

# Dog Immune System Health Leads to Overall Health

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The immune system is the body's surveillance and defense system. It requires the optimum functioning of many complex processes. A strong immune system leads to health; a compromised immune system opens the body up to disease.

## THE IMMUNE SYSTEM HAS TWO MAIN PARTS:

The innate immune system is the first line of defense. Its purpose is to keep harmful organisms and chemicals from entering the body. It includes the skin, stomach acids, mucous in the respiratory system, and chemicals in saliva.

The adaptive immune system reacts to specific molecules, called antigens, and uses antibodies (germ-fighting proteins) and a specific population of cells to rid the body of invading bacteria, fungi, toxins, viruses, and parasites. It remembers previous invaders and is able to respond quickly if there is a second exposure.

If both systems function well, disease is prevented; if either is compromised, diseases such as cancer and infections can develop. Possible malfunctions include:

- the immune system turning on itself (autoimmune disease, such as lupus or certain kidney diseases)
- overreacting (hypersensitivity, such as allergies)
- reacting insufficiently (immunodeficiency, such as in infections with feline leukemia or feline immunodeficiency virus)

Strengthening and maintaining the immune system is clearly of utmost importance.

- [Vaccinations](#) help the immune system build up defenses against a number of diseases.
- A [proper diet](#) is necessary for proper immune system functioning.
- Antioxidants are important to support a healthy immune system, especially in older pets. Give your pet a product that contains only antioxidants or one with other uses, such as [multivitamins](#), [joint care products](#), and [skin care products](#).
- Clean and fresh drinking water, outdoor exercise, and reduced exposure to pesticides and chemicals in food and in the environment are likewise important.
- Newborn pets, of course, receive colostrum in their mother's milk in the first few days of life. This contains antibodies that protect puppies and kittens in their first few weeks of life and help them develop their own immune systems.

