timing the whelping and the time between puppies.
- Notebook**
For recording details. The puppy sheets mentioned in the record keeping sheet will work as well.
- Rickrack Ribbon**
For identifying puppies. Tie a loose bit around each pups neck when you check them out and weigh them after birth.
- Food Scale**
For weighing the puppies at birth and daily thereafter.
- Microwave Heat Pad**
These chewproof pads are heated in the microwave for 5-7 minutes and stay warm for approximately 12 hours. Since they don't use electricity, they are much safer than the old options of heating lamps or heating pads. One brand name for these is Snuggle Safe Heat Pad.
- Fan**
If the weather is very hot, you should keep a fan on hand. This is more for the mother than the pups. Don't set the fan up to blow directly on the pups but rather to move the air across the top of the whelping box. If the mother is panting a lot in the whelping box once she's finished and has rested, set the fan up so that she can cool down and be comfortable with the puppies.
- Whelping Box Pads or Blankets**
While the pups are still in the whelping box, you'll need to keep a blanket or pad in their box. This pad will need to be changed twice a day or more, depending on how well the dam cleans up after the pups. A piece of fleece with a towel sewn to the back the same size as the whelping box makes a great pad. They can be washed and bleached to keep them clean. Having four on hand will keep you from having to do continuous laundry. Don't put these pads in the whelping box until the whelping is over.
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Whelping the Litter

Well, it's show time! Your bitch is ready and, hopefully, so are you! The information below is for a normal whelping. If your experience deviates much from this description,

then you should immediately contact your vet. Delaying seeking help could endanger the puppies and/or your bitch. This is definitely a time to remember to be "better safe than sorry."

On day 58 after the first breeding, you'll want to start taking your bitch's temperature three times a day. A bitch's temperature will drop from around 101.4 to 99 degrees Fahrenheit or below a few hours before she is ready to whelp. A fluctuation in temperature is very normal, what you are looking for is a dramatic drop to below 99F. The temperature drop is the best indicator of imminent whelping. Other signs of imminent whelping are restlessness, discomfort, licking and looking at vulva. The bitch may refuse food prior to whelping as well. She will probably pant heavily.

These are all signs that whelping is imminent. Call your veterinarian and let them know that the whelping is beginning so that they will be ready to answer any questions or give advice if you have any problems. The bitch will start pushing and straining at some point and may start digging at the bedding. She'll pant heavily between contractions. The contractions should be visible in the muscles along her back, assuming you can see her back muscles through her coat. You'll see them start at the top of her body and move down.

If labor continues an hour or so without producing a puppy, let the bitch go outside and walk around. This can help the labor progress. Also, the urge to push can feel, to the bitch, as if she has to defecate. A well-trained bitch will not want to break housetraining and will fight the urge to push, delaying labor. If the bitch is willing to go outdoors, keep a close eye on her. If its dark, take a flashlight. A maiden bitch, in particular, may not know what to do with a new puppy and may abandon it.

If labor continues for more than three hours without producing a puppy, call your vet! You will probably need to take the bitch into the vet.

Assuming labor continues normally, the contractions will come faster and the bitch will start pushing seriously. The water sac will appear, probably break, and then the puppy will be delivered shortly. The placenta may or may not be ready to be delivered at this point. You can gently pull on the cord to see if it will come but you should never pull on the puppy to check. You may pull the cord off the puppy and risk an umbilical hernia.

The bitch may want to eat the placentas. Opinions vary about whether or not this is a good idea. Some people think it's good nutrition for the bitch when she's exerting great effort. Others feel that the bitch will get diarrhea from eating them. Some breeders compromise by letting the bitch eat one and then keeping them away from her. Whatever you do, you want to make sure that you have a placenta for each puppy born. If the bitch should retain a placenta, she is at risk of having a serious uterine infection.

If you want to do to take over from the bitch at this point, you'll need to clear the water sac away from the puppy's nose and mouth first. Hold the puppy upside down to help drain fluid and mucus from its nose and throat. Rub the puppy very vigorously -- even

roughly -- with a dry, clean towel until the puppy squeaks. This rubbing will both clean the puppy and stimulate it to start breathing.

