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# Growth and Repair Factors for the Thymus Master Gland of Immunity

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## Thymus Plays Important Role in Response to Disease Invasion

The thymus, located just under the breast bone, increases in size and activity until adolescence, but decreases thereafter. For that reason it was thought, until as late as 1964, that the thymus was inactive in adults. More recent research, however, has shown the thymus to play an important role in the body's response to disease invasion.

Thymotrate is an excellent supplement in any condition where immune support is necessary or where thymus dysfunction or insufficiency is evident. Elevated uric acid and altered bilirubin, total globulin and T4 are all indications of thymus dysfunction.

## Thymotrate Is Rich in Thymosin Necessary for Production of Invasion Fighting T-Lymphocytes

The thymus is known to contain many polypeptide (protein) hormones. One of these hormones, thymosin, is necessary for the production of T-lymphocytes. Several universities and research groups have found raw thymus concentrate to be rich in thymosin.

T-lymphocytes carry out three important defense functions:

- First, they stimulate the production and growth of antibodies by other lymphocytes.
- Second, they stimulate the growth and action of phagocytes which surround and engulf invading viruses and microbes.
- Finally, the thymus lymphocytes recognize and destroy foreign and abnormal tissue.

Of the white blood cells which originate in the bone marrow, about half go directly into the bloodstream and tissue fluids. The rest must pass through the thymus before they reach the tissue. There some of these cells mature into T-lymphocytes, a process which can occur only in the presence of adequate amounts of thymosin.

Once the T-Lymphocytes are circulating in the blood stream, they take up residence in the lymph nodes. From there, anti-body activities take place in conjunction with other invasion fighters known as B-Lymphocytes. Both T and B-Lymphocytes help the body to identify and destroy foreign substances.

### THYMOTRATE™

#### *Raw Bovine Thymus Concentrate*

Product No. 981

Fill Size: 100 capsules

Each capsule contains:

Raw Bovine Thymus Concentrate - - - - - 150 mg.

Other ingredients: magnesium silicate, magnesium stearate, gelatin.

This natural product is prepared by a special process which does not exceed physiological temperature (37°C). Guaranteed to be free of synthetic hormones and chemical pesticides.

**Recommended Dosage:** One or more capsules daily.

When the body loses this ability, it loses not only its resistance to colds, flu and other infections, but auto-immune diseases such as rheumatoid arthritis, lupus erythematosus, myasthenia gravis, rheumatic fever and glomerulonephritis may occur.

Other thymus hormones facilitate the transmission of messages through the nervous system, others are necessary for the creation of reproductive hormones.

### Glandular Nutrition: Like Heals Like

The rationale for use of glandular tissue concentrates is based on a simple and universal concept: like heals like.

Even though much of this material, when taken orally, is denatured and hydrolyzed by the action of gastric juices, pepsin and various pancreatic proteolytic enzymes, research has shown that varying amounts of this material may survive gastrointestinal passage and be taken up intact via the enteric circulation. This research has also demonstrated that many of these peptide materials are so potent that even in microgram quantities, they can have a profound physiological effect on their target organs.

The active factors lie in the water-soluble fraction of glandular tissues, especially in the various peptides, polypeptides, proteins and enzymes. Many

(over)

of these proteinaceous materials exert their effect primarily on the organ which produces them or on a closely related tissue.

Thus, it is not difficult to see how glandular therapy can have remarkable healthful and preventive effects on metabolic functions. In other words, if an organ or gland in the body is func-

tioning poorly, consumption of healthy cells from those glands or a concentrate of those cells may normalize the function of that gland.

WARNING: This information is provided for health care professionals only. **This publication and the product contained herein have not been approved or evaluated by the Food and Drug Administration. This publication, and the product contained herein are not intended to diagnose, treat, cure or prevent any disease.** The product relates to nutritional support only.

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