

An Integrative Approach to Healthy Pet Immune Systems

Developed and reviewed by the members of the Standard Process Veterinary team

Immunity from the Inside Out: Nutritional Tools for Dogs and Cats

The immune system plays a critical role in maintaining health and preventing disease in companion animals. Recent research has highlighted the importance of nutrition in modulating immune function, with a growing interest in the use of whole foods and whole food supplements as potential strategies for enhancing immune health. The immune system is metabolically active and requires specific nutrients for the maintenance of immune cell function, cytokine production, and barrier integrity.¹ Both deficiencies and excesses of certain nutrients can impair immune competence.

- **Micronutrients** such as vitamins A, D, E, and B-complex vitamins are essential to immune function. Vitamin A maintains epithelial integrity and regulates lymphocyte function.² Vitamin D modulates both innate and adaptive immunity, and has been shown to reduce pro-inflammatory cytokine production.³ Vitamin E acts as a key antioxidant, protecting immune cell membranes from oxidative stress, while B vitamins are critical for energy metabolism and DNA synthesis in rapidly dividing immune cells.⁴
- **Trace minerals** such as zinc, selenium, and iron also play critical roles. Zinc is required for T-cell development and function, while selenium supports antioxidant enzyme systems like glutathione peroxidase, which helps control inflammation.¹ Zinc deficiency has been linked to delayed wound healing and increased infection risk in dogs and cats.²
- **Omega-3 fatty acids**, particularly eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), regulate inflammation and enhance immune signaling. Studies have demonstrated that omega-3s can reduce the production of inflammatory eicosanoids and cytokines, helping to balance immune responses in dogs with atopic dermatitis or inflammatory conditions.⁵
- **The gastrointestinal tract**, which houses 70% of the immune cells in the body, is heavily influenced by dietary components. Prebiotics (e.g., inulin, beet pulp) and probiotics (e.g., *Lactobacillus* spp., *Enterococcus faecium*) support gut-associated lymphoid tissue (GALT), modulate immune responses, and maintain a healthy intestinal barrier.⁶
- **Whole food ingredients** such as organ meats (liver, spleen), sea vegetables (kelp), and yeast-based supplements provide a broad spectrum of phytonutrients, enzymes, and nucleotides that support immune system function synergistically. Glandular tissue extracts, derived from the organs of healthy animals, are believed to provide bioactive compounds that may support the immune system. These extracts contain a variety of nutrients that include peptides, enzymes, and cofactors — all of which can enhance cellular function and promote tissue repair.⁷ Research suggests allergen immunotherapy may stimulate the production of immune cells, thereby improving the overall immune response in dogs and cats.⁸ In addition, it has been shown that yeast-derived beta-glucans enhance macrophage and neutrophil activity and have been used in veterinary immune support formulas.⁹

Clinical Pearls

- Malnourished or chronically stressed animals may have suppressed innate immunity and poor vaccine responses.
- Immune-modulating diets, whole food-based supplements, and therapeutic herbs can support recovery in animals with chronic immune system challenges without over-stimulating the immune system.
- A whole food approach to an animal's diet offers essential nutrients, cofactors, and bioactive compounds necessary for optimal immune performance.

Adjunctive Supplement Support

FEATURED PRODUCT



Canine and Feline Immune System Support

Suggested Use: **See product label for dosing by weight**

Provides nutritional and biochemical support for healthy immune cells and tissues. It is directed at facilitating normal function and is not intended to be suppressive or stimulating. Indications for use:

- General immune system support
- Colder climates or during the fall/winter months
- When kennelled or in a shelter



Mushroom Complex

Suggested Use: **See product label for dosing by weight**

A potent whole food source of beta glucans and ingredients that are clinically supported to promote immune health.

- Provides targeted immune support for the feline and canine adaptive immune systems
- Supports the canine and feline gut-immune axis via microbiome modulation to promote a healthy inflammatory response



Canine and Feline Enteric Support

Suggested Use: **See product label for dosing by weight**

Contains a variety of functional foods, both plant and animal, that “feed” the various components of the digestive system. These products are formulated to support the ability of intestinal cells to function, regenerate, and respond to daily metabolic and immune challenges.



VF Thymex

Suggested Use: **See product label for dosing by weight**

Supports a healthy thymus gland, the master gland of the immune system. Can be used in combination with other immune system support products for additional generalized trophic immune support. Can be used with short-term or ongoing immune system challenges.

A Multimodal Approach to Nourishing the Immune System

- Prioritize high-quality, balanced diets with minimal fillers and artificial ingredients.
- Use targeted whole food supplements during times of immune challenge.
- Address gut health as the foundation of immune health, especially with recurring infections or sensitivities.
- Avoid nutrient-depleting stressors such as stress, over-training, chronic inflammation, frequent immune challenges, environmental toxins, and poor-quality diets. These can increase metabolic demand, impair nutrient absorption or utilization, or accelerate the loss of essential vitamins, minerals, and other compounds.

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