

Vet's Corner

Dr. Oliver is the owner and veterinarian at Benessere Animal Hospital and captain of "Team Awesome"- her amazing, caring and knowledgeable staff. She has considered North Carolina her home since 1997, and has lived in Greensboro since 2009. She earned a bachelors degree in 1987 in Physical Therapy from East Carolina University and then graduated with her D.V.M. from the North Carolina State University College of Veterinary Medicine in 2008. Benessere Animal Hospital is a small animal general practice that sees cats, dogs and exotics. Dr. Oliver practices integrative fear free veterinary medicine and enjoys all aspects of providing veterinary care, but has an extra passion for geriatrics, nutrition, physical rehabilitation, and prevention and management of chronic diseases. There are several different professional associations that Dr. Oliver is a member of, including AAHA, AVMA, AAFP, NCVMA, AAVN, AAHA, and IVAPM. She also supports three local charities, SPCA of the Triad, People & Paws 4 Hope and Bingo Pet Hospice. She serves on the boards of SPCA and Bingo Pet Hospice. Benessere Animal Hospital is a "Pets for Patriots" veterinary service provider.

Janine Oliver, DVM



CHRONIC INFLAMMATION - the story of when good immune systems go bad

Living multicellular organisms (including cats, dogs and humans) have developed a set of specialized enzymes and proteins that have evolved over hundreds of millions of years to defend our bodies against microbial attacks from the outside world. Once the microbes are killed off by any number of interactions with these enzymes and proteins then the immune "soup" can start to heal damaged cells, or if the attacked cells are too badly damaged to function it eliminates them.

This inflammatory immune response is relatively simplistic and is known as the innate immune system- think Pac-Man, pub bouncer or an attack dog. The adaptive immune system is more complicated and comes into play when something slips by the innate immune system, think Navy Seal Team or CIA.

For decades most research and medical therapies were aimed at the adaptive immune system, but in the past 15 years, much more attention has been paid to innate immunity. Inflammation, its primary characteristic, and has now been identified as an underlying contributor to all of the known chronic diseases—a list that includes arthritis, inflammatory bowel disease, diabetes, depression, heart disease and vascular disease. Now researchers are finding very strong contributing links to cancer. The immune inflammatory state has been shown to be a key mediator in certain stages of tumor development. All cancer begins with genetic changes that tell a group of cells to over-replicate and then to branch out and invade surrounding tissue. In some cases tumor cells may break off and seed new growths (metastases) at other sites in the body. Cancer biologists and immunologists now know that the progression from abnormal tissue to confirmed invasive cancer happens with cells that normally aid in healing cuts and scrapes. These cells get diverted to the area of genetically premalignant tissue, where they are turned into agents of carcinogenesis. Some researchers have described cancer as genetic damage being the match that lights the fire, and inflammation as the fuel that feeds the fire.

We all need inflammation when we have a wound, it's necessary to start the healing process, but we don't want too much inflammation because then it puts us at risk for fanning the flames and letting the fire get out of control. Brief, transient inflammation can be very helpful, but chronic inflammation or raging inflammation can be as damaging to mammals as an out of control forest fire to adjacent neighborhoods.

Causes of chronic inflammation in our pets (and people too) include: obesity, untreated dental disease, asthma/chronic bronchitis, untreated or minimally treated wounds, diabetes, hypo or hyperthyroidism, Cushing's disease, allergies to food or environment, chemicals and pollutants in our food, air and water, unintended side effects of some medications or adverse reactions to medications, untreated anxiety, preventable parasites like heart worms, intestinal parasites, fleas and ticks, ear mites and larvae of certain insects.

What our pets eat and the irritants they are exposed to on a daily basis mat-

ter. Any chronic inflammatory process left untreated can result in increased intestinal permeability or what you may have heard referred to as "leaky gut syndrome". As the walls of their GI tract becomes more permeable- think mosquito netting instead of brick wall- proteins can leak from the gut into the blood stream. Your pet's immune system will begin to recognize these leaked proteins as similar to proteins that make up tissues in the body like brain tissue, thyroid tissue, kidney tissue, joint lining tissue. It will mount an immune response, an innate immune response against those tissues. This is when you may see your pet seem to lose energy or sleep more, or get up slower, or their skin may become more sensitive, or their thyroid or kidney function may deteriorate, or they may start to develop one or more tumors. They may itch and scratch all of the time or develop chronic diarrhea or vomiting or BOTH!

Inflammation can be friend or foe. It can act as an early warning system and help in the short term, or left untreated and allowed to burn out of control it can trigger a whole host of disease states and even cancer. It is important to the long term health and quality of life for your pet that you work with your veterinarian to mitigate inflammation and prevent it when appropriate and possible.

—The number one thing you can do for your pet's health at home is manage what they eat and how much they eat. Preventing obesity and providing a high quality diet will save you money and prolong the healthy life of your pet.

—The number two thing you can do at home is to make sure your pet does not smoke. If you or a family member smoke and cannot stop for your own health benefit, at least make every attempt to not smoke around your pet. They not only inhale your second hand smoke, they also lick the residue off of their fur. The same smoke residue that accumulates on ceilings and walls in the home of a smoker, accumulates on the fur and skin of their pets.

—The third thing you can do is work closely with your veterinarian to prevent parasites and disease. Heart worm prevention, intestinal parasite prevention and flea and tick prevention year round are vital to preventing chronic inflammation. Appropriate vaccinations for your pet's risk exposure are also important. It's true that over vaccination can cause inflammation but so can UNDER vaccination. Remember microbes- bacteria and viruses- cause inflammation too. It's best to prevent the invasion whenever possible.

There is no extra cost involved in diet and exercise. There is tremendous hidden cost both monetary and in detriment to your pet's health when inflammation is allowed to run amok.



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