

Is Your Pet's Immunity at Risk?

Recognize the subtle threats to your pet's immune health, including dietary deficiencies and chronic stress, and find out the essential steps you can take to help keep them protected and thriving.

STORY AT-A-GLANCE

- Your pet's immune system is designed to protect his or her body from foreign pathogens
- A healthy, functioning immune system is balanced, meaning it's neither underactive nor overactive
- Immune system disruptors disease, chronic stress, medications, and vaccines
- To help keep your dog's or cat's immune system in balance, focus on diet, exercise, therapeutic massage, and detoxification

Your pet's immune system is alternatively referred to as the "great protector," and for good reason. The word immune is derived from the Latin "immunis," which means "free" or "exempt." Your pet is free or exempt from specific diseases as a result of either inoculation (vaccination) or innate or acquired resistance resulting from prior exposure to a disease-causing pathogen.

What Exactly Is the Immune System?

The immune system is comprised of a diffuse, complex network of interacting cells, cell products, and cell-forming tissues that protect the body from pathogens and other foreign substances, destroy infected and malignant cells, and remove cellular debris.

The components of your dog's or cat's immune system include the thymus, spleen, lymph nodes and lymph tissue, stem cells, white blood cells, antibodies, and lymphokines. Lymphokines are a subset of cytokines produced by a type of immune cell called a lymphocyte.

The Importance of a Balanced Immune System

The job of the immune system is to respond appropriately to infectious agents from the outside world. An appropriate response is when the immune system mounts a defense against an outside challenge without destroying the body. This requires that the immune system knows the difference between its "self" (your pet's body) and the foreign invader.

Every cell and organ system in your pet's body has its own mechanisms of immunity and each also has some sort of interdependent, inner regulator. Research shows that an animal's emotions have a tremendous effect on immunity, both positive and negative. Environmental influences including noises, odors, light patterns, and environmental pollutants can also dramatically affect the immune system.

While Western medicine views the immune system as individual pieces separate from the whole, from an integrative/holistic point of view, the most important aspect of the immune system as a whole is that each individual component of immunity is interconnected and that all the parts of the system are in constant communication with all of the other parts. This is the inner communication that is the focus when we take a holistic approach to a pet's wellness.

While Western medicine focuses on just one component of a disease, the goal of a holistic approach is to integrate all of the components of the immune system to bring them back into balance.

Balance is key here. An immune system imbalance in either direction — meaning the immune system is either underactive or overactive — will ultimately lead to disease in the body.

Enemies of Your Pet's Immune System

There are many ways normal immune function can be disturbed or suppressed. Many diseases, especially those created by viruses, can directly attack the cells of the immune system. They can also be subtler in their assault, slowly invading one or more components of the immune system, decreasing its overall effectiveness.

Chronic, long-term stress will, over time, overwhelm the ability of the immune system to respond, which makes animals (including humans) more susceptible to disease. Interestingly, short-term moderate stress has been shown to enhance the immune response. Short episodes of stress that work the immune “muscles” to make them stronger can prepare an animal's body to respond appropriately to challenges such as infections or injuries.

Antibiotics can give the immune system an assist by killing off pathogenic bacteria. Unfortunately, they also simultaneously destroy much of the protective mechanisms by killing off the friendly bacteria that live in an animal's gut, on his skin, and in other parts of his body.

Corticosteroids such as prednisone are often used to suppress a hyperactive immune system response, but **overuse or long-term use of these drugs** can actually render the immune system unable to function at all.

Vaccines stimulate the immune system so that it will be ready to mount an attack at some later time against a specific disease. But vaccines can also over-stimulate the immune system to the point of anaphylaxis, which is a life-threatening adverse reaction.

More often, **repeated vaccinations** exceed the immunological threshold of some animals, resulting in autoimmune disease (also called immune-mediated disease), where the animal's immune system becomes confused and attacks itself, triggering one or more disease processes.

Immune System Disorders

Most integrative veterinarians believe that most disease is directly linked to an immune system imbalance of some kind. Anaphylaxis, which is called a Type I reaction, describes any acute, systemic hyperactive immune response to triggers such as an insect bite, a vaccine, drugs, food, or less often, blood products during a transfusion.

Other immune-mediated diseases, called Type II reactions, involve the production of antibodies against the cells of the animal's own body. In other words, the immune system doesn't recognize its "self." It can be difficult to know what triggers an autoimmune response, but it is often related to the administration of drugs or vaccines, as well as environmental toxins.

Two of the most common Type II autoimmune diseases are **autoimmune hemolytic anemia** (AIHA) and autoimmune thrombocytopenia. Myasthenia gravis is another immune-mediated disease in which the body attacks its own muscle cells.

Type III autoimmune reactions occur when an animal's body produces antibodies that interfere with the normal function of different areas of the body. Examples include canine rheumatoid arthritis, systemic lupus erythematosus (SLE), and a kidney disease call glomerulonephritis.

Type IV reactions involve cell-mediated components of the immune system, and include contact sensitivity, autoimmune thyroid disease, and keratoconjunctivitis sicca (dry eye). These are all examples of hyperactive immune system responses.

At the other end of the spectrum is the hypoactive (underactive) immune system response, which can be caused by a viral infection, a genetic disorder such as **IgA deficiency**, poor nutrition, and a stressful or toxic environment.

Tips to Help Boost Your Pet's Immune Health

A healthy immune system is a balanced immune system, and there are a number of things you can do to maintain your dog's or cat's immune health.

- **Exercise has direct benefits for your pet's immune system** — When your dog or cat works her muscles, it helps cleanse the body of toxins and keeps the lymphatic system working well.
- **Massage increases lymphocyte numbers and enhances their function** — Massaging your pet also relaxes her, which is good for her emotional health and therefore, her immune health.
- **Keeping your pet at an ideal body weight is also very important** — A species-specific, nutritionally balanced, fresh food diet will help manage inflammatory responses, which in turn will improve your dog's or cat's immune function. The more **antioxidants** you can offer your pet through whole food nutrition, the better. This is impossible to do if you're feeding an entirely processed diet in the form of dry or canned pet food.

Animals have very high antioxidant requirements, and you really have only two options for meeting those requirements. You can either provide a synthetic vitamin and mineral supplement (which is how processed pet food manufacturers do it), or you can provide whole food nutrition.

To be optimally healthy, animals need lots of unprocessed, living, fresh foods to meet their antioxidant requirements, which include vitamin A, all the B vitamins, vitamins C and E, zinc, selenium, and vitamin D. Fresh meats and organs, herbs, and organic, non-genetically modified (GM) vegetables are excellent natural sources of the vitamins and antioxidants your pet needs for a balanced, healthy immune system.

- **Reducing the amount of chemicals that are in, on, and around your pet is also important for maintaining a functional immune system** — It's my belief that the toxins in an animal's immediate

environment play a huge role in creating immune system dysfunction.

Offering fluoride- and chlorine-free water is very important, as is toxin-free air. Minimizing vaccines and topical pesticides found in flea and tick preventives is also important.

Avoiding all sources of environmental toxins is nearly impossible, so putting together a **detox protocol** for your dog or cat is a good idea.

Integrative and holistic veterinarians have long recognized the importance of a balanced immune system. They have tools available to help re-balance an underactive or overactive immune system, so it's wise to try to partner with a vet who prioritizes the health of your dog's or cat's immune system.

Sources and References

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