

View on Spaying and Neutering (taken from a well-respected Breeder friend of mine)

I have had a couple inquiries this week from families whose vets are pushing spaying their puppy girls at 6 months...for a variety of reasons, I am COMPLETELY OPPOSED TO SPAYING BITCHES BEFORE THEY HAVE ONE HEAT CYCLE and OPPOSED TO NEUTERING MALES BEFORE THEY REACH MATURITY. I am attaching a couple of articles I have found which support my beliefs. A lot of what I have written pertains to bitches, because it is my bitches who the vets particularly are after for early spaying, but I feel equally as strongly that MALES SHOULD NOT BE NEUTERED BEFORE MATURATION (probably 18 months or later) - and of course, I do not really see the need for neutering males at all - anyone who wants to discuss this, I am always available. I neutered my first boy, and I always regretted it. If you have time, read the articles I have attached. Do some research on your own. It is your responsibility to protect your dog!! Do not let a vet strong arm you into a course of action which may be detrimental to the health of your vizsla. Remember, to any of you who would like or are willing to try the show ring, the dogs and bitches must be intact (i.e., not spayed or neutered) - BUT even if you don't want to compete, there are many adverse health consequences to early spaying/neutering to consider in making your decision:

My comments on early spaying and neutering....

I am totally opposed to spaying or neutering a puppy at six months of age. In my opinion, it is in the best interests of your puppy to mature physically before spaying or neutering. Of course, it is a general rule that you never spay a bitch in season or around the time of her season - I think because of the likelihood of greater blood loss during the surgery. My recommendation would be to let your bitch have her first season, then wait 3 months before you spay her. A competent vet should have no particular difficulty spaying a female at that point - granted things do develop during a first season (breasts, vulva, etc. - as they should), but that should not make a routine spay difficult. My older females, whether never bred or those with several litters behind them, have come through their spay surgeries just fine. Some are bouncing around the next day, some are dragging in pain for several days before bouncing - but that is just like people! some bounce better than others. It is an individual response, and there has been no evident correlation between # litters, age at spay, etc. For boys, please do not neuter before the dog is physically mature - 18 months of age seems like a reasonable age.

I agree that much of the spay/neuter information that is available to the public is unbalanced and contains claims that are exaggerated or unsupported by evidence. "Rather than helping to educate pet owners, much of this has contributed to common misunderstandings about the long-term health impacts of spay/neuter in dogs. The traditional spay/neuter age of six months as well as the modern practice of pediatric spay/neuter appear to predispose dogs to health risks that could otherwise be avoided by waiting until the dog is physically mature (emphasis added)".

Spaying puppies young in my opinion is contrary to common sense and plain STUPID! and has serious repercussions on the long term health and growth of the pup. It is simply common sense that an animal should be allowed to mature before ripping out the organs nature included by nature for their maturation. Bitches and dogs spayed or neutered young often grow very tall (long bones don't close as quickly due to the lack of hormones) and end up looking completely different than they would have had they been allowed to mature - I know this from personal experience - I have seen it happen and it is not pretty - why take a promising beautiful bitch and then spay her so that she looks less lovely grown up than she would otherwise? Not to mention that spaying is not without risk, EARLY SPAYING is also linked with spay incontinence, orthopedic injuries and some cancers.

I think the data is not disputed that there is a slightly increased risk of mammary cancer if a bitch is allowed to develop and mature (I believe the risk is zero if spayed young), but this risk to me is outweighed by the serious negative impacts of early spaying (changes in growth, behavior and risks of injury and cancers). In 18 years of breeding, and I have produced a lot of puppy bitches, I have never had a bitch (knock on wood) develop mammary cancer..one article attached states that the published

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research¹⁸ shows that the relative risk (odds ratio) that females will develop mammary cancer compared to the risk in intact females is dependent on how many estrus cycles she experiences (of course, any percentage of zero is still zero for my personal experience with this type of cancer):

# of estrus cycles before spay	Odds Ratio
None	0.005
1	0.08
2 or more	0.26
Intact	1.00

It is not natural for bitches to be spayed young, and a large percentage of bitches spayed young develop spay incontinence (which means they leak urine and must go on drugs in an attempt to control the leaking). It is not clear whether this problem is hormonal or somehow related to the method of surgery or something else, but it is a very common negative result of spaying. It sometimes takes a year or even longer for the spay incontinence to begin - so later spaying gives you more years of continence in many bitches.

