

Thymic Protein A: Strengthens Immune System, Fights Viruses, May Combat Aging

People interested in living longer, healthier lives will welcome an exciting patented nutrient called “thymic protein A.” By supercharging the immune system, it may reduce time lost to viral and other illnesses and help people remain productive.

And our immune systems certainly need help. An estimated 65 million Americans suffer from immune suppression or dysfunction, as manifested by arthritis, asthma, allergy, diabetes, chronic viral infections (including *Herpes simplex*, Epstein-Barr, hepatitis and Chronic Fatigue Syndrome) and cancer.¹ Not to mention the parasitic infections, bacteria, fungi, yeast (including *Candida albicans*), and other microbes that invade to cause disabling and sometimes fatal diseases.²

“Strengthening the immune response may well be the single most important goal of anyone who wishes to become well or stay well⁴ and the thymus gland plays a crucial role.”

Our defense against these threats lies in cell-mediated immunity, which is orchestrated by our T-lymphocyte cells. That’s what protects us from infection and, just as importantly, prevents the development of cancer, autoimmune disorders like rheumatoid arthritis, and allergies.³

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Avoiding the Decline of the Thymus Gland

The thymus gland is located under the breastbone above the heart. It reaches maximum size at puberty, then begins to shrink. By age 40 it’s typically one-sixth its peak size,⁴ and in time lymphocyte content can decline by 90 percent.²

This atrophy of the thymus causes your immune system to take a significant downward slide. It’s no wonder that as you age, infections are more likely to get out of hand, and cancers to metastasize.⁵

The atrophy process can be accelerated by factors in addition to aging that are all too common today: exposure to radiation, chemicals, chronic disease, trauma, and common viral infections such as Chicken Pox, Measles, and Epstein-Barr.¹ Thymic hormone levels are also low in people exposed to undue stress.³

Experts speculate that thymus atrophy may even be one of nature’s methods of “programmed death” for humans.⁶

Immune system deficiencies observed in older people and in several diseases have been linked to the abnormally low level of thymic factors.² Researchers verified this connection by removing the thymus gland from young animals. This caused a profound wasting disease characterized by an increased incidence of infection and cancer (immune suppression), failure to grow, allergies, neuromuscular paralysis, and autoimmune diseases (immune dysfunction).⁴

Thymus Gland Holds Key to T-Cells

Many experts consider the T-4 lymphocyte function to be the most important aspect of immunity and a true key to longevity.^{1,11}

Fortunately, thymic protein A has been found to stimulate T-4 lymphocytes, which function as the conductor of the body’s symphony of immune responses. T-4 “helper” cells tell each instrument how to play its part: the lymphokines and cytokines including Interleukin-2 and Interferon, the bone marrow that produces the B cells, their antibodies, the killer cells, the totality of white and red blood cell levels. All depend on the T-4 cells for their instructions.¹ Clearly, T-4 cells are at the heart of the immune response.

The “T” in the lymphocyte name is for thymus. White blood cells leave the bone marrow in an immature state and depend on the thymus to stimulate them to maturity and proper function.

However, when supplemental thymus proteins were given, many of the wasting symptoms were prevented. Thymus transplants have also established immune function in a strain of mice bred without a thymus gland.

Thymic Protein A to the Rescue

Fortunately, a powerful new thymic protein can take over the work an atrophied thymus used to perform.⁵ Until recently, supplements prepared from ground, whole thymus glands contained only fragments of these important molecules.⁴ Then thymic

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Oral thymus extracts rich in polypeptides have been used effectively to:³

- Prevent recurrent respiratory infections in children¹⁰
- Correct T-cell defects in HIV infections¹¹
- Treat acute hepatitis B infections^{12,13}
- Restore white blood counts damaged by chemotherapy¹⁴
- Treat allergies including asthma, hay fever and food allergies in children^{15,16,17}

protein A was discovered by Terry Beardsley, Ph.D., Baylor College of Medicine, Houston, Texas. Beardsley also developed a procedure to produce the purified polypeptide in the laboratory. Laboratory and animal experiments show this specific protein causes T-4 lymphocytes to mature, thereby initiating a cell-mediated immune response.^{1,8}

Thymic protein has been hailed as the most powerful natural stimulant of the immune system ever discovered.⁵ It has been extensively studied in laboratory and animal experiments including testing at the National Institutes of Health.¹ As an intact native protein, it has the identical biological activity as the protein from human thymus.⁹ Thymic protein's production as a unique extract is confirmed by U.S. patent #5,616,554.

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Unlike crude extracts, thymic protein A is expected to have full biological activity because this natural molecule consists of whole 500-amino-acid peptide chains which exactly fits the proper receptor site on a T-4 cell needed to program its function.⁴

Thymic Protein A Fights Viral Infections

Physicians are being encouraged to use thymic protein in patients having known acute or chronic viral infections. In these patients, progress is usually relatively rapid and easily measured by blood tests.¹

A recent human pilot study examined the effects of protein A on Epstein-Barr (EBV), the virus that causes infectious mononucleosis and is associated with chronic fatigue syndrome (CFS) and many other chronic diseases.¹⁸ Patients with chronically elevated EBV antibodies were treated with protein A for 60 days. The result: a statistically significant improvement in the ratio of antibodies to antigens in the blood. Participants with CFS also mentioned an increase in energy and reduction in need for sleep after the treatment.¹⁸

Helps Restore Damaged Immune Function, May Slow Aging

Interest in thymic function is keen in researchers working on cancer and especially immune-deficiency diseases^{3,11} because of the way the HIV virus infects the T-4 cell.¹

Toxic therapies such as chemotherapy and radiation often severely damage the immune system, leaving the body vulnerable to opportunistic infections.⁴ Some physicians are now recommending thymic protein be taken during radiation and chemotherapy to maintain white blood cell levels.

Thymic protein has been an effective immune regulator when used against a variety of infections including colds, flu, herpes, shingles, sinusitis and hepatitis.⁵ In animal studies, both flu virus and feline immunodeficiency virus (the equivalent of HIV in cats) have been suppressed.^{4,19,20}

This product may also help prevent some effects of aging, such as those resulting from declining hormone levels.⁴ Soon, it may join the list of natural products, including CoQ10, melatonin and DHEA, that older people take to boost declining hormone levels.

Using Thymic Protein A

The purified ProBoost™ thymic protein powder is the result of 23 years of research and only recently has become commercially available in quantity.¹ It is a highly stable freeze-dried powder with a shelf life of several years.¹

Individual doses of 4 mcg of ProBoost™ in a maltodextrin base are sealed in individual packets. Each dose should be dissolved under the tongue for 2-3 minutes. One packet daily is recommended for maintenance; two or three packets daily for

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Thymic Protein A Helps Immune Function By:¹

- 1. Raising white blood counts to normal levels**
- 2. Increasing vital T-4 cell and T-8 cell levels**
- 3. Increasing total red blood cells**
- 4. Increasing CD-56 (natural killer) cells**
- 5. Reducing the body's viral load**

more serious immune deficiencies. Because the protein is identical to human thymic protein, it has a low potential for toxicity⁴ with no reports of allergy.¹

Any time the immune system needs to be strengthened, thymic protein A is helpful. This would be desirable for most illnesses except in certain auto-immune diseases such as lupus or in people taking large doses of steroid hormones for cancer treatment.¹ It is not a concern, however, for women on standard hormone

replacement therapy. Of course any supplement will be most effective when used in conjunction with a healthy lifestyle, nutritionally sound diet and positive state of mind.

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