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# Normal Reproduction of the Dog & Cat

## Cats

**Heats** occur from six months of age, last three weeks and recur throughout the spring, summer and autumn. The queen may appear to be in pain, rolling over, crying, not eating and trying to escape. Mating is needed to trigger ovulation and terminate the heat.



**Pregnancy** lasts 65 days +/- 7d. Stage one labour starts with the queen choosing a site to kitten. It is best to offer her a cardboard box with bedding, placed in a quiet corner. Stage two involves contraction of the uterus with visible straining. The first kitten should be produced within a couple of hours. The rest may follow over several more hours. Placentas are normally eaten. With the notable exception of longhairs, kitting is usually uneventful with up to seven to ten kittens.

**Kittens'** eyes open around ten days old, they start lapping at three weeks, are usually weaned by six weeks and can be rehomed at nine to twelve weeks. Pedigree kittens must be vaccinated before rehoming. First vaccines are given at nine weeks of age, followed by a second at twelve weeks. Kittens are born with roundworms and need regular deworming.

**Male cats** become sexually active from about six months of age. They establish a territory, mark its perimeter by spraying urine, and defend it from any intruders.

## Dogs

**Heats** The bitch usually comes on heat twice a

year from puberty at six to eighteen months of age. The heat lasts three weeks, the first ten days are "pro-oestrus", seen as bleeding and vulval enlargement, followed by ten days of "oestrus" when mating will be allowed. A successful mating is usually accompanied by "tying" of the male, the two dogs being unable to separate for up to half an hour. Failure to mate often results in a "false pregnancy", the bitch lactating and behaving as though pregnant but carrying no puppies.

**Pregnancy** lasts 63 days +/- 5 days. Whelping follows the same stages as kitting but is more prone to needing assistance. Failure to produce a puppy after two hours of straining should be investigated. Very short nosed breeds often need caesarean sections.

**Puppies** should start suckling immediately and bodyweights should be monitored daily. Poor growth in the early days may be due to infection and can result in the fading away of the puppy.

Puppies eyes open at 10 days, and as with kittens puppies may be weaned by six weeks of age. High quality diets are important especially for the larger breeds with their rapid body and skeleton growth. The best diets are produced by the big manufacturers such as Hills. Puppies are born with the roundworm *Toxocara Canis*, and should be dewormed regularly from six weeks of age. *Toxocara* can infect humans. First vaccines are given at eight weeks, second at twelve weeks.

**Dogs and cats are very efficient breeders and care is needed to prevent unwanted offspring**

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# Reproductive Problems

**False Pregnancy**, may be considered "normal" after an unmated heat in the bitch and is seen any time during the normal period of pregnancy. Signs include mammary swelling and lactation, nesting, mothering of toys and anxiety. Symptoms may be alleviated with hormones.

**Endometritis (Pyometra)** or inflammation of the lining of the womb, may occur after a season in both the dog and cat. The uterus produces mucus, which becomes toxic. If the cervix does not allow this to escape, it is absorbed and results in a severe, sometimes fatal sickness. There is a progressive loss of appetite, increased thirst, vomiting and ultimately collapse. The only effective treatment is a hysterectomy, sometimes risky if the patient is sick. Cats and dogs can have lower grade pyometras recurring after each heat ending in infertility (common in cats) or full blown illness (particularly dogs).

**Mammary Tumours (breast cancers)** have a range of severities from benign lumps to invasive malignant growths. Treatment usually involves surgical excision with or without hysterectomy or chemotherapy. The outlook is usually indicated by pathological examination of the excised growth. Neutering prior to the first heat almost precludes this condition.

**Testicular Tumours** are not uncommon in dogs, especially in an undescended testicle. Consequent hormonal imbalances may result in prostate and circum-anal gland growth, hair loss and shrinkage of the opposing testicle.

**Prostatic Disease** The prostate is a gland in the pelvis that produces secretions included in semen. Older dogs often suffer from enlargement of the prostate from its usual walnut size to anything up to the size of a grapefruit. This may obstruct both the passage of urine and faeces. The prostate may become inflamed and bleed into the urethra, the dog peeing and dribbling port coloured urine. Occasionally prostate enlargement may involve cysts, infection or cancers. Treatment usually involves castration with or without prostate surgery.

## Reasons For Neutering

**Medical** Avoidance of the reproductive problems listed above. Probably the most important of which is endometritis of the bitch.

**Contraception** Naturally neutering is the most reliable contraceptive, possibly the only reliable contraceptive.

**Management** of entire animals, particularly females may be difficult. Queens persistently calling and trying to get out, bitches dropping blood and attracting males, can be very trying.

**Behavioural** Probably most important in the male, to prevent:

**Aggression** Dogs are naturally pack animals and may not differentiate between other dogs and humans as challengers to their position. Dominance is usually achieved by aggression. Similarly male cats will fight other cats to defend their territory. Neutering can reduce this tendency, making the pet more relaxed, and easier to live with.

**Hypersexuality** Many young male dogs mount other animals, furniture or even owner's legs, all of which is both undesirable for the owner and frustrating for the dog. Some may be trained out of this behaviour others need neutering.

**Vagrancy** both cats and dogs will wander in search of females and territory if not neutered.

**Urine Spraying** particularly a tom cat problem, pungent urine being sprayed in and around the home to mark the cats territory. Male dogs, particularly the small breeds may urinate in the home in certain spots. Castration is usually the solution.

## Adverse Effects of Neutering

**Obesity** is the single biggest disadvantage of neutering. Neutered animals have an increased food conversion efficiency, requiring less calories, but may also have an increased appetite, wanting more calories. In addition, we often neuter about the same time as growth is slowing down and feeding should start to be restricted. If we continue to feed to appetite, the animal will become obese. The solution is to feed to requirement by close watching of the weight.

**Incontinence** Rarely a bitch may develop urinary incontinence, up to several years after spaying. The mechanism is not entirely understood, but treatment involves either hormone replacement or nerve stimulants.

## When to Neuter

Cats are usually neutered at six months of age, prior to the female's first season and before a male has developed any unwanted behaviour.

Bitches are best neutered at six months before the uterus is fully functional and whilst blood vessels are smaller, thus the operation safer. The old rule of letting bitches have a season, or even a litter to develop fully, is no longer seen as valid.

We advise dogs be neutered routinely at six months, but some prefer to await signs of undesirable behaviour before castrating. It is also possible to assess the effects of neutering with an injection of hormones before committing to surgery. This is particularly helpful for those breeds predisposed to obesity, notably the Labrador and Cavalier.

# Breeding and Neutering



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