



How the Immune System Works

By Kathleen O'Bannon, CNC

You deserve to feel fabulous all the time. A fully functioning immune system can help you have robust health and vitality so *you can feel great all the time.*

You can create a zest for life that will wipe away many so-called diseases that are really just the symptoms of a poorly functioning immune system.

Sprouts?

Sprouts contain the vital life force of the plant. They are concentrated powerhouses of the goodness of the plant or seed. The most powerful of these plant nutrients or phytonutrients are sterols and sterolins. Beta-sitosterol and beta-sitosterolin are the most active and most common.

Much research has been published over the last ten years showing that natural source sterols and sterolins can reduce or reverse many immune system problems including breast and prostate cancer, TB, stress, HIV/AIDS, FIV, rheumatoid arthritis, hepatitis C, candidiasis, benign prostatic hyperplasia, and both forms of diabetes.

Sterols and sterolins can help prevent cancer, colds, and the flu because sterols have immune modulating properties. Plant sterols induce apoptosis, or cell death to diseased cells, and are especially useful in breast, intestinal, and prostate cancers for this reason.

Stress and Sterols

Phytosterols exhibit an antioxidant effect in the body and help balance the levels of harmful cortisol to DHEA, the often-called youth hormone. Most stress can create a negative effect on the body causing damage to the cells. Phytosterols can help reduce the effects of stress, thus averting many kinds of cellular damage. When the production of cortisol is less than the production of DHEA, you will feel younger and more vital.

Sterols and Sterolins Can Be Effective For

- **Upregulating the immune system, bringing it into balance**
- **Balancing the T-helper activity of Th1 and Th2**
- **Reducing inflammation**
- **Modulating immune function**
- **Production of natural killer (NK) cells**
- **Hormonal balance for men and women**
- **Improving immune and autoimmune disease symptoms**
- **Reducing cholesterol levels**
- **Stress reduction**

Poor Immune Function

Emotional, physical, and chemical stressors can contribute to suppressed immune function. The monthly cycle in women can even contribute to a stress that suppresses the immune system. This stress caused by fluctuating hormones is one of the reasons why so many women have colds, headaches, and fatigue during certain parts of their cycles and this can often be responsible for herpes outbreaks during menses.

Common Causes of Poor Immune Function

- **Childhood illnesses**
- **Moldy environments**
- **Poor digestion**
- **Misuse of antibiotics**
- **Over consumption of caffeine, nicotine, and alcohol**
- **Stress**
- **Hypothyroidism**
- **Exhausted adrenal glands**
- **Toxic skin and hair care products**
- **Cold weather**
- **Inhaling toxic fumes**
- **Poor eating habits**
- **Constant barrage of allergens**
- **Exclusively wearing synthetic fabrics or bed clothes**
- **Consuming sugar**
- **Blood sugar imbalances**
- **Prescription and/or street drugs**
- **Frequent bathing with soap and water**
- **Heredity**
- **Abuse, poor self esteem**
- **Dog and cat dander, and litter box toxins**
- **And more.....**

How Your Immune System Works

Your immune system is the defense system of your body. It is specifically assigned the job of getting rid of (or keeping out) invaders like germs, viruses, dust, and toxins. When your immune system is healthy, it will keep you from getting sick and catching everything that comes along. Each time an invader successfully enters your body through the nose, mouth, or on the skin, the thymus gland part of your immune system secretes T-cells and macrophages to go out and attack and kill the invader. If your immune system is not functioning totally, it won't be able to fight off the invader and you will get sick. So it would seem that keeping your immune system healthy is very important for your health.

Skin is Important

Your skin is the largest immune system organ. It is supposed to be kept in a slightly acidic state. When it is acidic it can stop these invaders from entering through the skin. When it is alkaline, it cannot. Soap and water are both generally alkaline, so frequent washing with soap and water can be harmful to your immune function. Squeaky-clean can be deadly! Oils compose the natural acid mantle of your skin and act as a protective barrier. If you bathe or shower it is wise to

replace the acid mantle that is stripped off, with a thin coating of oil. The biggest problem is that most skin lotions contain harmful ingredients that can suppress your immune system. Always purchase lotions that are toxic free or totally organic and you can be sure that they will not add to immune suppression.

