

When is the best time to spay or neuter my pet?

With new research being published on a regular basis about the benefits of the gonadal steroids, US veterinarians are having to take a long, hard look at our recommendations about when is the best time to spay or neuter a pet. Please see the handout titled 'Benefits and Risks of the Gonadal Steroids' on this page for a more detailed review of the current science. When deciding which technique to use to spay or neuter your pets, please see the handout titled "Methods available to Spay or Neuter Your Pet". Here are some important points for every pet owner to consider.

Health considerations:

- 1) Breed – large and giant breed dogs are at greater risk for bone and splenic cancer and so will benefit more from having at least a few years exposure to their gonadal steroids. Large and giant breeds will also benefit from exposure of gonadal steroids in terms of full skeletal development and reduced risk of hip dysplasia and possibly cranial cruciate rupture. The latter may be more a factor of the increased activity of most intact animals, keeping them in better physical shape and thus less likely to have muscle fatigue resulting in musculoskeletal injury. Intact animals also tend to have a higher metabolic rate, thus keeping them in better body condition which also reduces their risk of musculoskeletal injury. At this time, it is not scientifically clear how many years are necessary for the maximal benefit, so the benefits must outweigh the risks. Further research may make this information available. Small – medium breeds will likely only benefit through puberty when their skeletal development is complete.
- 2) Species – while numerous health benefits have been shown for dogs and their exposure to gonadal steroids, there appear to be few, if any, benefits for cats. Since male cats begin to display offensive urinary behaviors and increased aggression when they reach puberty, they should be neutered before this time – thus around 5-6 months of age. For female cats, the repeated and behaviorally irritating behaviors of estrus will begin around 6-8 months of age depending on when the kitten was born and when it reaches puberty. Thus, spaying around 5-6 months of age is also recommended for queens.
- 3) Sex:
 - a. Once females reach 3-5 years of age the risks of uterine infection, ovarian cysts, ovarian tumors and mammary cancer start to become much more likely and thus will start to outweigh the potential benefits. So, bitches left intact should be spayed by the time they are 5-6 years of age unless they are still being bred, in which case they should be spayed as soon as the last litter is weaned.
 - b. Once males reach 5-7 years of age, their risk of prostate disease is very high, and this can predispose them to prostate infections, which can in some cases, become life-threatening, so males should be neutered by 7-8 years of age unless they are still being used for breeding.
- 4) Behavior – both intact male and female dogs will tend to be more aggressive and more likely to get into dog fights. Bitches may be more reactive during the hormonal stages of their heat cycles. It should be noted that spaying may increase aggression in an already aggressive bitch. Tom cats are significantly more aggressive than neutered males
- 5) Accidental breeding – intact cats, both male and female, will breed frequently and produce numerous unwanted litters every year. So intact cats, should always be housed indoors only. Accidental breedings occur with dogs quite commonly as well, so owners of intact male and female dogs must be responsible enough to ensure they are fully contained when around other intact animals. Males should never be allowed to run unattended; and females close to a heat cycle, in heat, or just after finishing a heat cycle should always be monitored when outside.

Household factors:

- 1) Homes where pets will be going to doggie-day care may need to spay or neuter at an earlier age because most of these centers do not allow intact animals.
- 2) Homes where there are young children may find it harder to ensure that a bitch in heat is not accidentally allowed outside unattended or to keep an intact male and female apart when she is in heat.
- 3) Bitches in heat will bleed for several weeks, and in some homes, this may result in cleaning issues with bedding, furniture or carpeting.
- 4) The need to restrict exercise and access to other intact animals to a bitch in heat for 4 weeks, 2-3 times annually, may be very difficult for some homes. Dogs that run on acreage must be strictly confined indoors for this time period and cannot be left outside unattended.

The discussion about when is the best time to spay or neuter your dog includes many factors and each family will need to have an open and frank discussion with your veterinarian. Be sure that your veterinarian is open to this discussion and doesn't have a rote answer for spaying and neutering every dog at the same time. Cats on the other hand are generally best spayed or neutered before they reach puberty at 6-7 months of age to prevent unwanted reproductive behaviors and pregnancy.