

Why I've Had a Change of Heart About Neutering Pets

Most American pet owners don't think twice about this routine procedure, and for the first five years of my practice, I truly believed I was doing the right thing for my clients. Now, after a disturbing discovery, I've changed my stance. And here's what I want you to know.

Analysis by Dr. Karen Shaw Becker

STORY AT-A-GLANCE

- Once a huge advocate of spaying or neutering every dog early in life, after being in private practice for a few years, Dr. Becker noticed many of her canine patients were developing endocrine-related disorders. After a conversation with an expert in the field of veterinary endocrinology, Dr. Becker realized her practice of insisting on early spays or neuters for every dog patient had left many of them with serious health problems
- Dr. Becker quickly changed her recommendation for her patients from automatic spays or neuters, and the younger the better, to a more holistic approach in which surgeries, including sterilization and desexing, should only be performed when there's a medical necessity. She also believes shelter pets should be sterilized rather than desexed (spayed or neutered) in order to preserve their sex hormones
- Scientific evidence is mounting that gonad removal can deliver serious consequences to a dog's future health. Among those consequences: shortened lifespan, atypical Cushing's disease, cardiac tumors, bone cancer, abnormal bone growth and development, CCL ruptures, and hip dysplasia
- Options to traditional full spays and neuters are hard to come by both in the U.S. and Canada, because veterinary schools don't teach alternative sterilization procedures. Fortunately, we're slowly waking up to the fact that spaying and neutering – especially in very young animals – are creating health problems that are non-existent or significantly less prevalent in intact pets
- Ownership of an intact dog, male or female, is not for everyone. It takes time, effort, vigilance, and often, a thick skin. Dr. Becker discusses the ins and outs of owning an intact male or female dog and the steps necessary to prevent pregnancy

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Whenever I discuss scientific evidence related to the health risks of spaying and neutering here at Mercola Healthy Pets or on my Facebook page, I receive a lot of negative feedback from people who are absolutely certain I'm encouraging pet overpopulation and irresponsible pet ownership. So, I decided to make a video to explain to those who are standing in judgment why nothing could be further from the truth.

Long Ago I Advocated Desexing Every Dog at an Early Age

I started volunteering at an animal shelter when I was 13 years old. I started working there when I was 14. I cleaned cages. By the time I was 17, I had become certified as a euthanasia technician by the Iowa State College of Veterinary Medicine. The ten years I spent working at a kill shelter and the exposure to certain clients and cases in my veterinary

practice over the years have taught me more than I ever wanted to know or could share in this video about abused, neglected, and unwanted pets.

When I first opened my animal hospital, I was so adamant about my clients spaying their female pets before the first heat cycle, that if they didn't follow my advice, I really became upset. I tried not to show it outwardly, but I suggested that those clients might be more ethically aligned with another veterinarian who didn't feel as strongly about the subject as I did.

That was my politically correct way of saying, "Maybe you should go to another vet," because I would literally lose sleep over having intact patients in my practice. I spayed and neutered thousands of my patients when they were very, very young, assuming I was completing my moral task as an ethical veterinarian.

Canine Patients Develop Unexpected Endocrine Imbalances

About five years after my practice opened, many of my patients started to develop endocrine issues. This was obviously very concerning to me, as these animals were not over-vaccinated. They were all eating biologically appropriate, fresh food diets.

The first light bulb went off in my head when I started researching why up to 90 percent of ferrets die of endocrine imbalance, specifically adrenal disease or Cushing's disease. Mass-bred ferrets that enter the pet trade are desexed at about three weeks of age. The theory behind why most ferrets develop endocrine imbalance is that juvenile desexing creates a sex hormone deficiency, which ultimately taxes the last remaining tissues of the body capable of producing a small amount of sex hormone – the adrenal glands. So I began to wonder... could the same phenomenon be happening with my dog patients?

By 2006, the number of dogs I was diagnosing with hypothyroidism was at an all-time high. Diagnosing low thyroid levels is very easy compared to the complex adrenal testing required to show that a dog has adrenal disease. I started to wonder if hypothyroidism was just a symptom of a deeper hormonal imbalance in many of my patients. Because even after we got those thyroid levels balanced, the dogs still didn't appear to be vibrantly healthy or entirely well.

I contacted Dr. Jack Oliver, who ran the University of Tennessee's adrenal lab, and posed my theory to him. I was stunned when he told me that indeed adrenal disease was occurring at epidemic proportions in dogs in the U.S. and was certainly tied to sex hormone imbalance. Now, whether veterinarians were testing and identifying the epidemic was a whole different story.

