



SELWORTHY VETERINARY GROUP

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Canine Pregnancy and Whelping

The following information leaflet is designed to provide you with the information required to care for your bitch during her pregnancy.

As in women, pregnancy and giving birth is a completely natural process for bitches. In most cases everything will go smoothly and your bitch will manage better without any interference. However, it is best to keep an eye on proceedings, as problems do occasionally occur.

The apparent gestation period for bitches averages **63 days** with a range of **56-72 days** if calculated from the first mating. This large variation is mainly due to the long and variable oestrus period (season) of the bitch, and the long lifespan of eggs and sperm. If we measure progesterone during the bitch's season, it becomes much easier to accurately determine when she will give birth, as it is 63 days after ovulation (with a day either side as the range!). Please talk to us about measuring progesterone if you wish to get your bitch pregnant; it is a useful tool not only for determining when she will give birth, but also when to mate her for the best chance of a successful outcome.

A number of behavioural and appearance changes may be noted during pregnancy.

These include:

- Persistent swelling of the vulva and slight enlargement of nipples (early changes).
- Enlargement of mammary glands from 5 weeks of pregnancy (although some bitches may not show changes until the final few days of pregnancy).
- Increase in abdomen size from 5 weeks, with the shape changing to pear shaped in the last week.
- Malaise (lethargy) in the third week when the embryos are implanting, and the fifth week as a result of pressure from the uterus on the stomach and liver. This should only last a day or two- contact us if this lasts longer.

- Appetite may reduce towards the end of pregnancy.

Checks by a Veterinary Surgeon ideally, we would perform a clinical examination on all bitches around 45 days into pregnancy.

This allows us to assess the health of the bitch, confirm pregnancy by ultrasound scan and ensure there is more than one pup present. If the bitch is only carrying one pup, she may struggle to go into labour and problems can ensue from this. If we know she is only carrying one pup, we can monitor her around the time she is expected to go into labour to try to avoid these problems. Feed your bitch a manufactured, fully balanced diet throughout her pregnancy.

There is no need to increase the amount of food she receives in the first two trimesters of pregnancy, although you may find as pregnancy progresses that she needs this amount in smaller, more frequent meals. In the final trimester (last 2-3 weeks of pregnancy) it is advisable to gradually increase the amount of food your bitch is fed, as it is in this time that most of the growth of the pups takes place. Be careful not to over-feed however! Obesity can cause whelping complications and increase the need for a Caesarian section. There are special pregnancy diets available for this period, you may find these useful to feed. There is absolutely no need to give your bitch a calcium supplement at any time during the pregnancy or post-natal period. You are likely to do more harm than good, risking eclampsia. Once the pups are born, energy requirements increase considerably as the bitch is lactating- producing milk is one of the biggest energy drains a bitch ever has to face. A 20kg bitch will have to produce nearly three times her weight in milk to sustain her pups to weaning. In some cases, maintaining the bitch's weight can be very tricky. It is best to feed a good quality puppy food during this time on a near ad lib basis (unless she looks to be getting fatter), such as an appropriate Hills puppy diet. Change any diet gradually over the course of a few days.

Exercise during the pregnancy it is fine to continue to exercise your bitch to avoid excessive weight gain and maintain her fitness levels. It is not uncommon for her to slow up towards the end of her pregnancy, carrying a large litter can be heavy and tiring!

Vaccination - Whilst it is safe to vaccinate during pregnancy, if possible it is best to avoid doing so and ensure that your bitch is up to date prior to mating. If this is not possible and it is necessary to vaccinate during the pregnancy, the best time to do so is the second trimester. Avoid vaccinating 2 weeks before and 2 weeks after mating, and 2 weeks before whelping. Again, whilst it is deemed safe to vaccinate during lactation, it is better to avoid it if possible. There is a vaccine against canine herpes virus. This virus is a commonly cited cause of neonatal death. Exposure of a naive bitch during the last three weeks or pregnancy can result in either late term abortion or death of the pups during the first few weeks or life, with the mortality rate of the litter commonly being 100%. Treatment is unrewarding and rarely successful. Vaccination is the best defence against this terrible disease and consists of two injections, the first at the time of mating or 7- 10 days later, and the second 1-2 weeks before the expected whelping date. Vaccination must be repeated for each pregnancy.