Many believe that there is a strong link between spaying a female and an increased incidence of hemangiosarcoma (basically a bleed out type of cancer, which in the past 10 years in my opinion is one of the top 3 cancer killers of vizslas (in my observations, I would say the top 3 cancer killers in this breed are hemangio, lymphoma and mast cells). Later spaying delays this result, if in fact it is as strongly linked as suggested by the data.

Clearly, a mature bitch who is not being bred probably should be spayed.

Pertinent Information from the Articles which I can email to you for Females. (These are skewed of course to support what I think is the correct decision, and I am sure one can find articles to support any position one wants to take. There is no black and white answer - I think there are risks from whatever decision you make - for me, the risks of waiting until the bitch is mature are worth taking and that is always my decision. It boils down in part to common sense and gut feeling - and that is individual to every one of us:

On the positive side, spaying female dogs

- if done before **2.5** years of age, greatly reduces the risk of mammary tumors, the most common malignant tumors in female dogs [*In 19 years of breeding, I am not aware of a single bitch of my breeding that has developed mammary cancer*].
- nearly eliminates the risk of pyometra, which otherwise would affect about 23% of intact female dogs; pyometra kills about 1% of intact female dogs [*This could be true, but pyos in young females are not common, and in those rare situations where they have been known to occur, have been very treatable. In 19 years of breeding, I have produced two pyos – one at age 2 and one at age 5 and both were spayed at that time and are fine*].
- reduces the risk of perianal fistulas [*These generally affect older age bitches, not young bitches. My male had one removed at 15 and he came through fine*].
- removes the very small risk (~0.5%) from uterine, cervical, and ovarian tumors [*Never had any of these tumors in 19 years of breeding*].

On the negative side, spaying female dogs

- if done before maturity, increases the risk of osteosarcoma by a factor of 3.1; this is a common cancer in larger breeds with a poor prognosis [*Osteosarcoma is not an uncommon cancer for vizslas – thankfully, I have never had it in any of my puppies*]
- increases the risk of splenic hemangiosarcoma by a factor of 2.2 and cardiac hemangiosarcoma by a factor of >5; this is a common cancer and major cause of death in some breeds

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[Hemangiosarcoma is presently one of the biggest killers of middle-aged vizslas in my observations. A good friend of mine just lost his 5 year old bitch to hemangiosarcoma, and he believes that his early spaying was a contributing factor; I have produced two older dogs who died from this cancer].

- triples the risk of hypothyroidism *[Vizslas do have thyroid problems sufficient to prompt VCA to include a thyroid clearance in the CHIC program].*
- increases the risk of obesity by a factor of 1.6-2, a common health problem in dogs with many associated health problems *[I have witnessed this with a lot of bitches who have been spayed.]*
- causes urinary “spay incontinence” in 4-20% of female dogs *[I have witnessed this with bitches across the board – and not just vizslas]*
- increases the risk of persistent or recurring urinary tract infections by a factor of 3-4
- increases the risk of recessed vulva, vaginal dermatitis, and vaginitis, especially for female dogs spayed before puberty
- doubles the small risk (<1%) of urinary tract tumors
- increases the risk of orthopedic disorders
- increases the risk of adverse reactions to vaccinations

There are also risks to the spay surgery itself. At one veterinary teaching hospital where complications were tracked, the rates of intraoperative, postoperative and total complications were 6.3%, 14.1% and 20.6%, respectively as a result of spaying female dogs¹. Other studies found a rate of total complications from spaying of 17.7%² and 23%³.

