When to sterilize pets?

(2016 discussion)

When it comes to making the decision to sterilize your pets there is not necessarily a "right" or "wrong". There has been very little scientific research done in to these matters, and for this reason the decision can be more complicated. All animals should be treated as individuals, and a decision made after considering multiple factors.

Factors include:

1) ***Unwanted pregnancy***

   This is obvious, but important! Animals should not be bred if they are too young and still developing themselves. They should be 'matched' with an appropriate partner as unwanted or mysterious pregnancies can be risky… You should always consider size, breed, temperament, genetics, health problems and relations when choosing an appropriate mate.

   Dogs and cats usually go through pregnancy and birthing without any problems but there is a VERY long list of POTENTIAL complications that not only cost you money but more importantly, compromise the health of mum and babies.

   Cats can become pregnant at a very young age (from around 4 months old), and can even get pregnant again while still feeding a litter of kittens! They are breeding machines…

   Cats with outdoor access are obviously most at risk of unwanted pregnancies if unsterilized, but even indoor cats can escape by accident! There are a lot of cats wandering around out there – both owned and stray.

Dogs are often not as secure in your yard as you think. Dogs can jump in to your yard or your dog can turn into incredible escape artists and jump out. Be mindful if you have other unsterilized animals on your property - as isolation, fencing and separation sometimes does not always work and an unwanted pregnancy can result.

2) *Prostatic disease in male dogs*

Castrated males have a lower rate of prostate problems, these include…

- A lower risk of a condition called BPH (Benign Prostatic Hyperplasia) – this is where the prostate enlarges over time due to hormonal stimulation. A large prostate can cause issues like straining to urinate or defecate.
- A lower risk of infection & abscess of the prostate
- A lower risk of perineal hernia– a condition where a part of the body wall weakens & allows contents from the abdomen to protrude. This is thought to be because a hormone (called relaxin) is released from enlarged prostates, and contributes to this weakening.

3) *Uterine disease in female dogs & cats*

When we spey (sterilize) female animals, we remove their reproductive tract (uterus & ovaries). This means there is no chance of accidental and inappropriate pregnancies.

It also means they cannot get "pyometra" – a very serious and common condition where the uterus becomes infected and filled with pus. There are other less common conditions that are also now impossible to get - like polycystic ovarian disease, and uterine or ovarian cancer.

4) *Genitalia of female dogs*

Some female dogs have what is called an "immature" or underdeveloped vulva. Having a recessed or inverted vulva can mean they are prone to dermatitis (infected, sore skin), vaginitis, and even recurrent urinary tract infections. In this case it seems to help if we WAIT for that individual to have one heat cycle, and then sterilize them.

5) *Behaviour*

Having testosterone (ie being an entire unsterilized male) does not "equal" aggression. However, testosterone is one of the (many!) hormones involved in behavior, including anxiety / fear / aggression. It seems to play a part in INTER-

animal aggression especially. Another factor to consider is we ideally should not breed from animals that have behaviour problems.

Roaming behavior is something to consider – unsterilized males and females are both more likely to go in search of other hormonally active pets. They can be amazing escape artists, even from seemingly secure yards, and unfortunately can get in to a lot of strife (hit by cars, lost, injury, fights, unwanted pregnancy etc). If cats have any outdoor access this is going to be an issue.

In cats, on-heat queens (females) can get very demanding & vocal. Entire male cats tend to spray urine around the place (marking), and develop a strong odour.

6) Growth factors in dogs

In EARLY desexed animals (ie before 5-6 months of age) there appears to be an increased risks of breaking bones around growth plates (called 'Salter-Harris fractures'). We think this is because one of the sex hormones (oestodiol) is involved in the closure of growth plates.

There is talk that sterilizing pets MAY increase the risks of orthopedic conditions like hip dysplasia and the rupture of cruciate ligaments in dogs' knees. This is highly debatable at this point in time, and these conditions do appear to have MULTIPLE factors contributing (like genetics, environmental factors, diet, growth, activity levels, weight / obesity etc).

7) Obesity in dogs & cats

Some people associate sterilizing with weight gain or obesity problems in pets. The data is conflicting here, and the bottom line is weight can be controlled using exercise and diet, regardless of sterilization status.

8) Urinary incontinence in females dogs

There can be lots of causes of urinary incontinence in any animal. One particular category in some female dogs is "hormonal responsive urinary incontinence". The mechanisms involved remains unclear, but the condition appears to be hormone responsive (meaning it gets better with hormone supplementation). So there is the possibility that delaying sterilization until after a female dog has had her first heat might reduce the likelihood of this condition.

9) Mammary neoplasia in female animals

We think that mammary cancer is hormonal-dependent in dogs. This means that there is a chance that sterilizing before a dog has their first heat cycle can actively reduce the risk of ever developing mammary cancer. The research suggests that each heat cycle a dog has may further increase their CHANCE or risk of developing this form of cancer. However there have not been any recent scientific studies that tell us just how important this is.

10) Cancer

Male dogs & cats cannot get testicular cancer if they are castrated.

Female dogs & cats cannot get ovarian or uterine cancer if they are speyed.

Entire male dogs are susceptible to a hormone-dependent tumour called a "perianal gland adenoma". While these are usually benign, they can grow to large sizes, ulcerate, bleed or get infected. The treatment involves castrating (to remove the hormonal cause), & often surgical removal of the mass itself.

See above the notes on 'Mammary cancer' in female dogs.

There is some discussion whether sterilized animals could be slightly more prone to developing other types of cancers (ie osteosarcoma of bones, & haemangiosarcoma or organs). There is no conclusive evidence at this time.

SUMMARY?!

Data is largely LACKING in both our dogs and cats for all issues & diseases associated with sterilizing (or not sterilizing!). So is not necessarily "right or wrong" to desex, and there is not necessarily a set time to have the procedure done.

No "one hat fits all" and it should ideally be an INDIVIDUAL decision based on multiple factors, and discussion between owners and vets.