

BREEDING FROM YOUR BITCH

Information on nutrition, how to get prepared, essential items for your whelping kit and what to expect during the birth

Avoiding malnourishment of a bitch from the pre-breeding phase to parturition is vital to the health of both the bitch and her pups. Good nutrition and proper prenatal care play important roles in ensuring the birth of healthy human children. The same is true in ensuring that our canine friends are born healthy.

Proper care and feeding of a breeding bitch should begin long before she is actually bred and even before her estrus cycle begins. If you and your veterinarian decide a bitch is a good breeding candidate, based upon a thorough physical exam in which she is found to be in good health and free of any physical abnormalities that may jeopardize pregnancy or whelping, as well as any potentially dangerous inheritable conditions, then the real work begins. She should be evaluated and treated for internal as well as external parasites that could impair her health or be transmitted to her offspring. She should also be given all appropriate vaccinations, as determined in consultation with your veterinarian.

The prospective breeding bitch should be weighed to help evaluate her overall nutritional status. Dietary adjustments in amount or type of food should be made at this time to achieve optimal body weight. A bitch who is either overweight or underweight will have less reproductive success.

Veterinary nutritionists strongly believe that malnourishment of bitches before breeding and during pregnancy is a major factor in neonatal puppy mortality, which is estimated to be between 20 and 30 percent. Just like growth and performance, reproduction is a physiologic state with nutritional requirements that exceed those of a maintenance phase. A bitch who is pregnant or has just given birth draws upon the nutritional reserves deposited in her body before and during pregnancy. A malnourished female will not have sufficient protein, vitamins, minerals and energy to support pregnancy.

Malnourishment of a breeding bitch can occur as the result of feeding poor-quality diets, imbalanced diets or insufficient amounts of good-quality diets. It can happen at any stage of her reproductive cycle, though perhaps the danger is greatest during late pregnancy, when nutritional needs greatly increase. Improper feeding of a breeding bitch can result in impaired health of both the bitch and her offspring, can cause low conception rates and birth defects, problems carrying the entire litter to

term, dystocia (labour difficulties), as well as improper mammary development, which reduces the quality and amount of the milk and colostrum produced. Overweight bitches, as well as those who are underweight, may also have many of these problems.

Nutritional deprivation during pregnancy has been shown to affect the immune systems of both the bitch and her pups. The immune system is very sensitive to nutritional inadequacies during its formation and development. It can also affect the immune system's ability to function during future pregnancies as well, even if proper nutrition is restored.

Many times the malnourishment of the bitch is not evident until it is too late. She may appear thin and out of condition once whelped, with inadequate muscle and body-fat reserves to support lactation. The pups may suffer from "fading puppy syndrome," appearing weak, crying frequently, eating poorly and lacking coordination. Many of these pups face early death.

To ensure adequate nutritional status of the bitch prior to breeding, many veterinarians will do some simple blood work to determine whether the bitch is anemic or has low blood protein. If either problem is detected, this would indicate malnourishment and should be corrected prior to breeding.

Feeding a pregnant bitch

A healthy diet during pregnancy will ensure both the dam and her puppies are happy and healthy. During the pregnancy she will need a higher amount of energy and protein to nurture her puppies and to give her extra boost of nutrients for when she gives birth.

The best way to keep your bitch in good health is to feed a balanced and nutritious diet. In my experience the majority of bitches that go off food during pregnancy are fed a dried kibble/biscuit meal. Dry food should have 30% protein and 20% fat. Bitches need to consume sufficient calories to support their developing puppies. A failure to eat sufficiently will produce undersized puppies with a poor start in life. Also, the failure of a dam to eat may result in vitamin and mineral deficiencies that could even jeopardize the well-being and life of the puppies. If your bitch goes off her food try a good quality wet food like Forth glade which contains 70% meat. Some bitches will benefit from a good home cooked diet of chicken, beef and lamb mince and vegetables, try a supper treat like scrambled egg, yoghurt, and cottage cheese.

Depending on each stage of her pregnancy, the nutrient intake is different because your dog's body will undergo changes requiring you to modify the number of nutrients that she needs.

