Lifestyle, Aging And The Immune and Detoxification Systems

A Research Report
by
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Studies indicate that a strong immune system is a key factor in preventing cancer and reducing susceptibility to infection by viruses, bacteria and other microorganisms. As well, the ability to effectively neutralize various toxins and other contaminants through a sound functioning detoxification system is also vital to long term survival and the expression of optimal health. In today's world we are exposed to an increasing number of pollutants and contaminants in our air, water and food, which places an increased demand upon the intestine and liver's detoxification systems. Making matters worse, studies demonstrate that our immune and detoxification systems become weaker and more sluggish as we age, increasing our susceptibility to more virulent infections (e.g., Pneumonia) and cumulative liver damage. (1,2) For these reasons, we should strive to optimize our immune and detoxification capabilities throughout our lifetime by implementing the following nutrition and supplementation practices:

The first and most obvious step is to avoid known damaging agents and carcinogens as much as possible (eg. Cigarette smoke, nitrosamines, excess alcohol etc).The second step involves following a healthy, low fat diet, rich in the phytonutrients, that enhance detoxification and immune function (fruits, vegetable, peas, beans, soy products, onions, garlic and cruciferous vegetables — broccoli, brussell sprouts, cabbage and cauliflower). (1,2)

Supplementation with antioxidant vitamins and minerals has also been shown to help maintain and rejuvenate the immune and detoxification systems as we age. (3–25) Thus, using a high potency multi-vitamin and mineral that provides 500-1000 mg of Vitamin C, 200-400I.U. of Vitamin E, 10,000 to 25,000 I.U. of Beta-Carotene, 100-200 mcg of selenium and 15-25 mg of zinc, should be considered by all adults.

Herbal Power For Immune And Detoxification Support

In addition to the preceding nutrition and supplementation considerations there are several herbal agents that exhibit incredible and unmatched ability to boost the function of the body's immune and detoxification systems. These primarily include the standardized grades of astragalus, reishi mushroom extract, milk thistle and indole-3-carbinols. A daily combination formula of these four botanicals works synergistically to boost and support the body's immune and detoxification systems (unlike Echinacea, which should not be taken daily over long periods). (26) Working together, these four herbal substances can significantly help our bodies cope with the ever-increasing load of environmental chemicals, strengthen the immune system, and help combat and reverse many of the age-related changes that weaken our immune and detoxification systems. The following is a brief description of how these four remarkable herbal supplements work to defend our health:

A. Astragulus And Reishi Mushroom Extract — *The Immune Boosters*

Astragalus, in Chinese medicine, has been studied extensively in laboratory investigations and human trials, primarily for its immune-enhancing effects. It is often prescribed for the common cold, but taken on a daily basis, can help keep the immune system functioning at more peak levels throughout the year. Specifically, **astragalus** supplementation has been shown to significantly increase the production of T- lymphocytes, which destroy harmful viruses that may otherwise cause infections. **Astragalus** also boosts immune function by stimulating the release of interferon and interleukin-2, two powerful signaling agents that enhance the effectiveness of immune cells. In fact, due to its powerful immune-stimulating

effects, interferon is now used to treat some cancers (e.g., melanoma). **Astragalus** supplementation also increases natural killer cell cytotoxicity (ability of these white blood cells to destroy developing cancer cells, viruses and other pathogens) and triggers the secretion of other immune-modifying chemicals (e.g., tumor necrosis factor) that boost the efficiency of the immune system in general. As such, many researchers have published studies showing that **astragalus** has significant anti-viral effects.

In China, **astragalus** has also been used in clinical studies with cancer patients and in patients with weakened immune system function (due to disease, chemotherapy drugs or radiation treatment) and has been shown to significantly increase the number of circulating white blood cells (WBC), in patients who previously demonstrated very low WBC counts (leukopenia). White blood cells are the principle immune system cells that defend us against infections and even cancer to certain degree. There is no doubt that astragalus is a proven immune-strengthening supplement. (27–41)

B. Reishi Mushroom Extract is classified as a super herb in China's Pharmacopoeia. It, too, can be taken daily to support immune function, while therapeutic doses are prescribed to reduce the side effects of chemotherapy and radiation treatment. Reishi mushrooms contain unique triterpenes and polysaccharides that are proven to increase the release of signaling agents (cytokines) that boost immune function (interleukin-1, tumor necrosis factor-alpha, interleukin-6, interferon) and increase the germ-killing activity (phagocytosis) of immune cells. In Japan, these active constituents are patented for use as immune boosters (modulators) and prescribed for patients with weakened immune systems, hepatitis and other conditions. (42–50)

Together, **astragalus** and **reishi mushroom extract** are a potent combination that can help strengthen immune function, beyond which can be achieved from a healthy diet alone. Daily supplementation of these herbs can be used to help optimize immune function throughout our lifetime.

C. Milk Thistle And Indole-3-Carbinols — *The Super–Detoxifiers*

Milk Thistle is unique in the world of herbal medicine due to its flavonoid known as silymarin, which has a proven ability to protect the liver from many environmental toxins, contaminants and microorganisms. It's so effective that milk thistle is used as a treatment to repair liver damage caused by drug-toxicity (e.g., acetaminophen, alcohol, phenothiazines, butyrphenones), acute and chronic viral hepatitis and cirrhosis. (51,52)

In the body, the liver is the primary filtration and detoxification center, representing about 75% of all detoxification reactions. In the modern world, our liver is exposed each day to copious amounts of pesticides, herbicides, food additives, artificial sweeteners, bacteria, end products of metabolism, and possibly medicinal drugs and/or alcohol. Every minute of our lives, 2 quarts of blood pass through the liver where highly specialized cells destroy any bacteria and detoxify potentially damaging substances that may otherwise threaten our health. However, with repeated daily exposure to various food and environmental chemicals, and the aging process itself, liver cells can become damaged and less efficient, resulting in a decreased capacity to perform these vital functions. Once compromised, we become increasingly susceptible to chronic illnesses, reduced immune functioning and toxic overload conditions. (2) This is why **milk thistle** should be considered for daily use. The silymarin content of **milk thistle** is known to protect liver cells from many types of environmental toxins, drugs and alcohol. It enhances detoxification by increasing liver glutathione levels (an essential element for detoxification and optimal immune function) and has been shown to repair liver cells that have been damaged by various toxins, drugs and infections. (e.g., hepatitis) (53–62)

D. Working in conjunction with milk thistle, **indole-3-carbinols** (the active constituents found in cruciferous vegetables) are also known to boost the body's detoxification system by stimulating both the Phase I and Phases II detoxification enzyme systems. In fact, individuals who consume generous amounts of foods containing **indole-3-carbinols** have been shown to have superior liver detoxification function and a marked reduction in cancer risk over their lifetime. Numerous animal studies also demonstrate that **indole–3–carbinols** significantly enhance detoxification and exert important anti-cancer effects. (63 –77)

Thus, beyond a healthy diet and antioxidant support, daily supplementation with these four herbal agents can be used to boost and support our immune and detoxification systems throughout our lifetime, and this translates into improved well being and better protection against a number of degenerative diseases.

Speak to your practitioner about how the *Immuno-Detox Prime* (Nutra Therapeutics) supplement or similar product may benefit you.

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