



Just like human medicine, veterinary medicine has its share of controversies regarding treatment, procedures, and other issues. And for many years, there has been much discussion regarding when to spay and neuter our pets.

Fortunately, we now have a considerable amount of research data to help us make a better decision of when to spay and neuter. Understand that far more research has been done in dogs than in cats. To access the largest study, see the link at the bottom of the page.

To be clear, I am fully aware that each situation has a different set of circumstances, such as the choice for pet adoption groups to spay/neuter at a young age prior to adoption to ensure that adopted dogs will not be used for breeding purposes. A pet owner acquiring both a male and female puppy or kitten simultaneously raises concerns of accidental pregnancies, aggression, and a tendency to roam. My intention is to provide the information we have now and let owners decide for themselves when to spay-neuter their pets based on their particular circumstances. Below are the current recommendations, with supporting reasons.

1. Male Dogs - Ideally, wait til after 12 months of age to neuter (and after 2 years for GIANT breeds)
2. Female Dogs - Ideally, aim for ~12 months of age to spay. Spay after the 1st heat cycle (typically between 6-10 months of age) but before the 2nd heat cycle (usually about 6 months after the 1st heat cycle)
3. Male Cats - 4-6 months of age to neuter (before reaching sexual maturity)
4. Female Cats - 4-6 months of age to spay (before reaching sexual maturity)

Male Dogs: The benefits of neutering male dogs at any age are

1. longer lifespan
2. reducing prostate cancer and prostate disease later in life.

The risks of early (less than 1 year of age) neutering can be many. In male dogs neutered before 1 year of age, there is a much greater risk of bone cancer (especially large breed dogs), cancer of the spleen, obesity, greater risk of a thyroid condition (hypothyroidism), increased risk of knee injuries (anterior cruciate ligament ruptures), especially in larger breed dogs, a more significant risk in Golden Retrievers for lymphosarcoma (cancer of the body's lymphatic system).

Female Dogs: The primary benefit to spaying a dog before she goes into heat for the first time is to reduce the risk of breast cancer .

Both non-spayed dogs and cats have 7 times the risk of mammary cancer compared to females that are spayed before going into heat. There is virtually no risk of breast cancer developing in dogs spayed before going into heat. If a dog goes through 1 heat cycle (usually between 6 and 10 months of age), she has an 8% chance of developing breast cancer. If a dog or cat goes through 2 heat cycles, they have a 26% chance of developing breast cancer (1 in 4 female dogs or cats), and the risk increases with each heat cycle. Also, spayed dogs and cats have virtually no risk of a life-threatening uterus infection (pyometra).

However, in Female Dogs spayed before 1 year of age, there are many more potential risks such as a more significant risk of bone cancer (especially large breed dogs), cancer of the spleen, risk for an inactive thyroid condition (hypothyroidism) , risk for obesity, increased risk of knee injuries (anterior cruciate ligament ruptures, especially in larger breed dogs), increased risk of hip dysplasia (especially in larger breed dogs), higher risk of urinary incontinence (loss of bladder control), increased risk of persistent or recurring urinary tract infections.

Research has also examined female dogs to determine whether it is preferred to remove the ovaries + the uterus (ovariohysterectomy) or remove just the ovaries alone (leaving the uterus alone ~ ovariectomy). Here in the U.S., the vast majority of vets remove both the ovaries and the uterus. In Europe and Asia, veterinarians typically remove only the ovaries. The consensus? Assuming the female has a normal uterus, there does not appear to be any advantage health-wise with either method, even looking at long-term studies. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6070019/>