



Canine Pregnancy

By - Bob Franklin

You have gotten your bitch bred and everything seems back to normal. Unlike some animals, most notably humans, no hormonal changes that are diagnostic occur in a bitch during pregnancy. A pregnant bitch experiences the same levels of progesterone as one that is not pregnant. Soooo, now you wait. There are charts available to use for calculating a normal due date, but perhaps the easiest way is to count off on a calendar exactly nine weeks from the date of the first breeding. This count may be a few days early since fertilization and movement of ova (eggs) into the uterus most likely occurred several days after that first breeding - but at least it provides an approximate birth date.

There is no infallible method to confirm a pregnancy early in term. Some bitches may exhibit subtle changes in their behavior, but unless that bitch has been observed through previous pregnancies, most of these changes will go unnoticed. The bitch may seek additional human attention or alternatively, she may appear depressed and withdrawn. Her appetite may change, either increasing OR decreasing, and she may switch from one extreme to the other during various phases of her pregnancy. An occasional bitch may suffer all the symptoms similar to their pregnant human counterparts, with morning sickness, nausea or poor appetite during early pregnancy. Some may even become coprophagous (eating feces) - either their own or other dogs.

Fertilized eggs do not attach to the uterus's lumen (wall) until approximately 18 days past conception. Until a few days after this attachment occurs, it is unwise to perform palpation examinations on the bitch. Palpation is performed by deeply, but gently, stroking the bitch's abdomen feeling for puppies. An abortion can happen if too much agitation by rough and improper exploratory palpation is done too early, causing the newly attached eggs (now embryos) to separate from their placentas. A placenta forms for each puppy on the uterine horn wall during the early stages of pregnancy and partially envelops the fetus, which is attached to the placenta through its umbilical cord. Therefore, a palpation examination is not recommended until at least 21 days from estimated conception and preferably 28 days after conception. At 28 days, careful palpation with a very relaxed bitch can usually detect puppies as soft, round lumps about the size of golf balls. Usually only a few of these lumps can be detected even though there may be more puppies growing in the two horns of the uterus. Some bitches even carry their puppies so high that palpation is not successful at all. After 32 days, palpation is most often not successful since the bitch's abdomen becomes fuller and therefore much tighter so puppies cannot be individually detected.

Ultrasound, if utilized properly, can be used to determine pregnancy. Ultrasound is a well known tool used often in human pregnancies, so it will not be technically described here. Not all veterinarians have ultrasound capabilities, so a visit to an ultrasound specialist may be necessary. Care must be taken to not misinterpret ultrasound examinations performed early in pregnancy because they may erroneously conclude the bitch is not pregnant. Ultrasound is most effectively performed about 30 days past conception when the puppies' structures have had the time to gain enough density.

Blood tests are also available that are fairly effective but even this is not a fail-safe test. Blood from the bitch is examined for a specific substance known to have high correlation with pregnancy and this test is most accurate when performed between 22 and 36 days after conception. This is a sophisticated test requiring a fully equipped laboratory that few veterinarians have, so it usually necessitates use of an outside laboratory.

Since early pregnancy is difficult if not impossible to determine, a conservative approach is recommended. The bitch should always be treated as if the breeding has been successful since time alone is the ultimate test of a pregnancy. Early pregnancy tests are useful mostly for the breeder's peace of mind; otherwise they are costly (ultrasound or blood tests) and may even have a negative impact on your bitch's pregnancy i.e., incorrect palpation.

The reasons a bitch may fail to conceive are numerous and are best left to conversations between breeders and their veterinarians. Never hesitate to call your veterinarian for a consultation should a bitch exhibit any suspicious or abnormal signs during her pregnancy, or if she fails to become pregnant. Your veterinarian is your best friend and ally, helping with advice and supportive therapy throughout all phases of a bitch's pregnancy. Certainly seek your veterinarian's approval before administering any chemical, non-food substances during pregnancy, i.e., worm medicine, antibiotics, etc..

If a breeding did not "take" and the bitch is not pregnant, she still may fool you and herself by having a "false pregnancy". The hopeful mother may believe in every way that she is pregnant and may even exhibit a distended tummy, enlarged nipples and breasts and she may even have milk. Some will even pant and have contractions or they may adopt a kitten, small dog, or even a small toy in lieu of their own pups. The "false pregnancy" oddity is usually caused by a secretion of progesterone following estrus and ovulation. Some may even have false pregnancies even though they were never bred. Usually no treatment is needed for mild cases of false pregnancy. Some cases may require hormone treatment as prescribed by a veterinarian, but most symptoms may be diminished by slightly reducing food and liquids, although care should be taken not to cause undue trauma to the bitch should she really be pregnant.

An expectant mother can and should have normal exercise during her pregnancy at whatever level of exercise she is accustomed to. As her bulk becomes greater, she may curtail her own activity, but she should be encouraged to go walking on a regular basis. Bitches that are fit and in good physical condition will be more likely to whelp naturally.

