



Care of the Breeding Bitch

Small Vet in Limerick

This is a guide to help you to prepare your breeding bitch for pregnancy, whelping and lactation. Breeding your bitch and raising her puppies can be very rewarding but can also be disappointing. Pet bitches often have difficulties with their instinctive desire to be with their puppies and their owners. This should be considered before breeding. Raising a litter of puppies is also very time-consuming.

Before Breeding

Vaccinations should be current, and if not, should be given as soon as possible. Do not vaccinate a pregnant bitch. Worming with an effective adult wormer should be done before breeding. The bitch should be checked for fleas, lice, ticks, scabies or earmites and treated if necessary.

Many large breeds of dogs should be Hip Scored and Elbow Scored before breeding and only dogs with an acceptable scores should be bred. Similarly, there are many breeds which should have their eyes tested before breeding to prevent inherited eye defects. Please ask for more details.

A bitch should be at her optimum weight at the start of pregnancy and at the end of lactation. This is best achieved by feeding a good quality diet such as *Hills' Science Plan*.

Breeding

The bitch comes into oestrus (heat) about every 6 months, although very large breeds may cycle anything up to once in 15 months. In most giant breeds an annual heat is normal. The onset and duration of oestrus varies and normally lasts about 3 weeks. The first signs may be an enlarged and swollen vulva, or increased attractivity to male dogs. A

preparatory, bleeding stage follows, true heat starts once the bleeding stops. Vaginal cytology can be used to determine the optimum time to breed. A sensitive laboratory test is also available to determines changes in the progesterone level in the blood and is done in the clinic. It gives a very good indication of when mating is most likely to be successful. It is best used for dogs that have a history of unsuccessful mating or for very valuable breeding bitches.

When choosing a male dog, make sure it is free of inherited defects and, if possible, is a proven sire. Male dogs are more successful in their own environment, therefore, take the female to the male for breeding. Allow breeding to take place every 2-4 days from the first day the bitch accepts the male, and allow several successful ties (matings).

Gestation

The length of gestation is usually given as 63 days from the first mating but 58 to 68 days is more correct, although most whelp between 63 and 65 days. This variation is because the length of gestation is determined from the date of ovulation, not the mating date. Canine semen can remain viable in the female reproductive tract for up to 7 days making accurate prediction more difficult. A more accurate prediction is 56 to 58 from the end of heat as determined by vaginal cytology. The simplest way to confirm pregnancy is for your veterinary surgeon to feel the foetuses in the womb between 20 and 30 days after breeding. Ultrasound can be used as early as 20 days, and radiography from 6 weeks.

Feed *Science Plan Canine Adult* during the first 4 weeks of pregnancy. Increasing the amount fed is usually not necessary. **Do not** give additional food, minerals or vitamins at any stage during pregnancy. Calcium and vitamin D in particular can be harmful to the puppies and do not help prevent eclampsia. During week 5 of pregnancy gradually change over to the same amount of *Science Plan Puppy*. From week 6 to birth the amount of food should be gradually increased so that the quantity fed is 15-25% greater than the amount fed at the end of week 5.

Worming the bitch with fenbendazole (*Curazole, Parazole, Panacur*) daily at the correct dosage from the 40th day of pregnancy to 14 days after whelping has been shown to reduce infestation of hookworm and roundworms by 90% in pups born to heavily exposed bitches. *Advocate* will also reduce the worm burden and is more convenient and cost effective.

It is good practice to have your bitch checked by a veterinary surgeon within a few days of whelping.

Whelping

Prepare a sturdy whelping box large enough to house the growing puppies until weaned and place it in a quiet place or a dark corner. The sides should be high enough to exclude draughts and be off the floor to protect it from cold and damp. A railing around the inside of the box about 7.5 cm high and 7.5 cm from the side will protect the pups from crushing by a bigger bitch. One side of the box should be low enough for the bitch to move in and out. Covering the box may help nervous bitches and is useful in cold weather. Line the box with towels or a *Vetbed*. Two of each should be available to allow frequent washing. Newspaper

is slippery for puppies and deep bedding might interfere with their breathing. Shredded paper is dangerous as it can wrap around the limbs and cut off blood supply. Disposable nappies or incontinuity sheets may be useful for toy breeds. In the last week or so of pregnancy, the bitch often looks for a secure place to whelp. She may develop a sagging appearance, her mammary glands enlarge, become pink and may have milk 4-5 days before whelping. She eats less and will stop eating about 12 hours before whelping. The rectal temperature drops below 37.8°C (100°F) within 10-24 hours before the onset of labour. Nervous or anxious bitches should be allowed to settle down on their own with the minimum of interference.

