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Dog Tips

Estrogens Run Rampant in Dogs — Avoid These 20 Items Like the Plague

Estrogen-mimicking chemicals play a major role in mammary tumors, making them key to prevention. For both male and female dogs. Here are 9 simple ways to reduce your dog's exposure. Failure to do so could have you kicking yourself for years to come.

Reviewed by Dr. Becker

STORY AT-A-GLANCE

- Mammary cancer is the most common tumor in female dogs
- Canine breast cancer is similar to human breast cancer, so veterinary research into treatments for mammary tumors in dogs can also ultimately benefit humans
- It's important to understand the root causes of mammary cancer are multifactorial, but the more we know, the sooner we can take steps to prevent it
- One cause is toxically high estrogen levels, which can occur even in spayed females and male dogs as the result of exposure to xenoestrogens (estrogen-mimicking compounds) in the environment
- It's important to take steps to reduce your dog's exposure to xenoestrogens

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Mammary gland cancer is the most common tumor found in female dogs, and is similar to breast cancer in humans, in that it's multifactorial (has multiple causes), but both are fueled by the hormone estrogen. Mammary cancer is most commonly seen in intact female dogs, for example, strays and females used as breeders in puppy mills. Among these populations, 1 in 4 may have mammary tumors.[1]

University Programs Treating Canine Mammary Cancer

Dogs make excellent mammary cancer research subjects for a number of reasons, one of the most important being that the disease in dogs shares many characteristics of breast cancer in humans in terms of dietary risk factors, hormonal associations, biology, clinical behavior and more.[2]

In addition, dogs have 10 mammary glands and may develop tumors in several of them at the same time. This allows researchers to analyze tumors at different stages of development in the same animal.

One example: The University of Pennsylvania runs the Penn Vet Shelter Canine Mammary Tumor Program, which treats homeless dogs with mammary cancer, often saving their lives while at the same time making them adoptable. Through the process of treating the dogs, the Penn Vet researchers learn more about human breast cancer.

Another program, at the Lois Bates Acheson Veterinary Teaching Hospital at Oregon State University's Carlson College of Veterinary Medicine,[3] is enrolling privately owned dogs with mammary tumors in a clinical trial for a treatment that attacks the cancer in two ways.

The first step is an enhancement to standard tumor removal surgery. Using new, guided surgery, dogs receive an intravenous (IV) injection of a compound that lights up when it comes in contact with cancer cells. This allows the surgeon to remove precisely the right tissue.

In the second step, which follows tumor removal, the surrounding tissue is treated with an infrared laser that causes the injected compound to heat up and kill off the remaining cancer cells.

Searching for Root Causes of Mammary Tumors

The work both Penn Vet and Oregon State are doing to treat dogs with mammary cancer is invaluable. But it is also important to focus on determining why the cancer occurred in the first place. We can cut cancers out of the body, but we can't address why the body allowed the disease to occur unless we identify why the immune system failed and allowed cancer cells to proliferate.

For dogs with mammary tumors, it's critical to evaluate the chemical load (including unidentified sources of xenoestrogens) in their environment. This type of cancer is linked to estrogen levels, which can be toxically high not only in intact females, but also spayed females and neutered male dogs.

Desexing dogs at a very young age does not guarantee they won't end up with mammary cancer, despite what we've been led to believe. Even animals no longer producing their own estrogen after being spayed or neutered can be exposed to overwhelming amounts of environmental toxins that mimic estrogen.

Dealing with Toxic Levels of Estrogen

After finding mammary tumors in a dog, your vet should measure the sex hormone levels. If estrogen is elevated, after removing the tumors institute a protocol including DIM (diindolylmethane) and high-lignan flax hulls, which may help to naturally reduce estrogen levels.[4]

DIM and flax hulls (not flaxseeds or flaxseed oil) have been shown to promote beneficial estrogen metabolism in both males and females. The body's ability to effectively metabolize estrogen is an important component in the prevention of certain cancers, in particular breast cancer.[5]

Dietary adjustments, including the elimination of all estrogenic foods (e.g., soy and yams) and highly processed foods created via the extrusion process (dry kibble) is important. The kibble manufacturing process creates carcinogenic byproducts. Feeding a fresh, ketogenic, high-fat, no-carb (starch-free), nutritionally balanced and species-appropriate diet is also part of the protocol, along with beneficial immune-support supplements.

Sources of Xenoestrogens

Exposure to xenoestrogens — chemicals that mimic the hormone estrogen — plays a role in elevated estrogen levels in dogs. Examples of xenoestrogens include:

- Atrazine (weed killer)
- Heptachlor (restricted insecticide)
- 4-Methylbenzylidene camphor (4-MBC, found in sunscreen lotions)
- Lindane, hexachlorocyclohexane (restricted insecticide)
- Butylated hydroxyanisole (BHA, food preservative)
- Methoxychlor (banned insecticide in U.S.)
- Bisphenol A (used to make plastics)
- Nonylphenol and derivatives (laboratory detergents; pesticides)
- Dichlorodiphenyldichloroethylene (DDT)
- Pentachlorophenol (restricted biocide in U.S.; wood preservative)
- Dieldrin (banned insecticide)
- Polychlorinated biphenyls (PCBs)
- DDT (banned insecticide in the U.S. but not other countries)
- Parabens (lotions)
- Endosulfan (banned insecticide in U.S.)
- Phthalates (used to make plastics)
- Erythrosine (FD&C Red No. 3)
- DEHP (found in PVC)
- Ethinylestradiol (oral contraceptive)
- Propyl gallate (used to preserve oils and fats)

The problem with this list is that these chemicals often aren't plainly labeled as such in many products found around the house. For instance, plug-ins, car fresheners, scented candles, room sprays and gel air fresheners are loaded with chemicals on this list, but manufacturers aren't required to list them on product labels.

Endocrine disrupters, which damage your dog's hormonal axis, including estrogen balance, are also found on many fabrics treated with flame-retardant chemicals (dog beds, carpets, couches, draperies).

Another endocrine disruptor is BPA, which is found in the lining of canned dog food containers and plastic food and water bowls, not to mention cleaning supplies that instruct you to call poison control if ingested. Always remember that any product used in your house has the potential to end up inside your pet.

It's also important to keep in mind that pesticides and chemicals banned in the U.S. still show up on and in products imported from other countries.

12 Ways to Reduce Your Dog's Exposure to Xenoestrogens

To reduce your dog's exposure to these estrogen-mimicking compounds, and thereby lower the risk of mammary cancer:

1. Use stainless steel, glass or ceramic food and water bowls
2. Avoid plastic storage containers for pet food or water
3. Don't microwave pet food in plastic containers
4. Don't use nonstick cookware if you cook food for your pet
5. Avoid using cling wrap that contains DEHA
6. Avoid pet foods containing soy, the preservatives BHA and BHT, and the food dye FD&C Red No. 3
7. Use natural pest control around your home and yard
8. Use alternatives to chemical flea/tick repellents
9. Use all-natural, nontoxic cleaning supplies inside your home
10. Buy organic dog beds
11. Remove fluoride and chlorine from drinking water
12. Don't buy canned food unless it's labeled BPA-free

Sources and References

KTVZ.com, August 8, 2018 (Archived)

[1] The New York Times March 31, 2014

[2] Penn Vet, Peen Vet Shelter Canine Mammary Tumor Program (Archived)

[3] Oregon State University, Carlson College of Veterinary Medicine, Lois Bates Acheson Veterinary Hospital

[4] Silver Bulletin (Archived)

[5] Mol Med. 2007 Jan-Feb;13(1-2):69–78