Bitches are usually more fertile if they are a bit lean when bred and obese bitches may have more trouble whelping. After breeding, the bitch should be fed normally. Some breeders do not increase the amount a bitch is fed during the entire pregnancy. Others feed normally until the fifth week of pregnancy, and then begin offering the bitch the same total amount of food but giving half of it to her twice a day. Still other breeders feel the amount of food should be increased gradually after the fifth or sixth week of pregnancy but never to more than 1½ times her normal daily amount. Some breeders provide additional protein, iron and calcium rich foods such as small amounts of raw hamburger, small amounts of raw liver, an egg a day, a spoonful or two of cottage cheese or yogurt, or even a little ice cream if she is a really "picky" eater. Most healthy bitches are probably receiving a vitamin supplement daily already (pet tabs or something similar) and it is especially important that these vitamin supplements be continued during pregnancy. However, it is also important not to get the bitch significantly overweight because, as was mentioned earlier, an obese bitch could have more trouble whelping puppies. Govern the amount of food provided for the bitch by her condition. NEVER allow her to be so overweight that you cannot easily feel ribs and backbone.

One excellent natural source of protein, calcium and animal fat is what some call "blended chicken". Save all poultry skin and bones (both fresh and cooked) and accumulate these chicken scraps in a plastic bag kept in your freezer. Periodically place the contents of this bag in a large

pot, cover completely with water (or old broth or water after cooking of vegetables) and simmer this concoction for a long time – all day is preferable – until the bones are soft. Finally, feed the contents of the pot gradually into a food blender run on high until the concoction is completely liquid and resembles pudding in consistency. Refrigerate (or freeze if there is too much volume to use quickly) and stir one heaping tablespoon of this “blended chicken” into the bitch’s food each meal.

Around the fifth to sixth week of pregnancy the bitch will begin to look a little “thick” in the body. By the seventh week she literally seems to “explode”, and all of a sudden she really begins to look very pregnant - somewhat resembling a potato with toothpicks for legs. During the last two weeks of her pregnancy she will seem to get only marginally larger, but her belly area becomes much more tight and hard. Around the last week or so, she will begin to look at you once in awhile with that, “Boss, what did you do to me.?” look. Her nipples may become larger and the mammary glands will start to enlarge. Feed her enough to keep her from becoming “ribby” but do not over feed. Walking or fetching a ball are excellent activities to keep her “fit”. She will probably need to pee and poop more frequently than normal, and, as was mentioned earlier, she might need to be given several small meals a day instead of one or two large meals. Always make certain she has access to fresh water.

Some breeders may want to do either an ultrasound or an X-Ray around 8 to 8 1/2 weeks from the first breeding when the puppies are well calcified. X-Rays work best if they are a “frontal” view (with the bitch on her back or her stomach). This view gives a rough approximation of the size of the pups compared to the bitch’s pelvic opening and could help in determining if the bitch can whelp the pups naturally or whether their size indicates that a C-Section may be required. Even a side view helps determine the number of puppies she is carrying. Lots of puppies usually means they are smaller and will probably be easier to deliver. One or two pups may indicate a difficult delivery ahead since the pups will most likely be larger. Variation in puppy size could mean a day or so difference in conception, but most likely puppy size variations are caused by the location of individual placentas in the uterus since the blood flow to different parts of the uterus can vary enough to create growth differences.

Around the beginning of the eighth week, the breeder should begin to take the bitch’s temperature. Normal temperature for a canine is between 100 and 102 degrees Fahrenheit. About 24 hours before contractions begin, the temperature will usually start dropping – sometimes to as low as 98 degrees Fahrenheit. Temperature will also vary on a daily basis depending on the relative activity of the bitch or the air temperature where she is located so start to take and record the temperature at least twice daily a week in advance of expected delivery time so a “baseline” for her normal temperature can be established. Some bitches do not have much of a temperature drop, but for most bitches this is one of the best ways to gauge when contractions will start.

About a day before delivery, the bitch may start nesting somewhere. Hopefully she will choose to do this nesting in her crate, but a bed, closet, or just about anywhere that she can find a “suitable den” will work just as well from her viewpoint. Provide something for bedding you don’t mind having torn up (old rags, newspapers, etc.) because she may try to rip her bedding into shreds. Don’t be surprised if your pillow gets shredded should she decide your bed would be the ideal spot for her nest. Do not let her go out to pee and poop unattended or even off lead during this last few hours before birthing or you could find yourself tearing up your deck or ripping up the floor of your tool shed to get her out if she decides this would be a good place for delivering puppies!

Well, it looks like our bitch is about ready to produce puppies. Since the parturition (giving birth) of puppies is a complicated subject in itself, it will be dealt with in a future article.

While doing research for this article, the author ran across a wonderful, very complete and detailed website "Canine Pregnancy: Predicting Parturition and timing Events of Gestation" that includes a detailed chart of "The events and clinical correlates of canine pregnancy". This excellent article by the Department of Biomedical Sciences, College of Veterinary Medicine, Cornell University (specific author - P.W. Concannon) is recommended for anyone wishing to learn about all there is to know about the subject:

http://www.ivis.org/advances/Concannon/concannon/chapter_frm.asp?LA=1

Other references were: "How to Breed Dogs" by Leon F. Whitney, DVM, published by Howell Book House, Inc. and "Breeding a Litter – The Complete Book of Prenatal and Postnatal Care" by Beth J. Finder Harris, published by Howell Book House, Inc.