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## EARLY SPAYING OR NEUTERING –PRO’S AND CON’S

Opinions are quite contradictory where it concerns spaying or neutering dogs. There are people who think that in order to prevent unwanted litters, dogs not meant for breeding should be sterilized. Others believe that spaying or neutering is taking away body-parts which are, in other words, amputating the animal. And as each body-part has its own specific function or functions and relates to other body parts, altering dysfunctions the animal partly with possible health problems as a consequence.

There is a lot to say about both opinions. The healthiest way for the dogs, naturally, is managing the females during their heat periods and preventing males from roaming unsupervised. However, this is difficult, if not impossible, with strays and there are many people unwilling to do so. In these cases sterilization is recommended in order to prevent the many unwanted litters, the many injuries and venereal diseases resulting from mating, and the stress and complications for the bitch during gestation, whelping and raising a new litter.

In Thailand, it has become more and more accepted to spay or neuter a dog, preferable at a young age (6 to 7 months). However, there are indications that one should be careful and critical before making such an irreversible decision, especially when the dog isn't physically and mentally full-grown yet.

A dog's growth is for an important part influenced by its reproductive hormones. Taking away the internal re-productive organs at a young age, before the dog is fully grown, causes an extended bone-growth period, making the bones longer and thinner, with as a result an increased chance of skeleton problems. It also can lead to relatively under-developed external reproductive organs, such as the vulva and the penis, with an increased risk of infections of the skin around these parts. Extended research has also found an increase in incontinence with the early spayed females which are, most probably, the case in males as well.

Females, spayed before their second heat, have a decreased chance of mammary gland cancer compared with those spayed at a later age. However, this doesn't apply to other forms of cancer. So it is found that there is more likelihood of haemangio-sarcoma (a relatively often occurring tumor in heart and spleen) and osteo-sarcoma (bone-cancer) in the (early) spayed females. Researchers and veterinarians have also discovered that sterilization can influence the thyroid function with negative side-effects such as skin, heart and behavioral problems.

Spaying and neutering can influence the animal not only on a physical level; it also can have effect on behavior.

Many people claim that since their dog is neutered it has become calmer and easier to manage. Studies on the effects of neutering male dogs show similar results. Like those conducted in the seventies by the University of Pennsylvania, showing a more than 70% improvement in the males' behaviors, regardless of the age, and by the Canine Studies Institute with an even slightly higher success rate. An extensive study conducted by Ben Hart, University of California, came up with the following results: 90% reduction in cases of roaming, 60% in inter-male aggression, 60% in mounting people and 50% in marking in the house. Neutered dogs are also less likely to mount other dogs and are more willing to accept authority from the owner or other people of the household. That there isn't a 100% improvement after neutering is often a result of the learned factor as behavior is not only influenced by a dog's hormones but also by what it learns. Therefore, neutering dogs as a consequence of a behavior problem almost always has to go together with behavior modification therapy.

Studies on the effects of spaying bitches show hardly any improved behavior. This is probably because females aren't hormonally active the whole year round but only twice a year. Evidence has been found that, where it concerns bitches under two years of age with a tendency to dominance aggression, 40% of them develop an abnormal degree of masculinity with an increase in aggressive behavior as a result. Therefore, the tendency towards dominant aggressive behavior should be overcome before spaying. In case one may still decide to continue with the surgery, it's best to wait till after the female is both physically and mentally matured.

When, however, it concerns competitive fights between females in a multi-bitch household, which often start during periods of heat, spaying (together with behavior modification) can make a difference.

And as mentioned before, spaying and neutering increase the likelihood of hypothyroidism. As side-effects, mental disorders can develop like lethargy, exercise intolerance, mental dullness, but also increased aggression, fearfulness or hyper-activity.

When summarizing the pro's and con's of spaying and neutering, I think the biggest pro's are the prevention of unwanted puppies in a world where there are already too many. Also injuries and illnesses from the mating are prevented as well as the stress and complications for the bitch during gestation, whelping and raising a new litter. Further, the chance of cancer of the reproductive organs reduces. On the mental level, males tend to become calmer, more housebound and manageable. In females spaying is primarily effective when it concerns inter-female aggression within the same household, provided that there isn't already a huge learned factor involved.

The con's are more on the physical level, with increased chances of hypothyroidism, osteo-sarcoma and haemangio-sarcoma, incontinence in females and probably in males as well, infections of the external re-productive organs and skeleton problems. On a mental level there is an increased tendency towards fear- or dominance aggression as a side-effect of hypo-thyroidism or, when spayed before mental maturity, of dominance aggression in females already with a tendency towards dominant behavior.

References and interesting links:

- Long Term Health Effects Of Spay Neuter In Dogs  
<http://www.naiaonline.org/pdfs/LongTermHealthEffectsOfSpayNeuterInDogs.pdf>

- Basis for Position on Mandatory Spay-Neuter in the Canine and Feline  
<http://www.theriogenology.org/displaycommon.cfm?an=1&subarticlenbr=59>
- The question of neutering and at what age <http://www.littleriverlabs.com/neuter.htm>
- Early Spay-Neuter Considerations for the Canine Athlete  
<http://www.caninesports.com/SpayNeuter.html>
- Non-reproductive effects of spaying and neutering on Behavior in Dogs  
<http://www.acc-d.org/2006%20Symposium%20Docs/Duffy2.pdf>
- Non-reproductive effects of spaying and neutering on the Urogenital System  
<http://www.acc-d.org/2006%20Symposium%20Docs/1VerstegenOnclin.pdf>
- Incontinence in Spayed Bitches: Frequency, Causes & Therapy  
<http://www.acc-d.org/2006%20Symposium%20Docs/1Reichler.pdf>
- Risks and Benefits of Neutering and Early-Age Neutering in Dogs and Cats: Effects on Development, Obesity, and Select Orthopedic and Neoplastic Conditions  
<http://www.acc-d.org/2006%20Symposium%20Docs/1Spain.pdf>

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