Many people allow the bitch to clean the puppy and chew off the umbilical cord. Others worry that the bitch may chew the cord off too close to the puppy resulting in an umbilical hernia and choose to deal with this themselves just to be safe. If you choose to do the task yourself, you'll want to cut the cord about 1" away from the body and tie it with plain dental floss. Dip the tip and the floss in Betadine solution (or another disinfectant such as iodine). It will dry up and drop off in a day or so.

Once the pup is breathing and clean, whether you did it or the dam did it, you'll want to check the puppy out carefully, weigh and measure the pup, check for abnormalities such as cleft palate, and identify the puppy in some way. Rickrack ribbon works very well. Measure and cut a piece large enough to tie loosely around the puppy's neck. This is only necessary if your puppies are very similar. Other ways to mark the puppies include clipping bits of their fur on different parts of their bodies or marking them with nail polish.

If the bitch is having a break between puppies, you should let the puppy nurse. The colostrum (milk produced in the first 24 hours) is extremely important for the puppies. It carries immunities that protect the puppies from infection. The puppy's nursing will also stimulate the bitch's contractions allowing her labor to progress. Take a chance to rest and relax while you can. Don't worry, however, if you can't get the puppies on the dam right away. They can go several hours without getting milk with no problem. Once labor starts up again, move the puppies into to the incubator box for safety while the dam is distracted.

Very often there will be a longish break between puppies about half way through. You can take the bitch outside, although she may not want to leave the puppies (you should encourage her!). Again, you'll want to keep a close eye on her to make sure she doesn't deliver a puppy out there and not know what to do with it.

The puppies can come as quickly as 15 minutes apart or as long as an hour apart. If the bitch goes more than an hour and you think there are more puppies, call your vet! There may be a puppy stuck and you'll want to ensure that you get it out as soon as possible.

When your bitch is finished whelping, you'll notice her calm down. Her breathing will slow and the contractions will stop. You should take the bitch and her puppies to the vet within the next four or five hours if at all possible. Don't go more than 24 hours without having them checked out. If the bitch has a retained puppy or placenta, she is at risk for serious infection. If any of the puppies have cleft palates or other deformities, you need to know as soon as possible. Such puppies are usually humanely euthanized by your vet as they are generally not likely to live.

There are a variety of problems you may run into. Again, keep your vet and/or emergency vet's phone number handy in case you run into a situation you aren't prepared for. If you have any question about what is happening or what you should do next, don't hesitate to call the vet. You really are dealing with life or death situations and it's much better to be safe than sorry.

Some breeders suggest keeping some drugs on hand to help the bitch should she have trouble delivering. You can discuss this with your vet but I don't recommend this practice. This drug is very strong and can cause serious complications if the problem is a large puppy blocking the birth canal. A better option is to keep in contact with your vet and take your bitch in if necessary.

There are some alternative medications that many breeders are using and recommending now that have similar results without the risk of injury. For a bitch whose labor is slowing down, there is a homeopathic treatment called *Caulophyllum* (Blue Cohash). This should be administered when the bitch is in a non-productive labor. Do not use it unless the bitch is clearly in labor. For puppies-in-distress, you can try a product called Bach's Rescue Remedy. It is a good gentle "kick start" for pups in trouble. You would just put a couple of drops on the puppies tongue. The nice thing about these remedies is that they can't be overused. They are extremely gentle. Detractors from homeopathic or alternative measures will tell you that these treatments won't do anything, good or bad. (For more information on this topic, see the Resource section below. There are a couple of books on Natural Health.)

The first problem you might see is a bitch that starts labor but doesn't proceed to delivering. First you should try walking her around outside to see if that helps her relax enough to start pushing. If that doesn't work in about 15 minutes, you can try a technique called "feathering." Put on surgical gloves and apply a small amount of lubricant such as KY Jelly. Gently, gently, gently insert one finger into the bitch's vulva and gently tickle - or feather -- her along the top of her vagina. This can help stimulate stronger contractions. If this doesn't produce a quick result or the bitch is acting tired at all, call your vet. You will probably be making a trip in to get some expert care.

