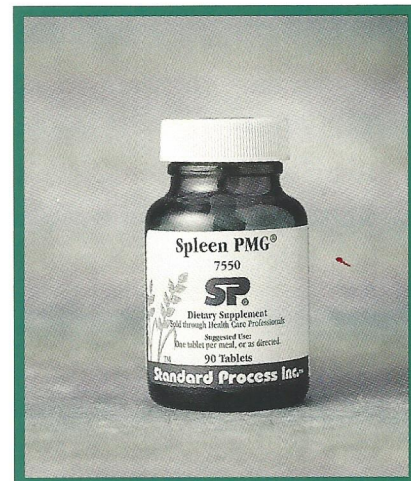


Spleen PMG® Is A Special Combination Formula With The Principal Ingredients Of 115 Mg Of Bovine Spleen PMG™ Extract, Calcium Lactate, And Magnesium Citrate

The spleen, an organ of the lymphatic system, forms both red and white blood cells in the fetus, however, it produces only the white blood cells following birth. The white blood cells of the spleen attack pathogens of all types in the circulating blood. The spleen is responsible for: **Disposing of exhausted red blood cells.** The white blood cells remove old red blood cells and debris from circulation. Many of the red blood cells destroyed elsewhere in the body meet their final demise in the spleen. The rupture of red blood cells forms bilirubin (from the release of heme of the hemoglobin). This waste product is then excreted via the intestinal tract. **Storing healthy red blood cells.** Because it is so vascular, the spleen is also a special reservoir that holds large quantities of extra red blood cells for release when the body needs them in an emergency. **Metabolizing iron.** Iron is transported to the spleen to synthesize hemoglobin. Hemoglobin carries vital oxygen from the lungs to all tissues.



Introduced in 1955
Bottle size: 90 tablets

How Spleen PMG Keeps You Healthy

Maintains cellular health

Protomorphogen™ extract is the brand name of Standard Process' extracts derived from nucleoprotein-mineral molecules. The foundation for the function of these uniquely formulated nucleoprotein-mineral extracts comes from the antigen-antibody reaction that takes place during normal cell maintenance. The antigenic properties promote healthy cellular division, function, and growth. When a tissue needs support, at least a dozen different compounds are formed that can cause white blood cells to travel together toward the compromised area. They include degenerative products of the tissues themselves. These substances strongly activate the macrophage system, and within a few hours, the macrophages begin to devour the destroyed tissue byproducts. At times, the macrophages can also affect the structure of the remaining healthy cells. The bovine spleen PMG™ extract in Spleen PMG appears to neutralize the circulating antibody, thereby contributing to the maintenance of cellular health.*

Improves calcium absorption

Calcium lactate is a very soluble calcium salt and highly bioavailable, changing to calcium bicarbonate (the type used by the body) in one chemical step. Unlike other forms of calcium, which are largely insoluble in water and need acid conditions to be absorbed, Standard Process' calcium lactate is highly soluble in water (a neutral pH) and does not depend on acidic conditions to perform its function.*

Enhances metabolic efficiency

Magnesium functions as a co-factor, assisting enzymes in catalyzing many chemical reactions. It functions in such reactions as nerve conduction and nerve excitability; energy transfer, muscular activity; and many other specific processes. This important mineral is a critical dietary substance and is an essential element in over 300 enzymes in the body. While magnesium is present in most cells in only minute quantities, it plays an important role in human metabolism, as does its partner, calcium. The magnesium in this product aids in the uptake of calcium lactate by the body. Magnesium and calcium are synergistic, meaning that what they do for the body together, they cannot perform on their own. Magnesium deficiencies are often accompanied by calcium and potassium deficiencies.*



What Makes Standard Process Spleen PMG Unique

Contains enzyme factors and proteins combined with bovine spleen PMG™ extract

- To help support the spleen's filtration and cleansing of the blood, the reabsorption of useful materials from the blood, and the synthesis of hemoglobin which is vital in providing oxygen to the tissues*

Contains Protomorphogen™ extracts

- Protomorphogen™ extracts are remarkable nutrients, extracted and processed in a singularly unique way by Standard Process Inc
- Use only adult sources of Protomorphogen™ extracts because they contain the important antigenic properties of nucleoprotein-mineral determinants, the foundation of the product
- Spleen PMG provides nutritional ingredients and support for the spleen*

The calcium lactate in Spleen PMG is not derived from a dairy source

- We obtain our calcium lactate from pure-vegetable sources of calcium

The ingredients in Spleen PMG are processed to remain intact, complete nutritional compounds

- Not disassociated into isolated components

Unique Processing

Exclusive low-temperature, high-vacuum drying technique

- Preserves the organ's enzymatic vitality and nutritional potential

Expert microbiologists and chemists in on-site labs constantly conduct bacteriological and analytical tests of raw materials, product batches, and finished products

- Ensures consistent quality and safety

Vitamin and mineral analyses conducted validate product content and specifications

- Assures high quality and delivery

Each tablet supplies 115 mg of bovine spleen PMG™ extract. Proprietary blend: Bovine spleen PMG™ extract, and magnesium citrate.

Other ingredients: Calcium lactate, cellulose, calcium stearate.

Sold to health care professionals. Suggested use: One tablet per meal, or as directed.

Guyton, A.C., and Hall, J.E., Genetic Control of Protein Synthesis, Cell Function, and Cell Reproduction; Textbook of Medical Physiology, p. 37
Guyton, A.C., and Hall, J.E., "white blood cells and chemotactic attraction." Textbook of Medical Physiology, 9TH ed. p. 434
Guyton, A.C., and Hall, J.E., "Inflammation and function of macrophages." Textbook of Medical Physiology, 9TH ed. p. 439
Leibovitz, B., Nutrition Update; Vol.5; No. 2; 1991
van Mossevelde, B., Culinary Cures: Calcium Fortification; p. 69-70; Food Product Design; September 1997
Pfeiffer, C.C., Magnesium; Zinc and Other Micro-nutrients; p. 102, 1978
Mosby's Medical, Nursing, & Allied Health Dictionary. 5th ed. Lois E. Anderson Consulting Editor and Writer. Mosby, St. Louis, MO. 1998. p.1526
Ruml, L.A., et al. XXX Am J Ther. 1999. Jan 1;6(1):45-50
Lindberg, J. et al. Effect of magnesium citrate and magnesium oxide on the crystallization of calcium salts in urine: changes produced by food-magnesium interaction. Journal of Urology. 1990. Feb;143(2):248-51
Tsubawa N. et al. Bioavailability of calcium from calcium carbonate, DL-calcium lactate, L-calcium lactate and powdered oyster shell calcium in vitamin D-deficient or -replete rats. Biol Pharm Bull. 1995. May;18(5):677-82
Goddard, M. et al. Short-term effects of calcium carbonate, lactate, and gluconate on the calcium-parathyroid axis in normal elderly men and women. American Journal of Clinical Nutrition. 1986. Nov;44(5):653-8
Germing, U. et al. XXX. European Journal of Medical Research. 1999. Jul 28;4(7):283-85
Fujie, T. et al. XXX. Cancer Immunology Immunotherapy. 1999. Jul;48(4):189-94

