

## THE ANIMAL CARE CENTER AT GRANVILLE

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### What to Expect When Your Pet is Expecting

Having a litter of puppies or kittens can be a very complicated endeavor. Although we can never completely insure a successful outcome, there are steps that can be taken to try to make the experience more positive for both mother and offspring.

Although pets do age faster than people, dogs and cats must still grow to adulthood before being bred. Even though they can conceive at their first heat cycle (as early as 6 months), they should be at least 2 years old before having their first litter. Breeding before this time cannot only be detrimental to the mother's health, but cause low birth weight and delivery complications. Additionally, the mother's vaccinations and preventive worming should be up to date prior to breeding and dogs should be on heartworm prevention. For dogs, both parents should be tested for brucellosis prior to breeding. This is a sexually transmitted disease that can cause infertility in males and late term abortion in females. It is also contagious to humans. Animals whose breeds are known to have genetically transmitted health defects such as hip dysplasia or eye problems should be tested for these prior to breeding.

Once a breeding has occurred, the next challenge is in predicting a due date. Variation in the timing of ovulation, multiple breeding dates and the inconsistent length of estrus make it difficult to identify the day of fertilization or the exact due date for a litter. The traditional 63-65 days from time of first breeding is not a perfect formula. A range of potential due dates, 56-70 days from the day of first breeding, is more correct. If progesterone tests were used to determine ovulation and breeding timed from this, a more exact date may be determined. A blood sample can be drawn after day 28 and an in clinic test run to determine if the animal is indeed pregnant. Radiographs (x-rays) may be taken 2 weeks prior to the projected due date to approximate the number of fetal skeletons that are present. This procedure is highly recommended so that the owner can anticipate the number of puppies or kittens to expect.

**Nutrition and General Care During Pregnancy and Lactation:** The diet for an expectant mother in the first half of pregnancy (4-5 weeks) should be a high quality maintenance diet. During the 5<sup>th</sup> to 6<sup>th</sup> week, the mother should be offered increasing quantities of food and also be gradually switched to the high quality puppy or kitten food the offspring will eventually be weaned over to. Her food intake should increase nearly 50% by the 8<sup>th</sup>-9<sup>th</sup> week, although this may need to be fed as several smaller meals throughout the day if the number of fetuses is restricting the stomach's ability to expand. By feeding a high quality diet, no vitamin supplements should be necessary. If the pet is accustomed to exercise, this may be continued until around the 6<sup>th</sup> week of pregnancy. Body weight should not change much in the first 4 weeks, but noticeable weight gain

after that time is to be expected. The ideal body weight of the mother immediately after birth is usually 10-15% above the prebreeding weight. It is also recommended to provide a whelping box for the mother several weeks in advance and to be sure it is in a quiet area in the house where the pet feels safe and secure. For large breed dogs a child's plastic swimming pool works well. The sides should be high enough so that the puppies or kittens cannot climb out after a few weeks of age, but such that the mother can go in and out easily. Towels are better in the box as nesting material as they may be washed frequently and are much warmer than newspaper.

Prior to the onset of parturition (birth), the mother may be restless, panting, and pacing for several hours to even 2-3 days. She may refuse to eat and may defecate more frequently. Often there is a decrease in rectal temperature 10-24 hours prior to parturition, decreasing below 100 degrees F and often below 99 degrees. For this reason it is a good idea to purchase a digital baby rectal thermometer and begin taking the pet's temperature and recording it up to 2 weeks before the anticipated delivery date.

### **Stages of Labor**

**Stage One:** This stage begins with the onset of uterine contractions and ends when the cervix is fully dilated. Contractions of the uterine musculature are usually NOT visible externally. The duration of stage one labor averages 6-12 hours but may last 24 hours. During this time the mother may appear restless, nervous and anorectic and may be seen to shiver, pant, vomit, chew, scratch at the floor or pace. Most of these animals will seek seclusion and/or exhibit nesting behavior.