The vet will probably x-ray your bitch to determine how many puppies are waiting to be born and whether or not you are dealing with a malpresentation (puppy trying to go out the wrong way). If all looks well, the vet will probably give your bitch injections of calcium and/or pituitary oxytocin. These injections often stimulate strong contractions and get the labor moving along. If they don't work, or if you are dealing with an overly large puppy or a malpresentation, the vet will probably recommend a cesarian section. C-sections should not be taken lightly but they are often unavoidable. They are very expensive and put the life of the mother and puppies at great risk. You should decide at this time whether or not you want the vet to spay your bitch during the C-section. Sometimes, there won't be any choice. If the uterus is badly damaged or infected, they will have to spay your bitch at this time. Once you reach the point of a c-section, many of the decisions will be taken out of your hands.

Discussing this possibility with your vet ahead of time is a good idea so you can find out what procedures they use and how amenable they are to your helping to revive the puppies as they are delivered. Many vets will not allow you into their examination area, however, some are grateful for the additional hands in reviving puppies. One of the biggest problems with a C-section is the anesthesia given the bitch. Because the puppies are still attached to her system, they will, inevitably, be anesthetized as well. It is really important that your vet take this into consideration when anesthetizing the bitch. Many vets will 'mask her down' and this is the recommended procedure. This means that the vet administers isoflourane gas to start her off, rather than administering a drug like Valium-Ketamine to put her to sleep before starting the gas. If your bitch is high-strung and/or aggressive, the vet will probably insist on doing the Valium-Ketamine option, but if your bitch is placid and biddable, you should ask that they mask her down. The gas is much easier on the puppies systems and they will be much easier to revive. The recovery of your bitch will be difficult after a c-section. It is major abdominal surgery and puts a huge strain on her system. However, if all goes well, she will still be able to care for and nurse her litter. Your vet will give you detailed instructions for her care. They will often prescribe antibiotics to help her avoid infection. You should be careful administering any antibiotics as they will generally cause both the dam and the pups to have diarrhea.

A situation when you won't have time to get to the vet is when you can't get a puppy breathing. Every puppy should be rubbed vigorously until they squeak and start moving around. Some of them are born with a squeak and don't need any additional help but more often than we'd like, puppies need extra help. If the vigorous rubbing doesn't work, you'll want to act quickly. The fastest way to get fluid out of the puppy's throat and nose is to hold the puppy firmly and raise it above your head and swing it quickly down between your legs. The centrifugal force can clear the nose and throat. Make sure that you support the puppy's head and neck while you do this so its delicate neck is not damaged. If this doesn't work, you can try using a bulb syringe to aspirate any possible fluid. While you are working on the pup, keep rubbing it vigorously and make sure it stays warm. Hopefully you'll be rewarded with that gasp of life and a healthy puppy.

At some point, however, you may have to give up on a puppy. This is an extremely difficult decision but if you've worked on the puppy for 15 minutes without response, you are unlikely to revive the puppy. Consult with your veterinarian about what to do with the dead puppy. Sadly, this isn't an uncommon event in a whelping.

Again, there is no shame in calling your vet for help. If you are unsure what to do or are presented with a situation you or your bitch don't understand. Get professional help!

Once the whelping is over, you'll be ready to let the new family settle down and get some well-deserved rest. And you'll need that rest yourself. Make sure the bitch has relieved herself and gotten some fluids. Give her a sponge bath so she is clean and fresh. Feeding her chicken broth with brown rice is a good first meal after whelping as it will be gentle on her stomach but give her plenty of fluid and nutrition.