Worming - To reduce the chances of roundworms being passed across the placenta to the puppies, it is best to worm your bitch every day from day 42 of pregnancy to 4 days after giving birth. We recommend Panacur syrup, which you can get from us. Please ask for more details.

Flea treatment - It is best to keep on top of your flea treatment during pregnancy as high flea burdens on small pups could potentially cause significant anaemia. Some flea treatments can be applied to the pregnant bitch, but others cannot. Frontline spray, for example, can be used throughout pregnancy and lactation.

Whelping preparation - The area in which your bitch is likely to whelp will be an area where she feels safe and relaxed. In the final few weeks of pregnancy, introduce her to the designated whelping area so that she can get used to the environment. The area should be warm, draught free and secure so that the conditions are suitable for both mum and pups. It is preferable to have a whelping box to allow her to give birth safely, and protect the pups once they are born. Disposable boxes are available. The box should be lined with newspaper, towels or sheets to make cleaning and disposal of waste products easy and effective. A heat lamp above the whelping box can be extremely useful to keep the puppies warm in the first few weeks of life. Normal canine labour Parturition is the process of giving birth. Several days before parturition, the bitch may become restless, seek seclusion or become over attentive, and she may refuse to eat. She may start nesting. Her body temperature will drop sharply 8-24 hours before parturition; it is therefore very useful to start taking her temperature three times a day in the days running up to the expected delivery date, to give you some warning that labour is about to start. In miniature breeds the temperature may drop to 35°C, in medium breeds it may drop to around 36°C. In giant breeds the temperature rarely drops below 37°C.

There are three recognised stages to true parturition, with the last two stages being repeated for each pup:

- Stage 1: this usually lasts 6-12 hours but can be as long as 36 hours. In this stage the uterus is contracting, but there are no abdominal contractions to be seen. The bitch often pants and is restless, and tearing up and rearranging of beds is not uncommon. Shivering and occasional vomiting can also be seen. You may see a clear watery discharge.
- Stage 2: this starts when you see the bitch beginning to strain- abdominal contractions- and these contractions will result in the birth of a puppy. It lasts 3-12 hours depending on the number of puppies, although rarely can last 24 hours. The bitch's body temperature returns to normal at the start of this stage. Generally there is not more than 1-2 hours between puppies. You will see fluid filled sacs appear at the vulva which may rupture- clear or bloody discharge from the vulva is not uncommon and is normal. The first pup is usually delivered within 4 hours of the start of this second stage labour. The bitch will generally break the sacs, sever the umbilicus and lick the puppy. Occasionally help is required by you to open the sacs and allow the puppy to breathe, and to clear the puppy's airways of fluid. Then place the puppy in front of mum to encourage her to lick it and stimulate it to breathe. If she fails to do this, rub the puppy with a clean, dry towel and clear its mouth of fluid. Typically, bitches will rest between deliveries, and will nurse and groom their new pups intermittently. As the next puppy starts to arrive, panting and trembling are common.
- Stage 3: this is the delivery of the placenta. It usually occurs within 15 minutes of the the birth of a puppy, but in some cases a bitch may give birth to 2-3 puppies before passing the placentas. Try to keep a check on the number of placentas that are passed, to ensure that there are the same number of placentas expelled as there are pups.

Dystocia This is defined as difficulties with whelping. There are two main groups of reasons as to why this can occur:

- Maternal reasons- for example, exhaustion due to a long parturition, or anatomical problems, such as a previous fractured pelvis causing narrowing of the birth canal.
- Foetal reasons- for example, very large puppies or mal-presentation. Dystocia should be recognised early, and veterinary attention sought quickly to ensure that both mum and pups receive the required medical attention. If the following occur, please ring the practice for advice:
 - Weak, irregular straining for more than 2-4 hours
 - Strong, regular straining for more than 20-30minutes
 - Foetal fluid was passed more than 2-3 hours previously, but nothing more has happened