



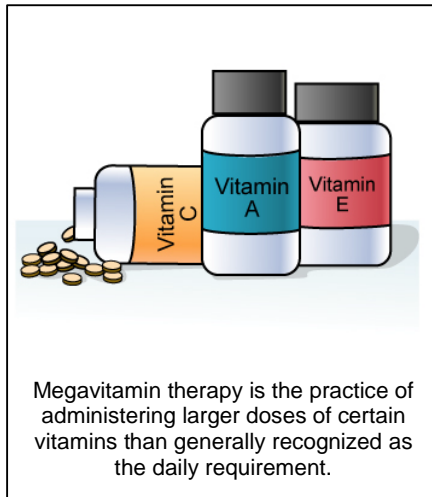
Veterinary Cancer Care, P.C.
2001 Vivigen Way
Santa Fe, NM 87505
www.vetcancercare.com

Phone: (505) 982-4492 Fax: (505) 982-1701 info@vetcancercare.com

ORTHOMOLECULAR THERAPY, MEGAVITAMIN THERAPY, AND VETERINARY THERAPEUTIC NUTRITION

What is orthomolecular therapy?

Much of the research into nutrition has focused on the minimum requirements of nutrients to avoid overt deficiency diseases. Orthomolecular therapy (from 'ortho' meaning 'right') places its focus on providing optimal levels of nutrients and substances that are normally present in the body in order to either prevent the development of disease or to treat disease once it has occurred. Orthomolecular medicine becomes necessary because of variability in food quality due to soil depletion or contamination and because individual patients have unique nutritional needs depending on heredity, health status and lifestyle.



Orthomolecular therapy may involve the use of single substances or combinations. Essential fatty acids, minerals and vitamins may be administered in higher doses than normally recommended when a pharmacological effect is sought. One of the more common forms of orthomolecular therapy is thus also known as megavitamin therapy. Megavitamin therapy is the practice of administering doses of certain vitamins at a much higher level than is generally recognized as the minimum daily requirement of these vitamins. Most frequently, up to three or four vitamins are combined. The usual vitamins that are administered this way include Vitamins A, C, and E.

What conditions are most often treated with Orthomolecular Therapy?

Inflammatory conditions and immune-mediated diseases may respond to increased doses of essential fatty acids, especially omega 3 fatty acids. Vitamin A may increase a patient's resistance to infection and may enhance immune function. Vitamin E may be useful in the treatment of feline steatitis (inflammation of fat cells) and some forms of liver disease. Vitamin C may be useful in the treatment of some cases of hip dysplasia, especially in the early stages. Vitamin E and C have antioxidant and anti-inflammatory effects; these effects appear to be synergistic when both vitamins are used together. Vanadium may be useful in the management of diabetes.

Combination megavitamin therapy may be useful in the treatment of skin allergies, inflammatory bowel disease, feline gingivitis (gum disease) and feline leukemia. Megadoses of vitamin A and D3 may be helpful for short periods in the treatment of cancer. Vitamin B12, given by injection, appears to stimulate the appetite of weakened animals. Zinc may be useful in the management of recurrent infectious skin disease. Injectable magnesium appears extremely useful in the treatment of cardiomyopathy and congestive heart failure.

How successful is Orthomolecular Therapy?

The use of Vitamin C and Vitamin E supplementation for treatment of certain skin conditions has become accepted in conventional medicine. Anecdotal reports of the success of orthomolecular therapy for other conditions such as neoplasia are encouraging. Cardiac muscle weakness appears dramatically responsive to magnesium. However, there are currently no controlled studies to demonstrate the efficacy or success of orthomolecular medicine in small animals.

How safe is Orthomolecular Therapy?

It is possible to produce toxicity if excessive amounts of some nutrients are administered. Toxicity problems are more common with fat-soluble vitamins, especially Vitamin A and D, and possibly Vitamin E. Because Vitamin C is water-soluble and readily excreted, toxicity is not generally an issue, although excessive levels of vitamin C given orally will cause diarrhea. Excessive levels of any nutrient may interfere with levels of other related nutrients in individual patients.



Can Orthomolecular Therapy be combined with other types of veterinary medicine?

Because of the potential for toxicity and other adverse nutritional effects, only veterinarians should prescribe orthomolecular therapy for animals. It is often safe to combine orthomolecular treatment with other types of veterinary medicine.

*This client information sheet is based on material written by Steve Marsden, DVM ND MSOM LAc DiplCH AHG, Shawn Messonnier, DVM and Cheryl Yuill, DVM, MSc, CVH.
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