



spay & neuter

The debate continues

In this article we will continue to look at the debate surrounding spay and castration of our dogs, focusing this time on the behavioural implications.

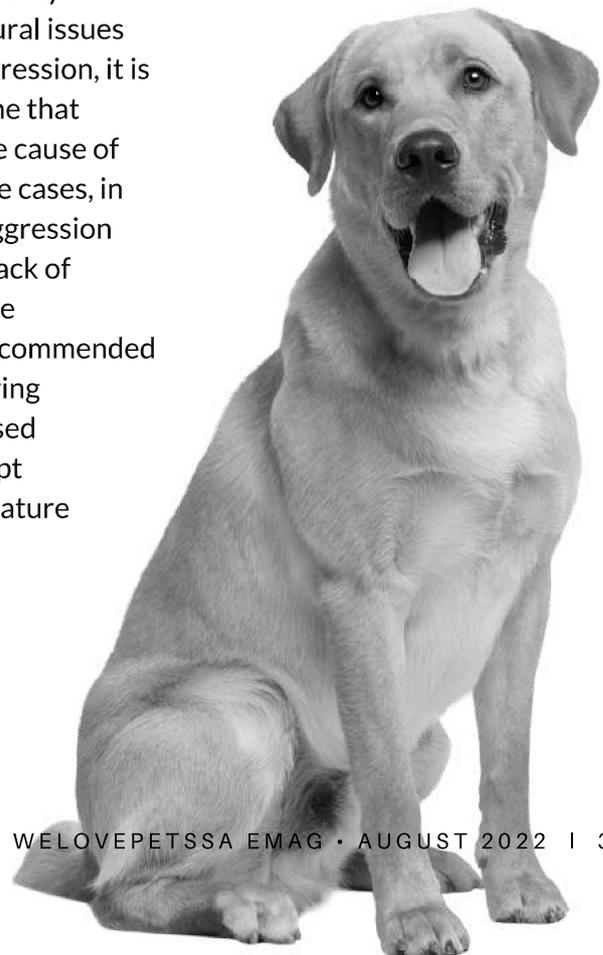
Overwhelmingly in dog bite statistics, intact males are overrepresented. For example, Patronek et al. examined dog bite-related fatalities to humans in the US between 2000-2009 and found the majority of these incidents involved intact dogs.

Historically it was thought that if a dog was exhibiting behavioural issues, removing the major source of the hormones (the testicles or ovaries) would fix the behavioural issue. Now we are more aware that there are many different aspects that contribute to a dog's

behaviour and removing the reproductive organs alone is unlikely to solve the issue and in some circumstances may exasperate it.

As with all hormones, testosterone has a function. As well as development of muscle, skin, bones and sexual organs, testosterone helps in the development of a dog's confidence. Commonly reported behavioural issues are fear based aggression, it is incorrect to assume that testosterone is the cause of aggression in these cases, in fact a lot of fear aggression comes down to a lack of confidence in these individuals. It is recommended that puppies showing fear or anxiety based behaviours are kept intact until they mature as the presence of testosterone may help the fearfulness.

Owners often choose to neuter because their dog is showing some inappropriate behaviour. Mounting people, objects, other dogs, urine marking, lack of focus and roaming. In females, mood changes during a heat cycle, presenting themselves to male dogs and to stop blood spotting in the house.



It is important to note that some of these behaviours are not always driven by hormones. Some of these behaviours can exist in neutered dogs. However, some studies have noticed a significant reduction in behaviours such as roaming, marking, humping and male/male aggression within the home in dogs that are neutered. Roaming behaviour decreased as much as 90% and marking behaviours saw a 60% decrease.

A 2018 study by McGreevy et al. looked at the reported behaviour of over 6000 dogs and found that those male dogs who were intact longer and therefore had longer exposure to the sexual hormones, had significant reduction in the reporting of 26 problem behaviours. Of those behaviours 8 were related to fearfulness and seven related to aggression. They concluded that a male dog's behaviour will mature when the reproductive organs are intact and the hormones are allowed to have their effect.

The adolescent period for a dog can be a challenging one for owners. Impulsivity and easily distracted are often reported problems. Owners often mistakenly believe neutering will calm them down and as a result make them likely to listen. When ideally training, creating a bond with your dog and providing mental and physical stimulation will succeed in solving the issue. The adolescent period is a normal life stage that cannot be eliminated by surgery.

When looking at the female population, some studies looking at female dog numbers referred for aggression issues, found a higher percentage of spayed females than intact females, which again shows neutering is not the solution for reducing aggressive behaviour.

It is worth remembering that in female dogs, a heat cycle will also greatly influence the

behaviour of a female, long after the outward signs have passed and for this reason, some owners may wish to spay their dog to eliminate this. The heat cycle brings an increase in the hormone progesterone, which can last for around 60 days. This progesterone increase can cause a rise in behaviours such as reactivity and resource guarding, as well as changing the dynamic with the other dogs in the household, especially in dogs that have some mild behaviour issues present. During this time management is important, as behaviour the female may have tolerated in the past, may not be what they tolerate now. After the levels have decreased, things should start to go back to normal. But it is something the owners with an intact female need to be aware of. The heat cycle typically comes twice a year, so there can be 4 months of the year that behaviour and levels of tolerance may change.



A female in heat becomes very attractive to male dogs, yet the window where she is willing to accept a male dog is much smaller. This can cause unwanted attention from male dogs and to prevent fights the owners may have to cease walks during this 3 week period or even separate the dogs within the household. Spaying the female will resolve these issues.

Other things to consider when deciding when or if to neuter your dog are the community in which you live. Dogs living in big cities with a dense dog population can find higher stress levels in intact dogs. There is a lot more competition in a smaller area. Dogs living in a more rural area would unlikely have these concerns. Also if your dog is expected to socialise with a large number of dogs, for example at a doggy day care, there may be a prerequisite to have them neutered.

It is also important to note that if the behavioural issue is a learnt behaviour, removing the source of the hormone, the dog may have already learned exhibiting this behaviour may give them the

reward they desire, so they will continue to express the behaviour because it gives them the result they desire. Thus again proving surgery alone won't always 'fix' the issue, behaviour modification is often required.

Much of the current research concerned with neutering of dogs and behaviour implications are based on the opinion of owners and dog bite statistics, so may be somewhat subjective and not representative of the population as a whole. More research is being published on the topic of neutering and behaviour, but the current information is conflicting. As with most issues, the dog should be treated as an individual with considerations such as environment, household dynamics, breed, genetics, health, owner compliance and the dog's history all taken into consideration.



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Disclaimer

As mentioned in part one of this feature, the statistics and research into the benefits and disadvantages of neutering come from countries such as Europe and America where the issue of roaming dogs is very uncommon. South Africa still has a huge problem with stray dogs, over run shelters and the risk to public health. Whilst the country still struggles to provide for so many dogs, neutering is still essential practice.