**Stage Two and Three:** Stage two of labor begins with full dilation of the cervix and ends with complete expulsion of the fetus, and stage three begins after expulsion of the fetus and ends with expulsion of the placenta. The mother with more than one fetus alternates between stage two and stage three. The length of these two stages is highly variable. Puppies or kittens may be delivered over a period of a few hours to as many as 24 to 36 hours. Contractions are usually visible and the mother is usually on her side or in a squatting position. With the passage of each fetus, the surrounding membranes rupture or the mother licks or bites them away. The time between the initiation of stage two labor and birth of the first fetus is variable. Commonly, this period is only 10 to 30 minutes. Active straining for more than 1 hour is worrisome and a veterinarian should be consulted. The time interval between the birth of subsequent fetuses is also variable. It is not unusual for the mother to deliver several offspring and then rest for a period before beginning the delivery process again. In this situation, a lag of more than 4-6 hours is worrisome. However, a lag of 30 minutes to 1 hour WITH STRAINING or abdominal contractions warrants veterinary consultation. A disturbed, frightened or nervous mother may actually interrupt the birth process. The placenta is usually passed within 5 to 15 minutes of the birth of each fetus. Lochia or uteroverdin is the green vulvar discharge observed following placental separation. It means that stage two labor will soon be seen and that delivery should soon follow. If birthing does not begin within 2 hours of the time that lochia is observed, the mother may be experiencing a difficult birth and veterinary attention is recommended.

The mother may eat the placentas. There is no known benefit to this and this practice should not be encouraged. Vomiting the placental material is common so it is best to simply remove it from the box. The mother should lick each newborn vigorously to remove all membranes from the face and to promote respiration. If this does not occur within 1-3 minutes, the owner can intervene. All membranes should be removed by laying the newborn in a clean, soft towel and vigorously rubbing it with the other end of the towel. Always use a clean, DRY towel for each newborn. Fluids can be removed from the mouth by suction, usually using a soft, blunt-ended rubber air bulb. One can cup the newborn in the hands (head at tip of fingers, tail at wrist) and swing the arms in an up and down motion to promote respiration and clean the respiratory tract.

The mother severs the umbilical cord with her teeth. If she does not, the owner can use thread or dental floss, tying two knots around the cord, with the first knot located 1 inch from the newborn and the second an additional ¼ inch away. Using clean scissors, cut between the knots. The newborns should be left with the mother except in unusual circumstances, and handled as little as possible. Some mothers nurse newborns while delivering littermates and others do not. Some newborns have to be encouraged to nurse by actually opening their mouths and placing them on the mother. The newborns must be kept warm. Do NOT put them on a heating pad as this can severely burn them. A heat light suspended over the box, keeping the temperature 85-90 degrees is ideal. Warm water bottles or socks filled with rice and warmed are also helpful to keep the newborns warm.

Following birth, the uterus undergoes a period of repair called involution. The majority of involution occurs during the initial 4-6 week postpartum period. During this time, an odorless green, dark red/brown or bloody vaginal discharge may be seen. It is a normal finding and varies from a rather significant amount immediately following parturition to quite small amounts 4-6 weeks later. It is recommended that the mother be seen the day after delivery for an injection of oxytocin to help this process begin. If the puppies are of a breed whose tails are traditionally docked, this must be done at 3 days of age. Puppies and their mothers should be wormed at 2, 4, 6, and 8 weeks and puppies vaccinated for the first time at 7 weeks, at the time when antibodies received from the mother are declining. Kittens should also start vaccines at 7 weeks and begin worming at 6 weeks and be wormed again at 8 and 10 weeks. Both puppies and kittens should stay with their mother and littermates until at least 7 weeks of age.

Puppies and kittens should be weaned from their mothers at around 4 weeks. In preparation, a weaning diet or high quality puppy or kitten food (what mom has been eating) should be soaked in warm water and placed in a shallow pan in the nursery box 3-4 times daily. The pups or kittens will walk in it and be messy. Mother will clean them up, but do keep her out of the box during the feedings. When all of the youngsters are eating the diet well, it is time to wean them. Separate the mother and withhold food from her for 24 hours, but be sure water is available. Feed the pups or kittens 4 times daily with the soaked food. After 24 hours, begin feeding the mother her original diet at her normal portion and keep her away from the little ones so her milk can dry. In the meantime, keep close watch on her mammary glands for heat, redness or swelling that

might indicate mastitis. Warm compresses on her mammaries may help deter this serious condition. When she is reunited with her little ones, her interaction must be supervised to prevent the pups or kittens from trying to nurse and thus restimulate milk production.

These are basic guidelines for pregnancy, birth, lactation and weaning. If at any time you have a question or concern, please don't hesitate to call. If the mother is having difficulty delivering the fetuses, a Caesarian section may be necessary. Waiting too long to seek professional advice or care may mean the life of the mother, the fetuses or both.