Some common supplements can be harmful or even toxic in large amounts. For example, Vitamin D is an essential vitamin that helps promote healthy bones in developing puppies. However, it is a fat-soluble vitamin. Fat-soluble means that any excess Vitamin D not immediately used by the dam's body will be stored. Over time this storage of excess can result in a toxic level of Vitamin D in the dog's body.

The other type of vitamins, water-soluble, are not stored. Any vitamin not immediately used by the dam's body is secreted by the kidneys in the urine. All the B-vitamins including folic acid are water-soluble ones.

Excessive or prolonged vomiting or morning sickness which is occasionally seen in pregnant women, i.e. hyperemesis gravidarum, does not occur in dogs. Any vomiting which occurs in a dog that is excessive or happens outside of week four or five of pregnancy is caused by another health problem. Any illness which causes several days of vomiting will need to be urgently treated by a veterinarian. Dehydration in a pregnant dog can result in fetal death (stillbirth) and miscarriage. Veterinarians may need to give a pregnant dog IV fluids while sorting out the cause of the vomiting and rendering treatment.

During the first half of the pregnancy, or from day 1 to 39, the puppies will grow no more than 30% of their full size, and your dog can be fed as normal. Giving a significant increase in diet portion is unnecessary during this time. Adding more food than what the developing fetus needs at this point will lead to the mother becoming overweight. These extra nutrients will present a problem either during the whelping or even on the development of the puppies. Adding more vitamins and minerals can disturb their hormonal balance. For instance, adding a lot of calcium or vitamin D can affect the hormones that naturally release calcium in your dog's body and lead to eclampsia when she begins to nurse her puppies. Therefore, you should only add calcium during the last days of the pregnancy to relieve birth pains and help the contraction the uterus, and after whelping.

Adjustments during Pregnancy

- For the first four/five weeks food intake shouldn't be that much higher than normal.
- Between weeks six and seven, the pregnant dog's weight will increase. At this time, put out 25 / 75 percent more food, dependent on the number of puppies she may be expecting.

- In week nine, her appetite may reduce, this is often a sign that the babies will be born in the next day or two.

Lactation

- After the puppies are born, expect your dog's diet to steadily increase over the next 20 to 30 days as the puppies grow and nurse more.
- After the first month, the mother may be eating three or four times the amount of food she ate before pregnancy. With large litters many breeders will free feed and let the bitch eat as much as she wants/needs.
- Give her all she wants and encourage her to eat by moistening the food.
- In the third week, the puppies will probably start nibbling at her dish, which is a good way to introduce them to solid food.

Raw feeding – only applicable to those that raw feed as you need to make a few adjustments and omit bone for the last two weeks of gestation

The average dog diet is built very roughly around the ratio 5:1:1, that is 5 parts raw meat on the bone (or mince with bone in it), 1 part fresh organ meat (liver, kidney, heart), 1 part vegetables (to help it pass through the system). A few small tweaks to this process at certain times is all that is necessary when considering what to feed a pregnant dog.

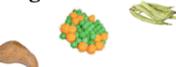
It's a fallacy to believe that beef and chicken provide the same nutrients for our dogs. Beef is an excellent source of vitamin B12 and very good source of protein, niacin, vitamin B6, selenium, zinc and phosphorus. It is also a good source of choline, pantothenic acid, iron, potassium and vitamin B2. While the vitamins and nutrients look similar, they're not the same nor do they contain the same amounts. By rotating a dog's protein source, we're providing a more balanced, nutrient-rich diet for our dogs.

Chicken is an excellent source of niacin and very good source of protein and selenium. It is also a good source of protein, selenium, vitamin B6, and phosphorus. It is also a good source of choline, pantothenic acid and vitamin B12.

When raw feeding a pregnant bitch simply give her more of everything! She's building mini-versions of herself and they need the same things that she needs. So feed her more meat on the bone, more muscle fresh meat, and more organ meats.

