IMMUNOMODULATORS

Immune System Firestarters

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Immunomodulators, both natural and synthetic preparations, are one of the most promising therapies for autoimmune disease.

How Immunomodulators Work

Immunomodulators are natural or synthetic substances that help regulate or normalize the immune system. Immunomodulators correct immune systems that are out of balance. Immunomodulators correct weak immune systems and temper immune systems that are overactive, but they do not boost the immune system the way immune stimulants such as Echinacea do. Immunomodulators are recommended for people with autoimmune diseases and they are widely used in chronic illness to restore immune system health in people who have been on lengthy courses of antibiotics or anti-viral therapies.

The benefits of immunomodulators stem from their ability to stimulate natural and adaptive defense mechanisms, such as cytokines, which enables the body to help itself.

Natural and Synthetic Immunomodulators

Plant sterols and sterolins are excellent immunomodulators found in waxy fruits and vegetables although they are lost when vegetables and fruits are cooked. Several products, such as Moducare, are patent preparations rich in sterols and sterolins. Other natural immunomodulators include ginseng root, German chamomile tea, lemon/olive drinks, reishi mushroom extract and olive leaf extract. Patent immunomodulator preparations include Biobran, AHCC, Noxylane4, and MGN 3.

The synthetic capsaicin-anandamide hybrid arvanil has been found to ameliorate symptoms in autoimmune encephalomyelitis in mice. The relevance of these findings suggests that arvanil and related compounds may offer benefits in the treatment of multiple sclerosis.

Prescription synthetic immunomodulator medications, such as azathioprine, 6-mercaptopurine, methotrexate, and mycophenolate mofetil, work by suppressing the immune system and decreasing inflammation in the digestive tract in people with inflammatory bowel disease, ulcerative colitis, and Crohn's disease. Tacrolimus can be used in Crohn's disease when corticosteroids prove ineffective. In children, immunomodulators are less likely to cause growth failure than corticosteroids.
Topical immunomodulators such as tacrolimus and pimeocolimus have been found to offer benefits in patients with eczema, vitiligo and nickel allergy. Topical immunomodulators are well tolerated even in infants.

**Side Effects of Oral Preparations**

Side effects of prescription immunomodulator medications include nausea, vomiting, diarrhea, stomach ulcers, rash, malaise and liver inflammation. Natural immunomodulators are less potent than prescription immunomodulators and also less likely to cause side effects.

**Resources:**

Biobran Info, Information and Research Site, www.biobran.org/comparison/immunomodulators.html

Malfitano AM, Matarese G, Pisanti S, Arvanil inhibits T lymphocyte activation and ameliorates autoimmune encephalomyelitis, J Neuroimmunol 2006 Feb;171(1-2).

Immunomodulators for inflammatory bowel disease, A-Z health Guide from WebMD