Digestion and Your Immune System

If your digestion is not functioning totally it can suppress your immune response. When partially digested food is allowed to enter the blood stream, the immune system thinks it is an invader and spends its time trying to get rid of the food. While thus occupied, it can't fend off other real invaders like colds, flu, viruses, and so on. But there's more. Poor digestion can cause your intestines to become inflamed and permeable and that is what allows partially digested foods to leak into your body. This is called leaky gut syndrome and it is closely associated with *Candida albicans* infestation as well as immune suppression. It is very important that you consider taking a complete digestive enzyme to improve digestion and reduce the strain on your immune system. It is also very important that you chew every mouthful until it is liquid to reduce the strain of trying to digest partially chewed food.

Common Immune Problems

- **Allergies**
- **Frequent colds**
- **Bouts of flu**
- **Systemic candidiasis**
- **Type 2 diabetes**
- **Repeated infections**
- **Benign prostatic hypertrophy (BPH)**
- **Prostatitis**
- **Fibromyalgia**
- **Chronic fatigue syndrome**
- **Asthma**
- **Allergic rhinitis**
- **Eczema**
- **Fatigue**
- **Hives & rashes**
- **Chemical sensitivities**
- **Environmental illness**
- **Slow wound healing**
- **Cancer**

Common Autoimmune Problems

- **Autoimmune Deficiency Syndrome (AIDS)**
- **Rheumatoid arthritis**
- **Multiple sclerosis (MS)**
- **Type 1 diabetes (IDDM)**
- **Psoriasis**
- **Juvenile diabetes**
- **Crohn's disease**
- **Celiac disease**
- **Ankylosing spondylitis**

- **Myasthenia gravis**
- **Systemic lupus erythematosus**
- **Grave's disease**
- **Pernicious anemia**
- **Bright's disease**
- **Tuberculosis (TB)**

How To Tell If Your Immune System Isn't Working?

You can tell if your immune system isn't working correctly if you have been diagnosed with one of the immune or autoimmune system diseases listed above. But that would mean you have a full-blown disease. Many telltale signs can show up long before you have a diagnosed disease. Please consult with your doctor if you suspect you might have an under or over functioning immune system.

Some Symptoms of Poor Immune Function

- **Severe fatigue**
- **Joint pain with redness and swelling**
- **Migraine headaches**
- **Dark circles under eyes**
- **Swollen looking face or body**
- **Localized or general itching, especially eyes, nose, ears, throat, skin**
- **Heart palpitates after eating certain foods**
- **Bruise easily**
- **Moldy or damp environment triggers illness**
- **Postnasal drip from certain foods**
- **Catch colds easily**
- **Diarrhea**
- **Puffy face**
- **Lips red and swollen**
- **Dark areas on cheeks or under eyes**
- **Candidiasis**
- **Nasal congestion or thick, yellow, or green discharge**
- **Inflamed or bleeding gums**
- **Cold sores or fever blisters**
- **Wounds heal slowly**
- **Neck, armpit, or groin swelling**

Sterols Lower Cholesterol

Eating daily servings of foods high in sterols and sterolins can reduce cholesterol levels almost as effectively as the statin drugs, but without the negative side effects or toxicity. Research published in the Journal of the American Medical Association in 2003 using foods highest in phytosterols showed a reduction of LDL-cholesterol levels of 28.6% while a statin drug reduced LDL-cholesterol 30.9%. There are no known side effects with sterols, there are with the statin drugs. Phytosterols effectively reduced LDL-cholesterol when given as supplements in a study published in the February 2004 issue of Current Opinions in Lipidology.

Eat Your Vegetables

Nutritionists recommend eating six to ten servings of vegetables a day, including at least one serving of raw vegetables. This might be easy to do during fresh vegetable season, but more difficult during the winter when fresh vegetables are not as easily available. Shipping, storing, and processing vegetables can reduce the sterolin and enzyme content.

Sprouts contain higher concentrations of phytosterols than other vegetables, but it is still important to eat a variety of fresh vegetables including nuts like almonds, pistachios, and cashews.

You can feel great all the time!

These statements have not been evaluated by the Food and Drug Administration.

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