



Standard Process® Renal Support

The urinary system provides a complementary function to hepatic detoxification. These two systems represent the major excretory pathways of the body.

There are many conditions and medications that can lead to kidney disease. Heartworms, cholangiohepatitis, immune-mediated diseases, Ehrlichia, inflammatory bowel disease, FELV, FIV, dental disease, Diabetes Mellitus, hypertension, hyperthyroidism, neoplasia, pyoderma, and Cushing's Disease have all been associated with conditions resulting in renal damage and dysfunction. Drugs for heart disease and blood pressure such as spironolactone, benazepril HCl and hydrochlorothiazide are known to aggravate any concurrent renal insufficiency. The urinary bladder is a holding reservoir and extension of what is happening with metabolism by the kidneys. Consequently it can develop bladder stones and bacterial infection.

Many diets are designed to help with kidney function, but oftentimes that is just not enough, or the animal may not want to eat it. With this product you can allow the older finicky animal to benefit from a diet it enjoys and know the kidney, bladder and liver are being nutritionally supported.

Rice bran, peavine juice, buckwheat and alfalfa juice are sources of whole vitamin complexes and chelated minerals. *Emblica officinalis* (Indian gooseberry) is a strong antioxidant and immune builder. Wheat germ oil, mushroom, carrot, chlorophyll and kelp are other nutrient rich ingredients. Whole dessicates, protomorphogen™ extracts and cytosol™ extracts are added to help guide the body in tissue function, regeneration, and its day-to-day activities.

Select **Canine Renal Support™** or **Feline Renal Support™** as your first choice when designing a dietary program for dogs or cats with kidney or bladder dysfunction.

Cases for Standard Process® Canine or Feline Renal Support™

- Cystitis in dogs
- Interstitial cystitis in cats
- Kidney disease or reduced function
- Bladder stones

References:

- Hand, Thatcher, Remillard, Roudesh. Small Animal Clinical Nutrition 4th Ed., *Mark Morris Institute*, 2000.
- National Research Council. Nutrient Requirements of Dogs and Cats. *The National Academies Press*, Washington, DC, 2006.
- Carsten, Frick, Gaston, Kincaid. Clinical Applications of Applied Nutrition. *Standard Process Lecture Series*, 2003.
- Physicians Desk Reference



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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...

“Cleo had chronic cystitis and bladder stones.

Once we started the Renal Support we never had another problem.”

- D. LeBlanc

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.