



WHAT TO EXPECT WHEN ...

Your Dog is Expecting

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Following the breeding of your female, the next couple months are full of excitement and preparation as you look forward to a new litter of puppies arriving. Your veterinarian is an excellent partner during the entire breeding, pregnancy, and whelping process. Dogs are pregnant for approximately 63 days. Your veterinarian can closely predict the day of birth if breeding timing was performed prior to breeding to determine the day of ovulation. If your dog is a breed with a high risk of whelping complications, it is wise to perform breeding timing. If only a single breeding date is available, your veterinarian may have a harder time predicting the exact day of whelping, because it can range from 57 to 72 days from that date.

Twenty-eight to 30 days following breeding, your veterinarian can perform an abdominal ultrasound to determine that your female is pregnant. During this visit, your veterinarian will be able to visualize fetal heartbeats. While a rough estimate of litter size can be made during this initial

ultrasound, radiographs will be needed on or after day 55 of pregnancy to confirm the number of fetuses. Radiographs will give you the advantage of knowing how many puppies to expect during the whelping process. This lets you know when your female is done giving birth or that she is having problems and your veterinarian should be contacted.

From breeding to pregnancy diagnosis, nutritional needs of your female do not change as long as she is on a quality, nutritionally balanced dog food and is of a healthy weight. Do not overfeed your dog because you plan to breed her; obesity can negatively impact fertility. Once diagnosed as pregnant, your female's caloric intake should *gradually* increase by 35-50% to match her increasing nutritional demand. Switching to a high-quality, caloric-dense food, such as a puppy food, is recommended. Your veterinarian can work with you to choose a brand and type of dog food that will ensure that your female's nutritional demands are met throughout

pregnancy. Your female's stomach capacity becomes reduced as the puppies grow, so she may prefer to have several smaller meals throughout the day.

Routine care, including all preventatives and daily medications, should be discussed with your veterinarian. It is not currently recommended to vaccinate your female during pregnancy, but make sure that your female is up to date on all vaccines before breeding. This will aid in allowing the female to produce quality colostrum (first milk) that will give the pups short-term immunity to common diseases until the time they can be vaccinated. Monthly preventatives, including heartworm, flea and tick, and deworming medications, may continue as long as the product is deemed safe for use in pregnant animals. Your veterinarian can assist you in determining if your current products are safe or if a change should be made.

Pregnant females should continue to engage in conservative exercise and stay active. Strenuous activity or training should be discontinued during pregnancy. As well, pregnant females should avoid dog parks, boarding kennels, and pet groomers to avoid exposure to diseases such as the Herpes virus, which can cause abortion.

A few weeks before whelping, prepare a whelping box for the expectant mother in a quiet area that is free of drafts. Whelping boxes can be bought or made at home: a kid's wading pool is an inexpensive option and easy to clean. It should be lined with newspaper or bedding that can be easily changed or washed. Encourage the female to use the whelping box for napping so that she becomes comfortable there in the days leading up to whelping. A heat lamp may need to be installed; the puppies will need help maintaining their body heat during the initial days after birth, especially if this is taking place in a garage or kennel.

Whelping supplies should be gathered in advance. Your veterinarian can explain your role in the birthing process. You will need:

- Dry, clean towels to clean the puppies
- Infant nasal bulb syringe to remove mucous from puppy's nose and mouth
- Paper towels
- Thermometer
- Unwaxed dental floss to tie off umbilical cords
- Clean scissors to cut umbilical cords
- A heating source (heat lamp or heat pads)
 - Caution should be taken to adjust to correct temperature. Puppies are unable to move away from the heating source and may suffer thermal burns if the heating source is too hot.



- A small scale that measures in ounces – a food scale works well
- A whelping plan, designed by you and your veterinarian, that includes when to call if there is an emergency

Dogs may show signs of impending parturition, such as restlessness, panting, enlarged nipples, decreased appetite, and nesting behaviors. A rectal thermometer can be used to monitor the body temperature of the female once daily during the week prior to whelping. About 24 hours prior to whelping, the female's body temperature will drop from normal (100-102.5°F) to 99°F.

There are 3 stages of labor. Stage 1 is marked by the start of uterine contractions; the contractions may or may not be visible to the owner. The cervix will begin to relax. This stage can last 12-24 hours, and the female may be abnormally restless, panting, or occasionally vomit. If a greenish/black discharge is noted from the vulva before a puppy arrives, this is indicative of premature placental separation and is a true emergency: The puppies have lost the source of oxygen prior to delivery.

As the cervix dilates and uterine contractions continue, a puppy will begin to engage into the cervix, and contractions will grow stronger. Once strong contractions begin, a puppy should arrive within 1 hour. If this does not occur, contact your veterinarian because this could be a sign that something is not right. Alternatively, if there are 45-60 minutes between sequential deliveries of puppies, your veterinarian should be alerted because this could mean that the female may need assistance.

As puppies are born the mother should chew each umbilical cord, severing it at the appropriate length. She will also lick the neonate to stimulate it to breathe and remove the membrane surrounding the puppy. There is no need to intervene if the mother takes care of the puppies. If the female does not promptly remove the membrane and break the umbilical cord, then human intervention is needed; the puppy can suffocate if the membrane is not broken. The umbilicus can be tied off approximately 1cm from the body wall with a small piece of unwaxed dental floss or umbilical tape.

Placentas will be passed following each puppy. They should be counted and removed from the whelping box to prevent the female from eating them; eating them may lead to vomiting. If placentas do not equal the number of puppies born, this may be of concern – a retained placenta(s) can cause the female to become sick. The fetal radiographs taken at about 55 days will let you know how many puppies to expect and when your female is done giving birth.

Puppies will naturally migrate toward the female's teat. You should ensure that each puppy is able to latch on a nurse. Record each puppy's weight and monitor it closely. That will allow you to confirm that each puppy is getting enough milk. Puppies may lose weight in the first 24 hours, but after that they should gradually increase each day. Initial birthweights should double by 7-10 days after birth.

Puppies are an exciting experience. Most births go well without any problems. Advanced preparation is a key factor in a successful whelping. Working with your veterinarian to create a plan for recognizing and taking care of any emergency that arises is important.