I would prefer my "patient" at the time of spay to NOT be a puppy! puppies are already going through so much as far as teething and vaccines and growing. I attempt to minimize further assaults to their immune system when young. I do believe there is a correlation between localized puppy mange (not uncommon in vizslas, but self-resolving in almost all cases) and overstressing immune systems by adding further assaults to the immune system, like early spaying.

Urinary incontinence is common in spayed female dogs, which can occur soon after spay surgery or after a delay of up to several years. The incidence rate in various studies is 4-20%^{33,34,35} for spayed females compared to only 0.3% in intact females³⁶. Urinary incontinence is so strongly linked to spaying that it is commonly called “spay incontinence” and is caused by urethral sphincter incompetence³⁷, though the biological mechanism is unknown.

AND FOR THE BOYS....

On the positive side, neutering male dogs

- eliminates the small risk (probably <1%) of dying from testicular cancer *[Never had one in 19 years of breeding that developed testicular cancer]*
- reduces the risk of non-cancerous prostate disorders *[which are treatable with antibiotics or later neutering – Pfalcon had prostate at 14 and was treated with antibiotics and went on to breed again].*
- reduces the risk of perianal fistulas *[which are treatable with antibiotics or later neutering – Pfalcon had one at 15 ½ which was surgically removed and he was not neutered]*
- may possibly reduce the risk of diabetes (data inconclusive)

On the negative side, neutering male dogs

- if done before maturity, increases the risk of osteosarcoma (bone cancer) by a factor of 3.8; this is a common cancer in medium/large and larger breeds with a poor prognosis. *[Osteosarcoma is not an uncommon cancer for vizslas – thankfully, I have never had it in any of my puppies]*

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- increases the risk of cardiac hemangiosarcoma by a factor of 1.6; this is a common cancer and major cause of death in some breeds [*Hemangiosarcoma is presently one of the biggest killers of middle-aged vizslas in my observations*].
- triples the risk of hypothyroidism [*Vizslas do have thyroid problems sufficient to prompt VCA to include a thyroid clearance in the CHIC program*].
- increases the risk of geriatric cognitive impairment
- triples the risk of obesity, a common health problem in dogs with it the many associated health problems associated with obesity {I HAVE OBSERVED THIS}
- quadruples the small risk (<0.6%) of prostate cancer {IRONIC THAT I NEUTERED MY FIRST MALE BECAUSE I WAS MISINFORMED AND THOUGHT I WOULD DECREASE THIS RISK!}
- doubles the small risk (<1%) of urinary tract cancers
- increases the risk of orthopedic disorders
- increases the risk of adverse reactions to vaccinations

Abnormal Growth and Increased Proneness to Injury

The sex hormones, by communicating with a number of other growth-related hormones, promote the closure of the growth plates at puberty (3), so the bones of dogs or bitches neutered or spayed before puberty continue to grow. Dogs that have been spayed or neutered well before puberty can frequently be identified by their longer limbs, lighter bone structure, narrow chests and narrow skulls. This abnormal growth frequently results in significant alterations in body proportions and particularly the lengths (and therefore weights) of certain bones relative to others.

For example, if the femur has achieved its genetically determined normal length at 8 months when a dog gets spayed or neutered, but the tibia, which normally stops growing at 12 to 14 months of age continues to grow, then an abnormal angle may develop at the stifle. In addition, with the extra growth, the lower leg below the stifle likely becomes heavier (because it is longer), and may cause increased stresses on the cranial cruciate ligament. In addition, sex hormones are critical for achieving peak bone density.(4) These structural and physiological alterations may be the reason why at least one recent study showed that spayed and neutered dogs had a higher incidence of CCL rupture. Another recent study showed that dogs spayed or neutered before 5 1/2 months had a significantly higher incidence of hip dysplasia than those spayed or neutered after 5 1/2 months of age

Cancer Risks

A retrospective study of cardiac tumors in dogs showed that there was a 5 times greater risk of hemangiosarcoma, one of the three most common cancers in dogs [and a huge killer of vizslas as of late] in spayed bitches than intact bitches.

