



HEALTH MATTERS!



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Immune System Support

The Immune System

The immune system is the body's defence against infectious organisms and other invaders – our shield against disease. Through a series of steps called the immune response, the immune system detects, and then attacks organisms and substances that invade our systems to cause disease. **It keeps us healthy and strong.**

The immune system is made up of a network of cells (such as T & B Cells, Tumour Necrosis Factor [TNF], Natural Killer [NK] Cells), antibodies (IgG, IgE etc), tissues and organs (such as the Thymus Gland) that work together to protect the body. In most cases, the immune system does keep people healthy and prevent infections. Sometimes, however, whether through nutrient deficiencies or chronic stress, the immune system can be impaired leading to illness and infection.

One protective action of the immune system is inflammation, a response that fights bacteria and other infectious agents. But when inflammatory responses are excessive, as they are in asthma and rheumatoid arthritis, they result in redness, swelling, pain, stiffness and other symptoms.

Allergies and the Immune System

Allergies are disorders of the immune system. Most allergic reactions are a result of an immune system that responds to a "false alarm." When a person who is allergic to that substance encounters a harmless substance such as dust, mold, or pollen, the immune system may react dramatically by producing antibodies that "attack" the allergen (a substance that produces allergic reactions).

Support - Adopt healthy-living strategies

Your first line of defense is to choose a healthy lifestyle. Following general good-health guidelines is the single best step you can take towards keeping your immune system strong and healthy. Every part of your body, including your immune system, functions better when protected from environmental assaults and bolstered by healthy-living strategies such as these:

- Don't smoke.
- Eat a diet high in low GI fruits, vegetables, whole grains, and low in saturated fat.
- Exercise regularly.
- Maintain a healthy weight.
- Control your blood pressure – eat less salt.
- If you drink alcohol, drink only in moderation.
- Get adequate sleep – 8hrs.
- Take steps to avoid infection, such as washing your hands frequently and cooking meats thoroughly.
- Get regular medical screening tests for people in your age group and risk category.

Nutritional Support

Food provides you with many of the nutrients you need to maintain a healthy body. A healthy balance of all nutrients helps support the immune system. Energy intake (calories) seems to have an important influence on immune activity. Undernourished people are at greater risk from infections, whilst excessive energy intake (calories) may also compromise the immune system's ability to fight infection.

Reducing saturated fat in the diet is important for weight control, but it also seems to influence how well the immune system works. Diets high in saturated fat can depress the immune response and increase the risk of infections, whereas diets lower in saturated fats can also increase immune activity and could also strengthen the type of immune cells.

Carbohydrates supply the immune system with energy so that it can work better and fight disease.

- **Choose Whole Grain Complex Carbohydrates**, such as: Wholewheat Bread, Brown Rice, Quinoa, Amaranth, Freekeh, Barley, Cereals like Oatmeal, Shredded Wheat.
- **Limit Simple Sugars And Processed Carbohydrates**, such as: All Sugar, Honey, Candy, Molasses, White Bread / Pasta Products, Cakes, Pastries, Cookies, Pies etc.

Proteins make enzymes, which help the immune cells kill germs, viruses, bacteria etc. They also help keep the GI tract and immune system healthy. Proteins comprise of amino acids – the precursors to neurotransmitters – that help to modulate immune functions.

- **Choose Lean Meats:** White Poultry, Lean Pork, Lean Red Meats and most Fish.
- **Choose Plant Proteins:** Nuts and Beans, Peanut Butter, Tofu and other Soy products.

Fats are necessary for the body and immune system to work properly as they serve as fuel for the immune cells, and healthy fats (Omega 3 fats) will help to reduce inflammation. Unhealthy fats affect the body's immunity by causing both inflammation and obesity, which triggers an overactive, and therefore compromised, immune system.

- **Omega-3 Fats** such as: Salmon, Mackerel, Herring, Halibut, Albacore Tuna, Anchovies, Trout and Sardines.
- **Vegetable sources are:** Flaxseed & Canola Oils (cold pressed oils are best), Walnuts, Flaxseeds, Pumpkin & Chia seeds, Seaweeds and certain Pulses.
- **Limit Saturated & Unhealthy Fats:** Trim the fat/skin off all meats, limit bacon, sausage, salami and other high fat meats. Avoid heavily processed coconut oil, palm oil and hydrogenated vegetable oils. Reduce Full-Fat Dairy.
- **Healthy Saturated Fat (Coconut Oil)** is sent straight to the liver and used in health and has antiviral and antibacterial activities in support of the immune system.

Fermented Foods Research suggests that regular consumption of fermented full fat dairy products and pickled foods may enhance our immune defences in the gut, by acting as prebiotics and helping the beneficial bacteria to flourish.

Nutrients That Support Immune Function

Zinc supports the thymus gland (which trains T-cells in the immune system). This can be found in: Oysters, Red Meat, Eggs, Herrings, Sunflower, Pumpkin Seeds and Leafy Greens.

Iodine supports activity of NK cells. This can be found in: Seawater, Seafoods, Kelp, Iodised Salt and Dairy Products.

Vitamin C increases antibody production. This can be found in: Citrus fruits like Oranges and Lime etc, Green peppers, Broccoli, Leafy Greens, Tomatoes, Berries and Peas.

Vitamin E combined with **Vitamin C** increases T-cells, interleukin 2, and TNF. This can be found in: Nuts, Seeds, Wholegrains, Leafy Greens and Root Vegetables. Fish Liver Oils.

Vitamin A can help normalise cell division and supports the thymus gland and antibody production. This can be found in: Carrots, Squashes, Broccoli, Sweet Potatoes, Tomatoes, Leafy Greens and Brightly Coloured Fruits.

Vitamin D helps to modulate the immune system. This can be found in: Oily Fish, Sunlight, Dairy and Egg Yolks.

Selenium supports T cell activity, NK cells and antibody production. This can be found in: Fish, Shellfish, Brazil Nuts, Wholegrains, Pulses, Leafy Greens, Chicken, Tuna and Garlic.

Vitamin B6 supports T cells and B cells, plus 50 other enzyme reactions. This can be found in: Milk, Eggs, Wholegrains, Vegetables, Nuts, Meat & Liver, Yeast, Oatmeal, Soybeans, Avocados and Walnuts.

CoQ10 supports IgG antibody production. This needs to be supplemented if needed.

Glutathione supports T cell activity. This needs to be supplemented if needed.

Probiotics modulate immune and anti-inflammatory responses. This needs to be properly supplemented if not obtained by the diet – not with sweet yoghurt drinks like Yakult.