A first-time mother may have some serious doubts about these puppies, particularly if the delivery was painful for her. This is another time where obedience training comes in handy. It is extremely important that you get the puppies nursing both for their sake and hers. Put the bitch on a down-stay, get in the whelping box with her to reassure her, and put the puppies on her. If she growls or complains, just climb in the bitch, make her lay down and keep her head away from the puppies. She's going to be tired and won't fight you too much -- besides, she's used to obeying your commands, right? The obvious benefit here is that the pups will get that necessary colostrum which will provide them with their mother's immunities. The added benefit, however, is that the nursing triggers the release of hormones into her bloodstream. These hormones help promote the bitch's mothering instincts. The more the puppies nurse, the more loving the mother will feel towards them. (It's true of humans as well.) Hopefully, the bitch will settle down and feel content as the puppies nurse. You should still supervise her with the puppies until you are sure she has fully accepted them and her new role.

Raising Puppies Timeline

Week One (Days 1-7)

DEVELOPMENT OF THE PUPPIES

- 90% of time spent sleeping
- 10% eating
- Susceptible to heat/cold
- Instinctive reflexes: crawl, seek warmth, nurse
- They can right themselves if placed upside down
- Needs stimulation for urination/defecation
- Rapid development of central nervous system
- Need constant care from bitch
- Rectal temperatures 94-97 degrees Fahrenheit
- Pups may lose 10% of weight after birth, but should start gaining again
- Weight should double by end of week

CARE OF THE PUPPIES

- Chart weight daily (2 x daily first 2 days)
- Examine puppies daily
- Trim nails weekly
- Keep whelping box around 85 degrees Fahrenheit (this means if it's hotter than that out, put a fan in the room or turn on the air conditioning, if it's colder than that get a heat lamp to put above the whelping box)
- When you handle the puppies, it's a good idea use a towel when you hold them. The puppies urinate upon stimulation and will inevitably find your attention stimulating!

- If your breed requires tail, ear, or dew claw docking, schedule this with your vet.

CARE OF THE BITCH

- Keep dam on fluids for first 24 hours (i.e.. chicken broth, etc.)
- Feed three full meals a day after that
- Supplement with 250 mg Vitamin C twice daily
- If puppies are fussy, supplement bitch with Vitamin B complex
- Check mammary glands twice daily (looking for signs of mastitis -- swelling, hardness, pus, etc.)
- Keep an eye on vaginal discharge (looking for signs of infection)
- Make sure bitch eats, drinks, and relieves herself -- once her mothering instincts kick in, you may have to force her to leave the puppies to do these things.

TO DO LIST

- Keep detailed records on puppies' weight and behavior
- Keep charting bitch's temperature
- Call puppy buyers with results of whelping

Week Two (Days 8-14)

DEVELOPMENT OF THE PUPPIES

- Eyes should open around days 8-10
- Ears should open around days 13-17
- Temperatures should be around 97-99F

CARE OF THE PUPPIES

- Keep whelping box around 80-83F
- Begin holding puppies in different ways (applying light stress)
- Trim nails weekly

CARE OF THE BITCH

- Bitch should get three times her normal amount of food

TO DO LIST

- Continue as above

Week Three (Days 15-21)

DEVELOPMENT OF THE PUPPIES

- Teeth begin to erupt
- Puppies stand up and start walking
- Begin to lap liquids
- Defecate/urinate without stimulation
- Start becoming aware of environment
- Start playing with littermates
- Develop sense of smell
- Puppies will start to discriminate as to where to relieve themselves

CARE OF THE PUPPIES

- Start adding stimuli (toys) to puppies' life
- Start giving specific stresses when handling (i.e.. pinch an ear or toe gently).
- Start giving pups milk replacer to lap for one meal a day -- after two days, add some very mushy food
- Weigh puppies every 2 days
- Give puppies a dirty shirt of yours to play with
- Start weekly grooming sessions (brush, trim nails, look at teeth, etc.)