Desexing My Youngest Patients Created Serious Health Problems

At this point, I became overwhelmed with guilt. For many years, I insisted my clients follow my advice to spay or neuter their pets at or before six months of age. It hit me like a lightning bolt that I was making this suggestion not based on what was physiologically best for my patients, but rather what I felt was morally best for their owners.

As all of the patients that I desexed at a young age cycled through, many of them with irreversible metabolic diseases, I started apologizing to my clients. I apologized to my patients as well. Through my blanket recommendation that all pets be desexed because humans may be irresponsible with an intact animal, I had inadvertently made many of my patients very ill. As a doctor, this revelation was devastating.

I began changing my recommendations on spaying and neutering. I advised my clients to leave their pets intact. Now, you must realize my veterinary practice is filled with wildly committed owners. I am not dealing with uneducated, uncaring, or unreliable clients.

Of course, there were and are exceptions to my advice against desexing. But in general, my recommendation as a holistic vet is to perform any surgery – including spaying and neutering – only when it's a medical necessity and not an elective procedure.

I recently adopted a stray Dachshund who is intact, and I plan to leave him intact. I am an intact female myself. I am proud to say that I have not experienced a single unplanned pregnancy in my personal life or in my career at my practice as a holistic vet catering to thousands of intact animals.

If you are an irresponsible pet owner who allows your intact pet outside without a leash and direct supervision, this video is not for you. Please sterilize your pet before allowing him or her outside again, as you are contributing to the overpopulation problem. Please rethink how you care for your pet, or consider not having pets.

My Views on Sterilization of Shelter Pets

The subject of spay/neuter is a huge one, and if I were to attempt to cover every aspect of it, this video would be three hours long. Suffice it to say that until we get our nation's shelter systems revamped, animals will continue to be spayed as juveniles. For now, that's that. We won't change anything with this video. Are we pushing for shelter vets to learn ovary-sparing techniques that allow for sterilization without sex hormone obliteration? Yes. But for now, that isn't happening.

I could have made a dozen different choices in my professional career that would have been satisfying, including being a shelter vet. If I were a shelter vet right now, I would be pushing for sterilization techniques that preserve normal endocrine function. I chose the path of a wellness veterinarian because that resonated the most with my personal goals in life. As I've explained, I've made many mistakes. I've apologized directly to the owners and the dogs that I desexed as puppies before I knew any better.

I am as committed as ever to preventing and treating illness in individual family pets. I'm not, however, advocating the adoption of intact animals to people who may or may not be responsible pet owners. Shelter vets don't have the luxury of building relationships with their adoptive families, so all the animals in their care must be sterilized prior to adoption. I totally agree with this. I don't necessarily agree with the method of sterilization being used.

Why I Believe Sterilization Is Better Than Desexing

As a proactive veterinarian, I have dedicated my life to keeping animals well. I have learned and continue to learn the best ways to help pets stay healthy and the reasons disease occurs. I am also a holistically oriented vet, which means I view animals as a whole – not just a collection of body parts or symptoms.

I believe there is a purpose for each organ we are born with, and that organ systems are interdependent. I believe removing any organ – certainly including all the organs of reproduction – will have health consequences. It's inevitable. It's simply common sense.

There is a growing body of evidence suggesting that desexing dogs, especially at an early age, can create health and behavior problems. When I use the term "desexing," I'm referring to the traditional spay and neuter surgery where all the sex hormone-secreting tissues are removed. When I use the term "sterilization," I'm referring to animals that can no longer reproduce, but maintain their sex hormone-secreting tissues.

In my view, I would not be fulfilling my obligation as an animal healthcare professional if I chose to ignore the scientific evidence and not pass it on to Healthy Pets readers and the clients at my practice who entrust me with the well being of their animals.

Health Issues Linked to Spaying and Neutering Dogs

Before I discuss some of the health issues now associated with desexing dogs, first let me point out that there are two medical conditions that actually can be totally eliminated by desexing: benign prostatic hypertrophy or BPH (enlarged prostate), and pyometra (a disease of the uterus). However, a wealth of information is mounting that preserving innate sex hormones, especially in the first years of life, may be beneficial to pets, whereas the risk of pyometra or BPH in an animal's first year of life is incredibly low.