Muscle meat feeds their muscle meat, fresh cartilage helps make strong joints, fresh bones lead to optimum bone growth and organ meats are broken down to form organs. The latter is particularly important and often overlooked, as, organ meats are probably the most important thing, nutritionally, for dogs. Their diets should consist of 10 to 15% organ meat, particularly for pregnant bitches.

Include as much variety in their diet as possible; liver, heart, kidney, eyes, spleen etc. Try not to include too much of the one thing as the different body parts are beneficial to different parts of the dog's system.

5 Fresh Meat 70%	1 Organ 10-15%	1 Bone ~10-15%
 <ul style="list-style-type: none"> Beef Lamb Pork Duck Rabbit Kangaroo 	 <ul style="list-style-type: none"> Liver* Kidney Spleen Pancreas Brain Eyes 	
 <ul style="list-style-type: none"> Chicken Turkey 	 <ul style="list-style-type: none"> Tripe Heart 	1 Other 
 <ul style="list-style-type: none"> Fish (from frozen) Eggs 		Extra Bits 

By Week 5 INCREASE QUANTITY

Increase the amount of food she is being given by approximately 20-30%

By Week 6 INCREASE FAT, DECREASE BONE

Her stomach capacity will shrink as her pups grow. Decrease her portion sizes and increase how often she is fed; three, four, maybe even five, times a day. You can increase the fat content of her diet at this point. You do this by selecting more red meats (duck, pork, beef) than white (chicken, turkey, fish). Fatty beef mince is probably the easiest ways of adding some much needed energy.

IMPORTANT: START REDUCING THE BONE CONTENT OF THE MEAL NOW BY USING MORE BONELESS MEATS

The food quantity should increase gradually over time and by week 8 she may be consuming 50 - 100% more food than she was pre-pregnancy. By this stage the bone content of her food should be nil.

In the last week (week 9), she will begin to eat less, so gradually reduce the amount of food. By the time she whelps, the feed quantity maybe half of what it was the previous week (with no bone), with many only eating 25% of the previous weeks total. A day or two beforehand some bitches will stop eating altogether and the same can happen afterwards. Don't worry, you have given them lots of reserves to draw upon.

Postpartum (after birth feeding)

Once she begins to eat again, one can start thinking about getting calcium back into her diet. She needs fresh meat mince with bone in it. You can also feed chicken backs, necks, carcass, wings, and egg shells. You can also feed goats milk, cottage cheese and yoghurt.

Calcium is stored in the bones. Before birth the parathyroid pulls calcium from the bones to help form the skeletons of the new pups but also to increase the contractibility of heart and uterus walls. During birth oxytocin controls the duration and frequency of contractions but calcium and the parathyroid controls the strength. If you feed too much calcium, such as a raw diet with lots of bones, then the parathyroid can sort of go on vacation during labour when you actually need it to work.

A lot of breeders will free feed giving the bitch as much as she wants to eat, especially with large litters, and you may need to feed your bitch four/five times a day to satisfy her appetite.

FIRST STAGE LABOUR can last from as little as an hour to 24 hours. Usually after their rise in temperature, labour would begin within this timescale. Most commonly the first stage lasts 24 hours so don't be alarmed if this is the case, it's very normal.

Please don't leave your bitch alone, give her lots of verbal reassurance and comfort. They may not want to eat but make sure you're offering water. They will look tired and sad and you will feel awful for them.. if they do eat, they might be sick.

This first stage includes behaviour such as

- heavy panting
- shaking/shivering
- licking their lips
- digging and scratching at their bedding
- rapid breathing
- pacing around and staring into space
- trying to hide away under beds, chairs, in the bushes of the garden etc.

You can give her a couple of towels/blankets to dig at, this is how they handle the pain of dilating. If they start to pause during their panting/ rapid breathing you need to look for signs of pushing. Their body will tighten up and they will pause to concentrate and push. Pushes start small (short and infrequent, lining up the puppies) and get stronger (longer and more frequent). You will see their tail raise. Once the pushes get strong, there will be a puppy in or close to the birth canal. At this point I don't advise letting them push for more than 30-40 minutes before contacting your vet, especially if this is the first puppy.

