



Standard Process® Hepatic Support

The liver has many jobs to perform but it can only do these efficiently if the proper nutrients are in place. Detoxification and elimination of toxins, bile formation, plasma protein synthesis, catabolism and maintenance of carbohydrate storage, mobilization and processing of dietary fats are only a few of the responsibilities placed on this organ. Toxins can leak from unhealthy intestines and reach the liver where they should be transformed and excreted. In situations of a toxin overload or suboptimal liver function, the toxins may be stored unchanged in fat, brain, and nervous tissue.

Many minerals and vitamins are vital to maintain liver health and toxin elimination. Zinc inhibits collagen deposits and reduces lipid peroxidation in cirrhosis, acts as a cofactor in a variety of reactions and stabilizes lysosomal membranes. Whole food vitamin E is an antioxidant, normalizes ALT levels, and can aid in reducing inflammatory hepatopathies. Bile flow can be optimized with adequate taurine pools. Taurine is also beneficial for cats with lipidosis or cholestasis. L-Carnitine mediates the transfer of long chain fatty acids across the mitochondrial membrane and is recommended in patients with hepatic encephalopathy or lipidosis. Inositol is a major component in cell membranes. It inhibits liver lipogenesis, lowers cholesterol and triglyceride levels and prevents liver carcinogenesis.

Canine Hepatic Support™ and **Feline Hepatic Support™** will bring these and other nutrients to your pet with ingredients such as mushroom for vitamin C, black current seed oil for omega 6 fatty acid, flaxseed oil for omega 3 fatty acid, and chlorophyll for healing. *Tillandsia* will detoxify, support the blood and balance the blood sugar handling. Brussels sprouts can even prevent DNA damage and detoxify environmental mutagens. *Ginkgo*, Milk thistle, and dandelion are herbs added to support the liver, kidney and body function during liver disease. Protomorphogen™ extracts, cytosol™ extracts, and organ dessicates make these products unique and optimize the treatment outcome for any pet.

While many ingredients are shared, the feline formula has yet other attributes, which make that formula feline specific. Select this product as your first choice when designing a dietary program for dogs or cats with potential liver malfunction.

Cases for Standard Process® Canine or Feline Hepatic Support™

- Acute or chronic liver disease or malfunction
- Liver support in cancer treatment
- Fatty liver, cholangitis, cirrhosis
- Support the liver in the face of side effects from drugs

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INTEGRATIVE VETERINARY
EDUCATION, INC.

Ava Frick, DVM
1825 Denmark Road
Union, MO 63084

Phone: 636-583-6293
Fax: 636-584-0371

E-mail: dravafrick@charterinternet.com
www.petbodybuilders.com

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What is Cytosol™ Extracts?

Dr. Royal Lee, the founder of Standard Process®, took great pains to analyze every aspect of plant and animal tissue before determining what was needed. As an engineer he designed many pieces of equipment that specifically enabled him to extract essential nutritional components from plants, animal organs, and the cytoplasm of glandular cells. Cytoplasm contains cellular organelles plus nutrients, such as enzymes, hormone precursors, and synergistic cofactors that are the biochemical building blocks essential to cellular metabolism in their respective tissue. Extracts of such can assist the day-to-day function of a system that is operating at sub-optimal level by supplying all these nutritional factors which the body can immediately use to its benefit.

What people are saying about using Standard Process® products for their pets...

“Gus had lymphoma and we needed to do something to help his liver during the chemotherapy. He is now in remission. We are thankful for this life that Standard Process helped save.” - K. Wise

What does PMG™ Mean?

The letters “PMG” as seen on many product labels stands for protomorphogen™. In 1947, Dr. Royal Lee, the founder of Standard Process®, after years of research published his theories “Protomorphology: the Principles of Cell Auto-regulation.” “Proto” coming from prototype and “morphogen” for morphology. It is this which sets these products far apart from any other nutritional supplements.

A protomorphogen is a chromosome end product made in the nucleus of the cell. It is that cellular chromosome component that is responsible for morphogenic determination of cell characteristics. It is the smallest unit of the gene system that guides the cell into its hereditary form as it grows, develops, or repairs itself. While PMGs are generally thermostable up to 700°C, oxidation can destroy some of the growth influencing potential of PMG. Without sufficient PMG in its chromatic the cell degenerates, de-differentiates, becomes senile and dies.

So how is PMG regulated? These tissue specific mineral containing nucleoproteins are antigenic in nature and stimulate the response of natural tissue antibodies (NTA). The NTAs control the level of extracellular protomorphogen in blood and lymph. Normally the body maintains a balance between PMG and NTA. When the NTAs exceed the peripheral circulating PMG level, the situation exists where the natural tissue antibodies could actually attack the diseased organ or tissue itself! Hence the need for PMGs. We can see many patients exhibiting this in auto-immune disease.

Introducing external tissue specific protomorphogen via the alimentary route can redirect the abundant natural tissue antibodies away from the organ. While PMG used in Standard Process® products is derived primarily from bovine and ovine species, a dog allergic to beef, for example, will not have the same allergic response to PMG because it is not protein derived from muscle.