SPAY AND NEUTER STUDY – WHY WE SHOULD WAIT

This month, I’d like to share with you a study on spay and neuter procedures that’s making big waves in veterinary circles. It really has surprised many people. However, before I launch into the review, I want to caution you that sometimes studies can be misleading, so let’s take the following with a grain of salt before we overhaul the way we think about the importance of alteration surgeries.

This new study was published by researchers at the University of California – Davis. It indicates that neutering may adversely impact the risk of some dogs for developing certain cancers and joint problems. This study runs counter to prevailing sentiments, so it’s worth a review of where we stand now.

In the U.S., pet parents overwhelmingly support the neutering of dogs, justified by concerns about overpopulation and minimizing the development of unwanted behaviors (such as roaming, aggression and marking). Nowadays, neutering is considered part of responsible pet care, and spay and neuter surgeries are usually done when dogs are less than one-year-old.

But in the past 10 years, studies have indicated that neutering can have negative health effects for certain breeds (see references). Drawing on these previous studies, researchers at Davis used historical data from their veterinary hospital to examine the effects of neutering on the risks of several diseases in one breed, the Golden Retriever. The researchers involved chose to focus exclusively on Goldens due to their popularity in the U.S. and Europe, as well as their predisposition to certain genetic issues. The study focused on joint disorders and cancers because neutering removes sex organs (testes or ovaries), which interrupts the production of certain hormones that play important roles in key body processes (such as the closure of bone growth plate).

The study showed that in Golden Retrievers, the rates of hip dysplasia, cranial cruciate ligament tear (knee injury), lymphosarcoma, hemangiosarcoma and mast cell tumors were higher in both males and females that were neutered compared to intact (non-neutered) retrievers. Specifically, early neutering was associated with an increase in the occurrence of hip dysplasia, cranial cruciate ligament tears and lymphosarcoma in males, and cranial cruciate ligament tears in females. In fact, there was a doubling of the incidence of hip dysplasia among early-neutered males.

Another interesting finding was that late neutering (after the first heat cycle) in females was associated with a higher incidence of mast cell tumors and hemangiosarcomas, with no apparent explanation. In contrast to the rather strong evidence for neutering males and/or females as a risk factor for certain cancers and joint disorders, evidence for neutering as protection against a dog acquiring one or more cancers is weak. The most frequently mentioned is mammary cancer, however, a recent systematic review of published work on neutering and mammary tumors found the evidence that neutering reduces the risk of mammary neoplasia to be weak, at best (Beauvais W, Cardwell JM, Brodbelt DC, 2012).

Even given the results of this new study, the relationship between neutering and disease-risk remains a very complex issue. For example, the increased incidence of joint disease seen in early neutered dogs is likely a combination of the effect on the growth plates and the increase in weight on the joints that is commonly seen in neutered dogs, and may even be affected by genetic factors yet to be determined. Obviously, more research is needed in this arena.

This research is notable for a couple of reasons. In Goldens, it suggests that the neutering of males well post-puberty could possibly help to avoid the problems of increased rates of hip dysplasia, cranial cruciate ligament tears and lymphosarcoma. For females, the issue is more convoluted and more studies are needed, because early neutering seems to increase the incidence rate of cranial cruciate ligament tears and late neutering may be tied to higher rates of certain cancers. For pet parents of pure-bred Goldens, the bottom line is that it is extremely important to gather all information before deciding if and when to neuter. As with all medical decisions, please review the options available to your companion animal with your veterinarian before deciding on a course of action.

It is important to note that the results of this study are breed-specific to Golden Retrievers and cannot be extrapolated to other breeds, or dogs generally. This study may or may not be the tip of an iceberg, as a full understanding of the disease conditions affected by neutering across all breeds would require many more breed-specific studies, and these may not bear any meaningful fruit. Needless to say, veterinarians will be following new research closely.