

## Spaying and Neutering health benefits

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Spaying or neutering is one of the best ways to ensure your pet's long, healthy life, and reduces the large number of pets euthanized in shelters each year. Spaying and neutering also provide several very important health and behavioral benefits.

Spaying (ovariohysterectomy) is the removal of the uterus and both ovaries in females. Neutering is the removal of both testicles in males. These procedures render the animal sterile, but they also cease production of the reproductive hormones (i.e. estrogen and progesterone in females, testosterone in males). Though essential for reproduction, these hormones can have many undesired side effects – which are eliminated with spaying/neutering.

Spayed females no longer have heat cycles and associated vaginal bleeding, and are much less prone to the risky behavior of escaping the yard in search of a mate (and risking exposure to traffic and other hazards). Likewise, a neutered male no longer senses or responds to females in heat, so he no longer displays the typical stressed-out, hard-to-control, and roaming behaviors. It has also been thought that neutering before adulthood curbs aggression between male dogs, but a recent study is challenging this belief.

Spaying prevents ovarian cancer in females, and if you spay before your pet's first heat cycle you can significantly reduce the chance of development of mammary cancer. Neutering prevents male testicular cancer and decreases the risk of prostate cancer. Spaying/neutering also reduces the risk of development of noncancerous tumors triggered by reproductive hormones. Neutering can also decrease the risk of other prostatic diseases such as prostatic cyst and benign prostatic hypertrophy (an enlarged prostate).

An unspayed female pet also has a much greater risk of a type of uterine infection known as pyometra, which occurs as a result of hormonal changes during a heat cycle. In the United States, most pets are spayed/neutered between 5 and 8 months of age. But a recent study has suggested that delaying spaying or neutering until after 1 year of age may benefit bone development. Males may have a lower incidence of hip dysplasia; and both males and females may have a lower incidence of cruciate ligament injury if they are sterilized after a year of age. But there is a down side as well. Females spayed after a year of age were found to possibly be at higher risk of developing two types of cancer not associated with the reproductive tract - lymphosarcoma (cancer of lymphocytes, a white blood cell) and hemangiosarcoma (cancer of the cells lining blood vessels). These findings are still controversial, as further studies are needed. Other studies have shown that early age spaying and neutering can delay closure of the growth plates of the bones.

Spaying or neutering is a healthy choice we make for our pets, resulting in fewer pet euthanizations and better quality of life. We recommend discussing with your veterinarian the age at which your pet should be spayed or neutered.