There certainly is evidence of a slightly increased risk of mammary cancer in female dogs after one heat cycle, and for increased risk with each subsequent heat. While about 30 % of mammary cancers are malignant, as in humans, when caught and surgically removed early the prognosis is very good.

Behavior

A recent report of the American Kennel Club Canine Health Foundation reported significantly more behavioral problems in spayed and neutered bitches and dogs. The most commonly observed behavioral problem in spayed females was fearful behavior and in males was aggression.

Other Health Concerns

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A number of studies have shown that there is an increase in the incidence of female urinary incontinence in dogs spayed early (13), although this finding has not been universal [I have seen this more frequently in bitches spayed young]. Certainly there is evidence that ovarian hormones are critical for maintenance of genital tissue structure and contractility.

Spayed or neutered dogs were more likely to develop hypothyroidism.(2) This study is consistent with the results of another study in which neutering and spaying was determined to be the most significant gender-associated risk factor for development of hypothyroidism.

The author of one article stated that she had gathered these studies to show that our practice of routinely spaying or neutering every dog at or before the age of 6 months is not a black-and-white issue. Clearly more studies need to be done to evaluate the effects of prepubertal spaying and neutering, particularly in canine athletes. Currently, she expresses that she has significant concerns with spaying or neutering canine athletes before puberty.

HERE IS ONE ARTICLE: I have just grabbed certain paragraphs above to give you a summary, but this is a very good article.

Early Spay-Neuter Considerations
for the Canine Athlete
One Veterinarian's Opinion
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Those of us with responsibility for the health of canine athletes need to continually read and evaluate new scientific studies to ensure that we are taking the most appropriate care of our performance dogs. This article provides evidence through a number of recent studies to suggest that veterinarians and owners working with canine athletes should revisit the standard protocol in which all dogs that are not intended for breeding are spayed and neutered at or before 6 months of age.

Orthopedic Considerations

A study by Salmeri et al in 1991 found that bitches spayed at 7 weeks grew significantly taller than those spayed at 7 months, who were taller than those not spayed (or presumably spayed after the growth plates had closed).(1) A study of 1444 Golden Retrievers performed in 1998 and 1999 also found bitches and dogs spayed and neutered at less than a year of age were significantly taller than those spayed or neutered at more than a year of age.(2) The sex hormones, by communicating with a number of other growth-related hormones, promote the closure of the growth plates at puberty (3), so the bones of dogs or bitches neutered or spayed before puberty continue to grow. Dogs that have been spayed or neutered well before puberty can frequently be identified by their longer limbs, lighter bone structure, narrow chests and narrow skulls. This abnormal growth frequently results in significant alterations in body proportions and particularly the lengths (and therefore weights) of certain bones relative to others. For example, if the femur has achieved its genetically determined normal length at 8 months when a dog gets spayed or neutered, but the tibia, which normally stops growing at 12 to 14 months of age continues to grow, then an abnormal angle may develop at the stifle. In addition, with the extra growth, the lower leg below the stifle likely becomes heavier (because it is longer), and may cause increased stresses on the cranial cruciate ligament. In addition, sex hormones are critical for achieving peak bone density.(4) These structural and physiological alterations may be the reason why at least one recent study showed that spayed and neutered dogs had a higher incidence of CCL rupture.(5) Another recent study showed that dogs spayed or neutered before 5 1/2 months had a significantly higher incidence of hip dysplasia than those spayed or neutered after 5 1/2 months of age, although it should be noted that in this study there were no

standard criteria for the diagnosis of hip dysplasia.(6) Nonetheless, breeders of purebred dogs should be

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cognizant of these studies and should consider whether or not pups they bred were spayed or neutered when considering breeding decisions.