Puppies can suffocate / drown if left in the birth canal for too long. This can then impact the rest of the litter. Dogs don't always look 'in distress' and as the owner you need to be able to do the right thing at the right time. They cannot tell you there is something wrong. If it's taking more than 40 minutes, the pup could be large and not able to pass through.

Please don't go into this thinking it'll be all plain sailing because if it's not and you are not prepared to go to the vets.

BEFORE THE PUPPIES ARRIVE

- Green discharge before any puppies have been born is a serious concern so please take your girl to the vets. This often means a puppy has come out of its sac. This means they can suffocate/drown and it can affect the rest of the litter.
- Your bitch may refuse to go in her whelping box before puppies come. Once you have your first puppy born you can move it to the whelping box on the heat mat and your bitch will follow. Be prepared for her to have the first one on your bed, or on the sofa, or just generally somewhere other than the whelping box!

Please don't force her to go in if she doesn't want to. Use puppy pads under her wherever she is so you can monitor the colour of discharge.

- Make sure you have your heat mat switched on. It should be kept in front of your bitch near her teats.

■ A puppy is presenting but not out...

- Things to do to help the puppy out are to get your girl to stand up, or walk around if she will. Gravity can help. Make sure you have gloves, lubricant and white puppy pads.

- Puppies born breech is normal (feet first). Bum first is slightly trickier but is also common. If you need to assist, please only help ease the puppy out in time with your girls contractions and pull gently towards your girls tummy (under) and not towards her bum (backwards). Very rarely do owners need to intervene in this way, most of the time your girl will manage to push their puppies out.

PLEASE NOTE JUST BECAUSE YOUR BITCH GIVES BIRTH TO THE FIRST PUPPY DOESN'T MEAN SHE WILL DELIVER THEM ALL BY HERSELF.

If your bitch gets tired she may suffer with inertia where contractions slow down or stop completely. You will need to contact your vets for advice in this case. Oxytocin may be given to re start contractions, you can also give liquid calcium once the first pup is born as this will also help. Oxytocin should only be given by the vet after the first pup is born and the bitch is fully dilated. They may scan her first before offering it. Your bitch may have minutes or hours between the birth of the puppies. The only time you can let her go hours between giving birth is if she is not pushing. If she is resting, 4-5 hours is quite an acceptable gap between puppies. If she is pushing, as a guideline 40 minutes max.

You can offer ice cream between puppy births, although I prefer calcium, or plain yoghurt with honey in, goats milk and of course water.

She will probably not want to eat during labour but if she does, she may throw it back up. So be ready for that.

■ When you have a puppy

- Puppies are born in sac with a placenta each, the sac must be broken immediately once the puppy is fully out. A lot of breeders will automatically do this first then hand the pup to the mum, and if your bitch doesn't do this, you will need to step in anyway and break it with your fingers from around its mouth.

- Your bitch will want to lick her puppy all over and she will also eat the placenta (this is fine as they are good for them but bare in mind she may throw it back up and only let her eat two or three, as although good for them, any more and she could have black diarrhea for a few days). If you have a large litter, you can try stop her

eating them after the 5th but no big deal if she eats them all apart from the poo aspect! When they eat the placenta they will chew the cord, please ensure 3cm of cord is left on the puppy by holding it while she chews. If it is chewed too closely, this can cause problems for the puppy and possibly give it a hernia. If she doesn't chew the cord, they are easily broken using your nails to fray them or use blunt scissors but you must tie off each side of the cut and leave around 4 cms from the puppy's abdomen.

- If she doesn't want to tend to her puppy, she may be in shock. Give her time. She may also try to run away, so keep all doors shut and pop a lead on her if she does try to escape so you can keep a hold of her, stay calm and don't shout at her, some first time mums can feel very overwhelmed at first.

- Make sure the puppies mouth and nose are clear from fluids and is breathing properly, squeaking and moving around. You can use a dry cloth to rub the puppies and get them squeaking and shouting. This helps clear their airways. Don't be afraid to be quite rough and don't be alarmed if your girl is nudging the puppy around and rolling it over, this is normal.