Giving birth is a normal event. Problems should not be expected for most breeds, but prepare for them so make your veterinary surgeon aware that your bitch is starting to whelp.

Stages of Whelping

Stage 1 is the longest and begins with womb contractions and lasts 6-12 hours usually but may last up to 24 hours. The bitch may be restless, nervous and panting, and may hide herself away or "nest".

Stage 2 is when the puppies are born. First-time mothers should be attended by their owners until at least one or two puppies are born. Breeds with slim heads, such as Shelties, Collies, and Dobermans may complete delivery in 1-2 hours. Those with large, round heads generally have longer delivery times. Bulldogs, Boston Terriers, and Pekingese puppies tend to have sizeable heads that make delivery more difficult. A dark green discharge is normal and indicates that placental separation has occurred. The duration of this stage is very variable but active straining of more than 1 hour without birth of a puppy is worrying and your veterinary surgeon should be consulted. Puppies are delivered

every 45-60 minutes. The bitch may rest for up to 2 hours between births, but a lag of 30-60 minutes with active straining warrants veterinary consultation.

Puppies are usually born with the head and forelegs extended, or may be born with tail and hindlegs coming first. A breech presentation is abnormal and occurs when the tail and rump are presented and the hind legs are forward. Breech presentations frequently cause problems, but the puppy may be born normally. If a puppy's rump is presented and the bitch is straining continuously without making any progress, veterinary attention should be sought without delay. Rarely, one or two puppies may be delivered, then have labour stop for as long as 24 hours before the rest of the litter is born.

If delivery proceeds normally, the puppy is born after a few contractions and passes through the birth canal within 10 minutes of becoming visible. Following delivery, the bitch licks the puppy's face to wash it. She uses her tongue to tear the sac and expose the mouth and nose. This vigorous washing stimulates circulation, causing the puppy to cry and begin breathing, and dries the coat. She also chews at the umbilical cord, cutting it about 2 - 2.5 cm from the body. If the bitch does not remove the sac within a short time of delivery, it should be removed to prevent suffocation. The puppy's face should be wiped with a damp cloth to remove the sac and allow breathing. Vigorous rubbing with a warm, soft towel will stimulate circulation and dry the hair. If the puppy does not start to breathe, gentle blowing down the throat after carefully opening the mouth assists respiration. If the bitch does not cut the cord, it should be tied with thread and cut with a clean scissors about 1.5 cm from the body.

A puppy may aspirate fluid into the lungs, causing a raspy respiratory sound. This fluid can be removed by

holding the puppy in the palm of your hand and cradling the puppy's face between the first two fingers. The head should be held firmly with this hand, and the body held firmly with the other. A downward swinging motion with the hands should make the puppy gasp. Gravity will help the fluid and mucus to flow out of the lungs. Repeat this several times until the lungs sound clear. The tongue is a reliable indicator of successful respiration. If the puppy is getting adequate oxygen, it will appear pink. A bluish coloured tongue indicates insufficient oxygen to the blood, and this procedure is repeated.

Some puppies may be stillborn and are usually delivered normally, but sometimes labour is disrupted. Puppies may also be born several days prematurely. They may be small, thin, and have little or no hair. It is possible for them to survive, but they require an enormous amount of care. They are subject to chilling and are frequently very weak and unable to swallow.

Difficulty delivering (dystocia) may be managed with or without surgery, depending on the condition of the bitch, size of the litter, and size of the puppies.

It can also be difficult to know when whelping is complete. Radiographs and or ultrasonic may be required to determine if there are any puppies remaining in the womb.

Stage 3 is expulsion of the afterbirth which occurs within 5-15 minutes of the birth of each puppy. The bitch may eat this but it is of no advantage and need not be encouraged. If the afterbirth is not passed, it usually disintegrates and is passed within 24-48 hours after delivery.

If the bitch's experiences any of the following during or after whelping, contact your veterinary surgeon immediately.

- ◆ sudden depression or marked lethargy.
- ◆ rectal temperature over 39.4°C (103°F).

- ◆ fresh blood discharging from the vagina for more than 10 minutes.
- ◆ a dark green vaginal discharge without any puppies been born.
- ◆ a blood-stained or smelly purulent discharge for 24-48 hours.
- ◆ a bloody vaginal discharge for more than one week.