CARE OF THE BITCH

- Continue as above

TO DO LIST

- Purchase milk replacer to feed puppies

Week Four (Days 22-28)

DEVELOPMENT OF THE PUPPIES

- Begin to eat food
- Begin to bark, wag tails, bite, paw, bare teeth, growl and chase
- Use legs well
- Tire easily
- Depth perception starts

CARE OF THE PUPPIES

- Keep mom with them a lot! Things can get overwhelming at this age and Mom will add stability for them
- Each pup needs individual attention

- Offer small amounts of food that is the consistency of cooked oatmeal (puppy food mixed with water and mashed up in a blender)

CARE OF THE BITCH

- Continue as above

TO DO LIST

- Start limiting bitch's access to pups before offering them food

Week Five (Days 29-35)

DEVELOPMENT OF THE PUPPIES

- Group activities and sexual play will begin
- Dominance order starts
- Rapid growth/development

CARE OF THE PUPPIES

- Reduce fluids in puppies' food
- Make sure other people start coming to see pups
- Begin weaning
- Play radio at normal volume near pups for 5 minutes at a time

CARE OF THE BITCH

- Start reducing amount of food to discourage milk development
- Keep a careful eye on mammary glands

TO DO LIST

- Discuss vaccination schedule with veterinarian

Week Six (Days 36-42)

DEVELOPMENT OF THE PUPPIES

- Growth and development continue

CARE OF THE PUPPIES

- Offer soft, damp food
- Chart weekly weight

- Individual attention crucial -- give each puppy time with you away from litter

CARE OF THE BITCH

- To prepare bitch for weaning: Day 1 -- no food
Day 2 -- 1/4 normal maintenance meal
Day 3 -- 1/2 normal maintenance meal
Day 4 -- 3/4 normal maintenance meal
Day 5 -- full amount of normal maintenance meal
- Keep bitch on puppy food for several weeks to help her recover from the strain of breeding, whelping, and raising puppies
- Keep careful eye on mammary glands

TO DO LIST

- Continue as above

Week Seven (Days 43-49)

DEVELOPMENT OF THE PUPPIES

- Total hearing/visual capacity
- Will investigate anything
- Can't respond yet to name

CARE OF THE PUPPIES

- Pups should be weaned and on regular puppy food
- Pups can go to new homes

CARE OF THE BITCH

- Keep careful eye on mammary glands until milk is completely dried up

TO DO LIST

Week Eight (Days 50-56)

DEVELOPMENT OF THE PUPPIES

- First fear period
- Starts learning name

CARE OF THE PUPPIES

- Don't ship puppies
- Can start training puppies in small steps

CARE OF THE BITCH

- Continue as above

TO DO LIST

- Continue as above

Week Nine (Days 57-63)

DEVELOPMENT OF THE PUPPIES

- Develops strong dominant and subordinate behavior among littermates
- Begins to learn right behavior
- Motor skills improve
- Short attention span
- Starts focusing attention on owner rather than other puppies
- Separate littermates
- Start house training

CARE OF THE PUPPIES

- Continue lots of individual attention

Week Ten (Days 64-70)

DEVELOPMENT OF THE PUPPIES

- Safe to ship puppies by air

Finding And Dealing With Puppy Buyers

Finding good homes for your puppies should be one of your highest priorities. This is not an easy task but it is a very rewarding one. Matching the right dog with the right family is a great feeling! Responsible breeders try to have a list of interested buyers before they do the breeding -- or at least before they whelp the litter. As stated before, there is a serious pet overpopulation problem in this country and no litter should be bred without a purpose. That purpose should include providing wanted puppies to good homes.

The most effective way to find homes is by connecting into the network of breeders in your area. This is best done by finding a breed or kennel club in your area, joining, becoming active, and taking advantage of their resources. Many clubs publish litter listings in their newsletters and then club members refer callers to those litters. This is another way that your active participation in showing, training, and working your dog makes you a better breeder. By building a network of resources doing these activities, you open yourself up to puppy referrals.

Advertising can be useful but should be done with care. Many breeders advertise upcoming litters in breed publications. Newspaper ads should be considered a last resort as you should have homes lined up before the puppies are born.

When word gets out that you are doing a breeding, you'll probably start getting phone calls from potential buyers. You should carefully screen these buyers over the telephone and ideally in person before putting them on your puppy list. The type of information you should be trying to get from the buyers should focus on their potential as dog owners. Try to evaluate their intentions and their understanding of what is involved in raising, training, and caring a dog. You should try to evaluate their home in terms of things like whether or not they have a fenced yard, if they will be able to provide the type of exercise appropriate to the dog. If your breed has special grooming considerations, you should make sure that they understand these as well.

