

Why neuter?

Female dogs (bitches)

There are several benefits of spaying aside from preventing the inconvenience of bleeding and the risk of unwanted pregnancy. We can separate them into behavioural and medical.

a) Behavioural

- Hormone changes around oestrus can increase inter bitch aggression, and aggression towards humans.
- False pregnancy is normal in the bitch and stems from when dogs lived wild in packs and all the bitches would cycle together. The dominant bitch would mate and whelp, the subordinate bitches in the pack would undergo a false pregnancy, and assist by lactating thus helping her feed the pups

Spaying involves removal of the ovaries as well as the uterus, thus these unwanted hormone triggered behaviours are eliminated.

b) Medical

- *Mammary tumours* are the second most common form of neoplasia in the dog and 50% are malignant.
 - If bitches are neutered prior to their first season the risk is reduced by 99.5%
 - Neutering between seasons one and two reduces the risk by 92%
 - after the second season 26% of bitches will develop mammary tumours.If one has waited until a bitch actually develops a tumour, there seems to be little benefit from neutering a bitch at the time of tumour removal.
- As an entire bitch ages, she is more prone to developing *pyometra*, (an infected womb) after she has been in season. This can be life threatening and often the only way to control the infection is to spay her. The bitch is then a high anaesthetic risk. If spayed when young, fit and healthy, she recovers from surgery, much better and more rapidly.
- *Vaginal hyperplasia* and even *prolapse* may occur during pro oestrus. Obviously, this too is prevented by spaying.

An often argued point against spaying is that there is an increased risk of a particular form of urinary incontinence. The incidence is 2% entire bitches vs 16% in spayed bitches and it usually occurs within one year of surgery. However, the problem is not life threatening (which mammary cancer or pyometra can be) this condition is easily treatable with medication.

Neither growth rate nor growth period is affected by spaying. After spaying a bitch has a reduced maintenance food requirement so food intake should be monitored post op.

We usually recommend spaying to be between first and second seasons. This is in order to reduce significantly the risks of mammary tumours, whilst at the same time allowing maturation of the vaginal wall and improved mucosal defences which stops some puppy vaginitis. This also has the benefit that some congenital forms of incontinence may resolve with endogenous oestrogen.

The best time to spay a bitch is *2 months after the current season has finished* - this allows for the womb and ovarian activity to reduce to a minimum.

Female cats (queens)

As cats spend more time outdoors unsupervised, the emphasis is more on population control. However, as with the bitch, there are other factors to consider.

Cats are induced ovulators so will not come out of season until they have been mated.

Their behaviour during oestrus can cause them to lose weight and condition, and prolonged high levels of oestrogen can cause anaemia.

Mammary tumours are less common than in bitches but nevertheless, a higher risk in entire queens.

Cats are usually spayed from 5-6 months of age.

Male dogs

- Antisocial sexually related behaviour is far from the only reason for neutering. Although a reduction in testosterone is likely to be helpful if a male dog is showing signs of willfulness, aggression or dominance with either people or other dogs, roaming and mounting behaviour are more effectively prevented by castration than dominance aggression.
- There are multiple hormone-related diseases that can manifest in middle aged to old entire male dogs. *Prostatic enlargement* in response to testosterone (mainly between ages 6-10), can lead to constipation, straining and even *perineal hernia* (because the perineal musculature is also weakened by the hormone testosterone) A secondary *prostatitis* is common. The enlarged prostate gland may become *neoplastic (cancerous)* and cause similar symptoms. These tumours often metastasise to adjacent tissues such as the bones of the pelvis and lumbar spine, and can cause paraplegia. Castration involves removal of the testicles which are the source of the testosterone, thus preventing this.
- An entire (un-neutered) dog may develop *testicular neoplasia*. There are 3 types of testicular tumour -
 - * 1) interstitial cell tumour,
 - * 2) seminoma,
 - * 3) sertoli cell tumour which produces oestrogen leading to feminisation. This problem is especially important in cryptorchid dogs (ie dogs with undescended testes) because they are 10x more likely to develop a tumour than a normal dog.
 - *Testicular torsion* is another, painful condition that is prevented by removal of the testicles.
 - Finally, *anal adenomata* are hormone triggered tumours around the bottom. They are the third most common tumour in male dogs and prevented by castration early in life.

Male cats (toms)

Entire tom cats have a wider territory than castrated toms, and defend it more vehemently. This leads to increased inter-cat aggression, fighting and the risk of diseases carried by biting such as FeLV and FIV.

There is obviously also the risk of an entire tom cat causing unwanted pregnancies.

Urine spraying can be a problem with any cat but is much more likely in entire tom cats, (and much more pungent!.)