- Once the puppy is dry and warm, and breathing properly, it can then feed from mum. A puppy's instinct to feed comes naturally, despite being born blind and deaf they will find their way to their mum's teats. You may need to help them latch on initially. Some puppies can take a while to latch, this can be because is it tiring being born and they may want to sleep first. Keep puppies on the heat mat at all times when first born and when feeding. Try to make sure puppies feed within 2 hours of being born.

- To help a puppy latch, guide them to a teat and cup your hands around their body holding them into place. Position their paws either side of the boob so they can 'paddle'. This helps the milk flow. It is best to have all puppies feeding at once as this stimulates the milk to flow faster. One puppy alone will have to work really hard to get the milk to flow.

- If you have a puppy which is lifeless you can work on that puppy for an hour to bring it back. Don't give up easily, life drops are excellent for these cases but it is something you need to buy 'in case of need' as it is too late after if you need it and you don't have it. Check the colour of its gums, if they have gone white then your puppy has passed. If still pink/ purple, don't stop! There are lots of videos on YouTube about resuscitation. I can't write full instructions on that here but YouTube is a great place to learn.

■ Aftercare of the puppies...

- Each puppy needs weighing at birth and sexing (male parts below cord, female parts between hind legs). You also need to weigh them every day at the same time, and make a chart to monitor their daily gains. Make notes of colours/markings and use collars if need be to tell them apart. This is very important.

- It's normal for pups to lose weight slightly in the first 24 hours but if you monitor their feeds and keep them on the heat mat they shouldn't lose much. If they do this is a sign something is the matter and pups go downhill very quickly, the first sign is weight loss so please reach out if this is the case!
- Puppies should feed every 2 hours max, please don't let them go any longer without a feed. They should ideally be feeding and sleeping none-stop for the first week or so.
- Please do not take it upon yourself to hand feed your pups as this comes with a lot of risks and if done incorrectly and unnecessarily then you could kill your puppies by drowning them.
- Check puppies over all over their bodies for any abnormalities and check inside their mouths for cleft palates.

PLEASE REMEMBER YOUR VET IS YOUR FIRST PORT OF CALL IF YOU HAVE A SERIOUS PROBLEM BUT MOST REPUTABLE SCANNERS CAN CONFIRM VIA AN ULTRASOUND SCAN IF ALL PUPPIES AND PLACENTA'S HAVE COME AWAY. PLEASE CHECK IF YOU ARE IN ANY DOUBT.

SHOULD I TAKE HER TO THE VET?

A WHELPING FLOW CHART

START HERE



BE PREPARED

For less than £100 you can have some essential items in your whelping kit which could mean the difference between the life and death of a puppy.

VetBed is recommended and used by vets and breeders and is perfect for newborn puppies, kittens and convalescing dogs and cats. VetBed is made from very strong polyester and can be washed at high temperatures. Vetbed is absorbent and most of the liquid on the top will go through, keeping puppies dry and warm.



Vet bed from £20 a roll measuring 1m x 1.5m

Calcium –Eclampsia, or milk fever, is an acute, life-threatening condition which attacks a brood bitch about 3 to 4 weeks after whelping puppies. Calcium must never be given during pregnancy. Zolcal D, and CalloC D are the most popular.



Life drops - A combination of herbal tinctures to kick start all major organs of the body. Rouses vital energy within the body if you have a newborn puppy who is struggling.



Puppy Stim provides immediate energy supplies from fast absorbed triglycerides, essential fatty acids and glucose. Colostrum (Immunoglobulins) for complementary passive immunity for the first 24-36 hours of life. You can also purchase a product called King K9 (from Abnoba Pet Store) which does the same job as Puppy Stim.



Heat pad / heat lamp - Puppies are unable to regulate their temperature until they are at least 14 days old. You can use hot water bottles but they don't keep a constant temperature and you can't have them too warm or you will burn the puppies.



Life Aid Xtra

A "must have" for any dog owners or breeder expecting a litter, can be given to females during whelping, and bottle or tube fed to dehydrated puppies for upto 24 hours then added to your own puppy formulas.

Available from Abnoba Pet Store