Recent research has also discredited a couple of myths about the supposed benefits of early spays and neuters, including:

- A study from the U.K. suggests there isn't much scientific evidence at all to support the idea that early spaying of female dogs decreases or eliminates future risk of mammary tumors or breast cancer. This has been a much promoted supposed benefit of early spays for decades. But as it turns out, it's based on theory rather than scientific evidence.
- Similar to the situation with early spaying and mammary tumors, there's a common belief that neutering a male dog prevents prostate cancer. However, a small study conducted at Michigan State University's College of Veterinary Medicine suggests that neutering – no matter the age – has no effect on the development of prostate cancer.

And now for some of the disorders and diseases linked to spaying/neutering:

- **Shortened lifespan** — A study conducted and published in 2009 by the Gerald P. Murphy Cancer Foundation established a link between the age at which female Rottweilers are spayed and how long they live. Researchers compared long-lived Rotties that lived for 13 years or more with those who lived a normal lifespan of about 9 years. They discovered that while females live longer than males, removing the ovaries of female Rottweilers before five years of age evened the score. Females who kept their ovaries until at least 6 years of age were four times more likely to reach an exceptional age compared to Rotties who were spayed at a younger age.

I spayed my rescued Rottie, Isabelle, when I adopted her at seven years of age. She lived to be 17, and she was still unbelievably vibrant at 17. She slipped on the floor in a freak accident and became paralyzed, which ultimately led to her euthanasia. But she was the oldest and healthiest Rottweiler I have ever met.

With Isabelle, I provided literally no medical care because she didn't need it. Her body naturally thrived throughout her life. I fed her a balanced raw diet. I checked her bloodwork every six months, which was

perfect until the day she died. Isabelle was a great example of a thriving pet that lived above the level of disease. I believe her sex hormones greatly contributed to her longevity and her abundantly healthy life.

- **Atypical Cushing's disease** — It's my professional opinion that early spaying and neutering plays a role in the development of atypical Cushing's disease as well. Typical Cushing's means the middle layer of the adrenal gland is over-secreting cortisol. Atypical Cushing's involves the outer and innermost layers of the adrenal glands and occurs when other types of hormones are over-produced, usually estrogen and progesterone.

When a dog is spayed or neutered before puberty, the endocrine, glandular and hormonal systems have not yet fully developed. A complete removal of the gonads, resulting in stopping production of all the body's sex hormones (which is what happens during castration or the traditional spay), can force the adrenal glands to produce sex hormones because they're the only remaining tissue in the body that can secrete them.

Over time, the adrenal glands become taxed from doing their own work plus the work of the missing gonads. It's very difficult for these tiny little glands to keep up with the body's demand for sex hormones. This is the condition of atypical Cushing's. Hormone disruption is a central feature in Cushing's disease. Any substance or procedure that affects the body's hormonal balance should be absolutely evaluated as a potential root cause.

- **Cardiac tumors** — A Veterinary Medical Database search of the years 1982 to 1985 revealed that in dogs with tumors of the heart, the relative risk for spayed females was over four times that of intact females. For the most common type of cardiac tumor, hemangiosarcoma, spayed females had a greater than five times risk vs. their intact counterparts. Neutered males had a slightly higher risk than intact males as well.
- **Bone cancer** — In another Rottweiler study published 10 years ago for both males and females spayed or neutered before one year of age, there was a one in four lifetime risk of developing bone cancer. Desexed Rotties were significantly more likely to acquire the disease than intact dogs. In another study using the Veterinary Medical Database for 1980 to 1984, the risk of bone cancer in large-breed, purebred dogs increased two-fold for those dogs that were also desexed.
- **Abnormal bone growth and development** — Studies done in the 1990s concluded dogs spayed or neutered under one year of age grew significantly taller than non-sterilized dogs or those dogs spayed or neutered after puberty. The earlier the spay or neuter procedure, the taller the dog. Research published in 2000 may explain why: it appears that the removal of estrogen-producing organs in immature dogs – both females and males – can cause growth plates to remain open. These animals continue to grow and wind up with abnormal growth patterns and bone structure. This results in irregular body proportions, possible cartilage issues, and joint conformation issues.
- **Higher rate of CCL ruptures** — A study conducted at Texas Tech University Health Sciences Center on cranial cruciate ligament injuries concluded that spayed and neutered dogs had a significantly higher incidence of rupture than their intact counterparts. While large-breed dogs had more CCL injuries, sterilized or desexed dogs of all breeds and sizes had an increased rupture rate.
- **Hip dysplasia** — In a retrospective cohort study conducted at Cornell University's College of Veterinary Medicine, results showed that both male and female dogs sterilized at an early age were more prone to hip dysplasia.
- **Breed-specific effects of spay/neuter** — A recent study conducted at the University of California Davis involving several hundred Golden Retrievers revealed that for the incidence of hip dysplasia, CCL tears, lymphosarcoma, hemangiosarcoma, and mast cell tumors, the rates were significantly higher in both males and females that were neutered or spayed compared with intact dogs.