Part of your job as a breeder is acting as a counselor of sorts to your puppy buyers. In addition to the above information, you'll want to make sure they understand all the health concerns for your breed. If they don't ask the right questions, you should be prepared to fill them in on the information while explaining everything you have done to avoid these problems. Also, make sure that a puppy is the right choice for them. When screening puppy buyers, one ends up referring a lot of them to Rescue organizations if they don't have the time or energy to raise a young puppy.

Most breeders provide a packet of information with their puppies. These packets include the bill of sale, any health guarantees (as discussed below), details on what the dog should be fed, details on what shots and worming the dog has been given, etc. Puppy packets can also include descriptions of the breed, pedigrees, photos and health clearances on the parents, information on training, and other items of interest.

A breeder should be willing to make a lifelong commitment to the puppies they produce. They should be willing to answer questions or concerns at any time in the dog's life. Many breeders make a further commitment to take back a dog at any time in the future should the owner's be unable to keep the dog. People's lives can change with little or no notice and dog's sometimes suffer. Rather than seeing one of their puppies end up in the pound, breeders often put a "right of first refusal" into their contracts.

The AKC has recently started offering limited registrations. This is a great option for breeders who want to ensure that the puppies they produce don't get used in the future to add to the pet overpopulation problem. Limited registrations mean that the dogs so

registered can't be shown nor can their offspring be registered with the AKC. The breeder can change the registration in the future should the owners decide they want to show or breed it. The breeder is the only one who can make that change. If you go with this option, you'll want to explain this carefully to the pet buyers so that they don't misunderstand or have a problem with it when they come to collect their puppy.

Health Guarantees

Every dog breed has health problems associated with it. Responsible breeders do everything in their power to avoid these problems in their litters. More and more breeders are finding some way to stand behind their breeding program by providing guarantees or warranties on their puppies. The details will change depending on the breed and the types of problems seen in the particular breed. You'll have to decide what you want to guarantee. Many people offer money or a replacement puppy upon receipt of proof of the particular problem. Some states have what are called "Lemon Laws" that protect puppy buyers. You should investigate the laws in your state to make sure what your obligations are.

One example is with hip dysplasia: many breeds have a problem with dysplasia and it is extremely common to evaluate the parents' hips. However, even with these measures, there is no way to ensure that the puppies won't be affected. If the puppies end up having problems, some breeders will refund the purchase price with the intention of easing the veterinary bills for the owners. Other breeders will offer a replacement puppy to the owners for sometime in the future. Some breeders insist that the affected puppies are returned. Some breeders will insist that the affected puppy be spayed or neutered before honoring their guarantees. Whatever you do, you need to be very clear with your buyers about your policies to avoid problems in the future.

Financial Considerations

Many people go into breeding thinking that it's a great way to make some easy money. Nothing could be further from the truth. Done correctly, breeding is rarely a money-making venture. If there are any problems at all, breeding generally becomes a financial disaster. So, you have to be prepared for possible expenses that may or may not occur. Keeping a credit card cleared off in case it's needed can be a good way to handle this type of problem.

Most breeders get a deposit of some sort from potential buyers at some point during the process. Some breeders require a deposit before putting buyers on their list. Some don't accept deposits until the puppies are born and they are sure they have a puppy for the buyer. Whatever you decide to do, please be sure to carefully explain under what

circumstances you will or won't return the deposit so as to avoid unpleasantness in the future.

Whatever your deposit arrangements, you should require payment-in-full before turning your puppies over to the new owners. The price of the puppies depends on your breed and the market in your area. Ask around among other breeders, consider your expenses, and set a fair price for your puppies.

If you have a large litter with no problems, you can expect to pay your expenses and, perhaps, make a little extra money. If you have any problems at all, including a small litter, you will probably lose money on breeding a litter. Done correctly, breeding puppies is no way to make your fortune.