



"Molly," photo by Jeanette MacDonald, Amherst, N.S.

EARLY-AGE Spaying and Neutering

By Dr. Susan Little

Early-age spaying and neutering (also known as "altering") are surgeries performed on kittens before the conventional ages of six to eight months. Typically, these early-age operations take place between the ages of eight and 16 weeks.

Early-age altering has been practised for over 25 years in North America. Attention has primarily been focused on animal shelter and rescue pets before adoption. However, today's pedigreed cat breeders are increasingly requesting early-age altering from veterinarians, so kittens destined for pet homes can be altered before sale. Breeders who do so are ensuring any kittens they sell will not contribute to the tragedy of pet overpopulation.

In the U.S., it is estimated that four to 15 million healthy cats are euthanized every year because they do not have homes. Figures are not readily available for Canada, but the magnitude of the problem may not be any less daunting. We do know the leading cause of death for healthy unwanted cats in Canada is euthanasia. In some shelters, between 50 and 90 per cent of cats taken in are euthanized, simply because no one wants them.

Studies have shown that, despite economic incentives such as low-cost spay and neuter services, many cats and dogs adopted from shelters have one litter before they are sterilized or are never sterilized at all. Shelter-mandated spay and neuter programs are often poorly supported by adoptive owners, despite pre-payment of surgery fees, good screening of potential adoptive owners and altering contracts.

In turn, about one-third of cats and dogs are relinquished to shelters because they are from unwanted litters. Early-age altering is therefore a valuable tool in the fight against pet overpopulation and the needless euthanasia of healthy homeless pets.

People working to reduce the problem of surplus dogs and cats in the U.S. pioneered the concept of early altering. Surgical sterilization is the most effective means of population control, but delaying the surgery until after sexual maturity defeats the purpose. Animal shelters advocate mandatory altering, but many adopted cats and dogs either are never altered or have at least one litter first.

Studies and support

Many respected professional organizations—including the Canadian Veterinary Medical Association (CVMA), the Ontario Veterinary Medical Association (OVMA), the American Veterinary



Medical Association (AVMA) and the American Animal Hospital Association (AAHA)—have published position statements supportive of early-age altering. Many veterinarians are now aware of its benefits, with surveys showing most veterinarians are in favour of altering shelter animals before adoption.

However, it is a paradox that one of the oldest and most commonly performed surgeries for companion animals is one of the least studied. Very little scientific data exists to propose the optimal age for spaying and neutering cats or dogs.

In the past, the most common reason for choosing the age of six to eight months was that veterinarians were comfortable performing surgery on and administering anesthesia to this age group. Back when safe pediatric anesthetic techniques were not yet available, waiting until the patient was older traditionally increased the safety of surgery.

However, with many veterinary schools now providing training in pediatric surgery, the availability of better anesthetic monitoring equipment and the development of anesthesia and surgery guidelines for younger patients, there is no longer any reason to delay spaying and neutering pets until after six months of age—and evidence is mounting that it may be in their best interest to be altered earlier.

Until recently, veterinarians worried earlier altering would predispose pets to more risks during surgery, more post-surgical complications and more health problems during the rest of their lives. However, several scientific studies have now shown these concerns are unwarranted. For example, it has been shown that early-age altering of cats:

- does not cause stunted growth in cats (University of Florida study, 1996).
- does not contribute to increased surgical and anesthetic risks or post-surgical complication rates (University of Texas studies, 1997 and 2000).
- does not cause serious behaviour problems in cats (University of Cornell study, 2004, and Mercer University study, 2001).
- does not contribute to feline lower urinary tract disease (University of Minnesota study, 1996, and University of Texas study, 2000).
- does not cause obesity (University of Minnesota study, 1996).

In fact, a large-scale study from Cornell University of over 1,600 cats—adopted from a humane society in New York State and followed for up to 11 years—showed early-age altered cats had less risk of certain health problems—including gingivitis, asthma and abscesses—than cats altered at traditional ages. The study concluded early-age altering provides more benefits than risks, especially for male cats, where decreased rates of urine spraying and aggression were seen.

The study's authors, Drs. Victor Spain, Janet Scarlett and Katherine Houpt, reported altering before 5.5 months of age “was not associated with increased rates of death or relinquishment or occurrence of any serious medical or behavioural conditions and may provide certain important long-term benefits.” The authors

also concluded “veterinarians should consider recommending routine gonadectomy [spay and neuter] for client-owned cats before the traditional age of six to eight months.”

Taking care

Certain guidelines must be observed for anesthesia and surgery in kittens, as they have special needs compared to those of adult animals. These young patients should have a complete examination before surgery and be vaccinated and de-wormed. Any external parasites such as fleas or ticks should also be treated.

Kittens must be weighed accurately, so anesthetic drug doses can be carefully calculated. Certain drugs are most appropriate for animals in this young age group and this information is readily available to your veterinarian. Generally, kittens under four months of age are not fasted for very long before surgery; usually only for three to four hours. This prevents them from suffering from low blood sugar (hypoglycemia). They are also encouraged to eat a small meal within one hour of recovery from surgery, for the same reason.

When a litter is scheduled for surgery on the same day, the kittens are kept together in a quiet area before surgery. Separating them can cause anxiety and distress. As soon as possible after surgery, the litter is reunited.

During surgery, precautions are taken to ensure the kitten's body temperature does not drop too low (hypothermia). Generally, kittens can be discharged from the hospital the same day as their surgery. Veterinarians who perform these procedures say surgery and recovery times are shorter and easier than with older animals.

Wider acceptance

As we learn more about the benefits of early-age altering for kittens, it may become more widely applied. Although its main use at this time is to alter pets from shelters or rescue organizations before they are adopted, there may also be benefits to encouraging pet owners to choose altering earlier rather than later.

For example, by the time kittens have been fully vaccinated, de-wormed and treated for other parasites, most are 12 weeks of age or slightly older. It may be reasonable to schedule spay or neuter surgery within the next few weeks, rather than waiting until the kitten is over six months of age as is often done. This will provide the kitten with the benefits of earlier surgery and reduce the risk of an unplanned litter—given that cats can start reproducing as early as four months old. 🐾

Susan Little, DVM, is an Ottawa-based veterinarian board-certified in feline practice. For more information about early-age spaying and neutering, she recommends consulting your veterinarian and visiting the following organizations' websites: the Canadian Federation of Humane Societies (www.cfhs.ca), the American Humane Association (www.americanhumane.org) and the Winn Feline Foundation (www.winnfelinehealth.org/health/early-spay-neuter.html).