Lactation & Puppy Care.

The newborn puppies must get adequate amounts of colostrum shortly after birth. Every effort should be made to ensure the puppies feed and that the bitch is producing enough milk. If necessary hold the puppies up to the nipple until fed. Allow the bitch to eat *Science Plan Puppy* ad. lib. Restrict the food only if she is gaining weight. Do not give any supplements and make sure clean fresh water is available.

Up to 6 days old puppies are unable to control their body temperature. Hypothermia is a major factor in *Fading Puppy Syndrome*. The ideal environmental temperature during the first week is 29-32°C, 26-29°C in the second week, 23-26°C in the third, and 23°C from 4-12 weeks. A heating pad, hot water bottle or heat lamp can be used. The heating pad should be on the low setting and covered with a towel, and a hot water bottle should be well wrapped. Caution must be taken to ensure the puppies are not overheated.

In the first month of life, puppies require little care from the owner because the bitch feeds and cares for them. The eyes open at 7-14 days, but if they have not opened at 14-6 days, or if there is any pus or discharge, consult your veterinary surgeon at once.

Puppies feed and sleep 90% of the time during the first 2 weeks. If the bitch does not produce milk or her milk is infected, the puppies will make "mewing" noises indicating hunger or infection, and if proper action is not taken, could die within 24-48 hours. Total replacement

feeding, using *Lactol* or a home-made milk replacer, or a foster mother is usually necessary. When the milk supply is inadequate, supplemental feeding 1-3 times daily is recommended and is necessary in a litter of more than 5-6 puppies. Puppies less than 2 weeks old should be fed every 3-4 hours, and every 6-8 hours from 2-4 weeks old. In these circumstances, weaning should begin as early as possible and certainly no later than about 3 weeks old.

The best monitor of puppy health is weighing them daily for the first 2 weeks, then every 3 days for the first month, and regularly thereafter. Using a gram scale the puppies should gain 2-4g per day per kg of expected adult weight.

Eclampsia is a life threatening condition which occurs during lactation and rarely in late pregnancy. The cause of this disease is not fully understood but the signs are as a result of a drop in the level of blood calcium. It occurs mainly in small dogs. The earliest signs are nervousness, restlessness, pacing, panting and whining, and the bitch may lose interest in her puppies. Salivation, stiffness of gait and pain on walking occur. Within minutes to hours muscles spasm can start. Epileptic like seizures may follow and if untreated the bitch will die. If there is any suspicion that this condition is developing get veterinary assistance IMMEDIATELY. Mastitis is not common in the lactating bitch, but the mammary glands should be checked frequently for any abnormality, discomfort or discoloured milk. The bitch may become sick and fevered. Do not allow the puppies to nurse, and get veterinary assistance as soon as possible.

Weaning

At two weeks old puppies should be alert and trying to stand. At three weeks, they generally try to climb out of their box. Feeding for weaning should begin at 3 weeks of age. A pasty gruel of *Science Plan Puppy* may be smeared around the lips. Put

the puppies in a shallow dish 2-3 times daily with the gruel where they will quickly learn to lick it off their feet and begin to eat.

Do not complete weaning before 6 weeks of age and ensure the puppies have close human contact between 6 and 10 weeks of age. Behavioural problems are more common in puppies weaned too early or those without human contact.

Care of the Puppies

Tail docking is commonly done on many breeds. This is a fashionable but unnecessary mutilation. Although it remains legal to dock tails up to 3 days of age it is no longer ethical for veterinary surgeons to carry out this procedure.

The bitch and puppies are wormed weekly from about 2 weeks of age until weaning. Continue treating the puppies weekly until they are 6 months old. *Advocate* is a very suitable and easy to use treatment for puppies and is given once monthly. Strict hygiene should be maintained in the whelping area and as much puppy stool as possible should be removed and dispose of safely.

First vaccinations may be given as early as 6 weeks of age. More often they are given at 10-12 weeks of age with a second vaccination 2-3 weeks later. If vaccination is done before this age it is essential that it is repeated at 10-12 weeks of age or older.

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Recipe 1

Skim milk	44 g
Low fat curd*	40 g
Egg yolk (2/3)	10 g
Vegetable oil	6 g
Citric acid	4 g
Vitamin-mineral mix	0.2g
*Do not use cottage cheese as it may clot in the puppy stomach	