- **Other health concerns** — Early spaying or neutering is commonly associated with urinary incontinence in female dogs and has been linked to increased incidence of urethral sphincter incontinence in males. Spayed or neutered Golden Retrievers are much more likely to develop hypothyroidism.

A cohort study of shelter dogs conducted by the College of Veterinary Medicine at Texas A&M University concluded that infectious diseases were more common in dogs that were spayed and neutered at under 24 weeks of age.

The AKC's Canine Health Foundation issued a report pointing to higher incidence of adverse reactions to vaccines in spayed and neutered dogs as well.

Among the reports and studies pointing to health concerns associated with early spaying and neutering, we also find mention of increased incidence of behavior problems, including noise phobias, fear behavior, aggression, and undesirable sexual behaviors.

Options to Traditional Spaying and Neutering

Veterinarians in the U.S. and Canada are trained only to spay and neuter, which is unfortunate since there are less invasive alternatives, such as tubal ligation, hysterectomy, and vasectomy. These techniques are quick and easy and certainly effective. In fact, commonly, once the technique is mastered, they're faster, less risky and potentially less costly than a full spay or neuter.

But unfortunately, nobody knows how to do them in this country. The reason they're hard to come by is because U.S. veterinary schools simply don't teach these alternative procedures. They've never had a reason to. And until pet owners start demanding sterilization options beyond spaying and neutering, the status quo will remain.

As author Ted Kerasote and I have discussed on numerous occasions, in many European countries, there are intact free-roaming dogs running about under voice control of their owners. When female dogs go into heat, owners simply manage the situation by removing them from group social events until their heat cycle is complete. They're kept at home, sequestered away from males. They're walked on a leash.

Ted tells the story of a British veterinarian he interviewed who said most of the requests he gets to neuter dogs come from U.S. and Canadian citizens who are living in London. Rather than immediately complying with the request, the veterinarian talks with the pet owner about the actual necessity to desex the dog. For example, if the dog is always on a leash and always under the owner's control, then how exactly would the dog become pregnant (or mate with a female) if it's constantly with the owner and never off leash? The veterinarian says that he rarely has a British pet owner request a spay or neuter procedure.

Most Americans can't even comprehend that it's possible to keep intact pet dogs and not have millions of litters of unwanted puppies. That's because we've been conditioned to believe that a responsible pet owner means spaying and neutering your dog. I was taught to believe the same thing -- that keeping an intact pet was considered irresponsible even if the owner is meticulously careful about not allowing the pet to breed.

Of course, our dependence on spaying and neutering as the only form of birth control is the result of generations of irresponsible pet owners and millions of unwanted dogs and cats that are killed annually in our animal shelters.

It is a vicious cycle, and it's a very frustrating cycle to witness. Irresponsible people need to have sterilized pets. No one's going to argue that point. Unfortunately, spaying and neutering responsible people's pets doesn't make irresponsible people any more responsible. They remain the root cause of the overpopulation crisis in this country.

My problem with the spaying and neutering issue is it's the only current solution to the overpopulation problem. We're not just halting the animal's ability to reproduce, we are also removing incredibly valuable sex hormone-secreting tissues like the ovaries and the testes. These organs serve a purpose.

We're slowly waking up to the fact that in our rush to spay or neuter every possible animal we can get our hands on – the younger, the better – we are creating health problems, sometimes life-threatening health problems, that are non-existent or significantly less prevalent in intact pets.

Responsible Ownership of an Intact Female Dog

First of all, you should know that not everyone is cut out to be the owner of an intact male or female dog. Part of the popularity of full spays and neuters vs. other means of sterilization is that it's just plain convenient for pet owners. Not only do spays and neuters render the animal unable to reproduce, but they also remove all of the messiness of female heat cycles and most of the pet's key mating behaviors for both sexes.

Female dogs don't have monthly periods like humans do. They have one, or usually two heats a year. You can typically tell a female heat cycle is on its way when your intact female's vulva begins to enlarge. Just like humans there's bleeding involved, but unlike human females who are not fertile during menstruation, dogs are just the opposite. Female dogs can get pregnant only during heats for about three to four days as unfertilized eggs ripen in their bodies.

Some dogs will signal during this time by flagging, which means lifting the tail base up and to the side. Some females will stand and can be mounted at any time during their heat cycle, including before and after they're pregnant or fertile. Others show no behavior signs whatsoever. Owners of intact female dogs must be certain of the signs of heat in their pets, so that they can separate them from male dogs during this important time.