Cancer Considerations

A retrospective study of cardiac tumors in dogs showed that there was a 5 times greater risk of hemangiosarcoma, one of the three most common cancers in dogs, in spayed bitches than intact bitches and a 2.4 times greater risk of hemangiosarcoma in neutered dogs as compared to intact males.(7) A study of 3218 dogs demonstrated that dogs that were neutered before a year of age had a significantly increased chance of developing bone cancer.(8) A separate study showed that neutered dogs had a two-fold higher risk of developing bone cancer.(9) Despite the common belief that neutering dogs helps prevent prostate cancer, at least one study suggests that neutering provides no benefit.(10) There certainly is evidence of a slightly increased risk of mammary cancer in female dogs after one heat cycle, and for increased risk with each subsequent heat. While about 30 % of mammary cancers are malignant, as in humans, when caught and surgically removed early the prognosis is very good.(12) Luckily, canine athletes are handled frequently and generally receive prompt veterinary care.

Behavioral Considerations

The study that identified a higher incidence of cranial cruciate ligament rupture in spayed or neutered dogs also identified an increased incidence of sexual behaviors in males and females that were neutered early.(5) Further, the study that identified a higher incidence of hip dysplasia in dogs neutered or spayed before 5 1/2 months also showed that early age gonadectomy was associated with an increased incidence of noise phobias and undesirable sexual behaviors.(6) A recent report of the American Kennel Club Canine Health Foundation reported significantly more behavioral problems in spayed and neutered bitches and dogs. The most commonly observed behavioral problem in spayed females was fearful behavior and the most common problem in males was aggression.(12)

Other Health Considerations

A number of studies have shown that there is an increase in the incidence of female urinary incontinence in dogs spayed early (13), although this finding has not been universal. Certainly there is evidence that ovarian hormones are critical for maintenance of genital tissue structure and contractility.(14, 15) Neutering also has been associated with an increased likelihood of urethral sphincter incontinence in males.(16) This problem is an inconvenience, and not usually life-threatening, but nonetheless one that requires the dog to be medicated for life. A health survey of several thousand Golden Retrievers showed that spayed or neutered dogs were more likely to develop hypothyroidism.(2) This study is consistent with the results of another study in which neutering and spaying was determined to be the most significant gender-associated risk factor for development of hypothyroidism.(17) Infectious diseases were more common in dogs that were spayed or neutered at 24 weeks or less as opposed to those undergoing gonadectomy at more than 24 weeks.(18) Finally, the AKC-CHF report demonstrated a higher incidence of adverse reactions to vaccines in neutered dogs as compared to intact.(12)

I have gathered these studies to show that our practice of routinely spaying or neutering every dog at or before the age of 6 months is not a black-and-white issue. Clearly more studies need to be done to evaluate the effects of prepubertal spaying and neutering, particularly in canine athletes.

Currently, I have significant concerns with spaying or neutering canine athletes before puberty. But of course, there is the pet overpopulation problem. How can we prevent the production of unwanted dogs while still leaving the gonads to produce the hormones that are so important to canine growth and development? One answer would be to perform vasectomies in males and tubal ligation in females, to be followed after maturity by ovariectomy in females to prevent mammary cancer and pyometra. One possible disadvantage is that vasectomy does not prevent some unwanted behaviors associated with males such as marking and humping. On the other hand, females and neutered males frequently participate in these behaviors too. Really, training is the best solution for these issues. Another possible disadvantage is finding a veterinarian who is experienced in performing these procedures. Nonetheless,

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some do, and if the procedures were in greater demand, more veterinarians would learn them.

I believe it is important that we assess each situation individually. For canine athletes, I currently recommend that dogs and bitches be spayed or neutered after 14 months of age.

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