Never underestimate the determination of an intact male dog that wants to mate with a female dog in heat. I'm telling you, if you have a female dog, male dogs will come visit her from across a tri-state area because she's putting out some very attractive pheromones.

With proper training, reinforcement, and constant supervision, however, male dogs can learn to be in the presence of a female while supervised, even when she's in heat, without mating. Some people with both an intact male and female don't want to put the effort into managing male dogs around cycling females and simply ship them off to a friend or relative's house until the heat cycle is over.

If you have a female dog in heat, you should never leave her outside alone even for a second. It doesn't matter if you have a fenced-in yard. If there's an unsupervised male around, there's absolutely a risk of impregnation through the fence (or over the fence, or under the fence).

The heat cycle of a female dog lasts about three weeks, but the menstrual bleeding can be unpredictable during that time. It's neither consistently heavy nor is it every day, all day. Many owners of intact female dogs invest in special diapers or panties that can hold a sanitary napkin to contain the discharge.

At my house we just get a baby gate, and we gate our special lady of the month in the kitchen area. We put a dog bed in there, and then we just mop a couple of times a day. Typically, female dogs are incredibly good at keeping themselves very clean. Most of the time, there's very little mess.

Responsible Ownership of an Intact Male Dog

Intact males should receive positive reinforcement behavior training to stop urine marking in the house as well as any humping behavior that may occur.

The intact, male, adult Dachsie we just rescued – his name is Lenny – became Lenny Loincloth after a few days in our house for obvious reasons. He acquired his last name because he marked absolutely every corner of every piece of furniture we own. To reduce this totally undesirable behavior and reinforce healthy housebreaking, we put a belly band on him. We call it his loincloth. It's a little diaper that holds his penis to his abdomen. Dogs innately do not want to urinate on themselves; they want to pee and mark on objects. By belly banding him, we reinforce good behavior like going potty outside and not marking in the house. I'm proud to say that in one month's time, we've really helped him kick his marking habit for the most part.

Constant positive reinforcement was really necessary with Lenny, as it is with all dogs. We also discovered the first day Lenny was in our house that he liked to hump everything in sight. He preferred humping pillows and dog beds. We simply picked those pillows and dog beds up. We didn't give him access to objects that tempted his undesirable behavior. He hasn't humped anything in three weeks. So there are ways to positively reinforce good behavior and extinguish negative intact male dog behaviors if you put in the effort.

Your unneutered male should never be off-leash unless you are absolutely sure you won't run into an intact female dog or he's under constant voice control around all dogs. You also need to be in control of your dog while he's leashed. If your intact male or female dog is able to jerk away from you when he or she gets excited, then your dog is not under your control despite the leash.

I recommend positive reinforcement behavior training for all dogs, especially intact dogs. And it's an absolute necessity for powerfully built, intact male dogs. Remaining in obedience class for a dog's first 16 months of life is an excellent foundation for good manners for the rest of his life.

If your dog becomes assertive, desexing (a full neuter) can be an important part of managing long-term behavior issues. Again, in this instance, if you have an aggressive dog, we must evaluate the risks vs. benefits. The health benefits of leaving a temperamental dog intact do not outweigh the greater risk of this aggressive animal being rehomed, dumped, or abused – or hurting another animal or human. With behavior issues, spaying or neutering can be a logical choice. It's better to have endocrine disease but be in a loving home, than be disease-free but dumped at a kill shelter for a behavior problem.

Keep in mind that out in the world, at least in North America, you and your intact dog will not have a whole lot of company in this day and age. You won't be able to take your dog everywhere a spayed or neutered dog is allowed to go. If your dog is a male, prepare to deal with plenty of prying questions and even anger from people who will pre-judge you as totally irresponsible.

When Lenny sees people, he flops on his back and says, "Hello, hello, hello!" Everyone's comment is, "What are those?" And then "When are those coming off," pointing to his testicles.

What About My Cat?

Luckily, thus far, research has shown that our feline companions don't have the same negative long-term physiologic consequences associated with desexing that plague our canine population. We may identify potential links in the future, but thus far, it appears our canine companions are more negatively affected by spaying or neutering.

I made this video so you could understand why I no longer take a cookie-cutter approach to desexing all juvenile pets. The decision to sterilize, spay, or neuter your pet, at what age, and with what technique is a very personal decision that is based on your dog's breed, temperament, personality, and your commitment to training, lifestyle management, and responsible pet ownership.
