

Immune System Rebalancing

Immune Problems:

1. Three known ways of inducing cancers:
 - a. RNA viruses (many are retroviruses) that carry proto-oncogenes “stolen” from other cells and mutated
 - b. Oncogenes induced by carcinogens/random mutations
 - c. DNA viruses contain genes to move the cancer from a resting state into an active state
2. Growth suppressor genes must be turned off for tumor to form (p15, p16, p21, p53)
3. Apoptosis must be turned off so that the cell does not die as normal
 - a. Upregulation of Bcl
 - b. Downregulation of fas and p53
4. The immune system is suppressed
 - a. Immune system inhibitory factors
 - b. “Fibrin coating” of cells making them “hidden” from the immune system
 - c. Th1 to Th2 transition. Th1 are the immune cells that help control the humoral side of the immune system. It is this side that is down regulated in cancer and the inflammatory Th2 side that is upregulated.
 - d. Bacterial and viral super infections which must be addressed in treatment
5. Production of telomerase, which adds short sections of DNA to the ends of the chromosomes which are normally lost with cell division. This allows the cell to divide without reaching the proverbial “end of the rope” and so become immortal (divide essentially forever. This is why they can divide forever and so form tumors.
6. Production of epidermal growth factors may lead to the continuous activation of the receptor and continuous growth of the cell.
7. Production of proteases necessary for metastases to break out of the capsule and spread into the body.

Immune System Rebalancing Solution:

“Immune Option Powder” by BioImmune Inc.

Immune Response Enhanced: A Complete Formula for Immune Enhancement & Detoxification

Immune Response Enhanced is an all in one dietary supplement containing over 60 nutrients, vitamins, minerals, herbs and immune modulating nutraceuticals. This unique formula was developed for broad use by patients with compromised immune function. *Immune Response Enhanced* nourishes patients who are usually depleted allowing other protocols to be even more effective and providing patients with much-needed follow-up care.

Immune Response Enhanced is a blend of select nutraceuticals and nutrients designed to work synergistically to modulate and enhance immune system function, decrease oxidative damage, promote liver detoxification and to normalize cell division. The proprietary blend of nutraceuticals and nutrients is available at a fraction of the cost of all of these nutrients taken separately and is easy to use due to its availability in powder rather than capsule and tablet form.

Antioxidants for Immune Support

A free radical is a molecule with a non-paired electron. This electron imbalance makes the free radical reactive and able to cause damage both chemically and biologically (DNA, proteins, carbohydrates and lipids). Free radicals can be formed in photochemical reactions, oxidative stress and as a part of normal metabolism. A balance between free radicals and antioxidants is necessary in the maintenance of health and prevention of disease. Disease states such as immune dysfunction and carcinogenesis have been associated with an elevated level of free radicals relative to antioxidants. Organic free radicals, which are a natural byproduct of metabolic functioning can potentially, lead to underlying tissue damage. Antioxidants including beta-carotene, coenzyme Q10, vitamin E, and tapioca-derived vitamin C are such nutrients capable of inactivating these free radicals. An increased incidence of certain cancers has been demonstrated in an environment low in specific antioxidant nutrients. It has been shown that increasing serum levels of some of these antioxidants through supplementation may reduce the incidence of these same cancers. Although not as well studied, preliminary results indicate a synergistic effect between nutrients in the prevention of carcinogenesis. Additionally, herbal supplements which have proven to be powerful antioxidants may work synergistically with the aforementioned nutrients. Herbal and nutrient antioxidants are contained in the *Immune Response Enhanced* product in high amounts and include Co-enzyme Q10, grape seed extract, alpha carotene, beta-carotene, vitamin E, beet-derived vitamin C, germanium sesquioxide, N-Acetyl cysteine, glutathione, selenium, bioflavonoid complex and turmeric. In addition to the antioxidant benefit these nutrients and herbs also provide a direct benefit to the immune system, both humoral and cell-mediated functions.

Polysaccharide Immune Support Obtained from Seven Mycelia Mushroom Extracts

The mushroom extracts are derived from the *mycelia* or budding stage of the mushroom, as opposed to the fruiting stage, ensuring the highest level of biological and biochemical activity. Both animal and human clinical studies in Japan have documented the efficacy of mushroom extracts for significant anti-tumor properties as well as enhancement of the immune system. Mushroom extracts increase NK (natural killer cell) activity, T-cell, B-cell, macrophage, mitochondria function and your own natural production of interferon enabling the body to recognize the genetic codes of the pathogens, thus facilitating their destruction. *Agaricus blazei* an exciting new mushroom with exceptional anti-tumor properties has been added to enhance the mushroom mixture. *Agaricus blazei* has more mixed beta glucan than any other mushroom yet analyzed at the National Cancer Laboratory in Tokyo (Mizuno, 1985).

Liver Detoxification and Elimination Support

The liver is the site of detoxification in the body. The detoxification process is primary in the metabolism of hormones (pharmaceutical and in food), pesticides, alcohol and drugs and chemicals in the environment and food. Studies of cancer and immune system dysfunction have provided evidence of an environmental association. Because of this association, many immune-enhancing programs will include herbs and nutrients to enhance the detoxification function of the liver. The B-vitamins are essential to the enzymatic processes in the liver and can be found in high amounts in the *Immune Response Enhanced* product. Additionally, choline, N-Acetyl cysteine, glutathione, taurine, MSM and sulforaphane are all known to improve the detoxification and elimination process of the liver. In treating diseases of immunologic dysfunction, including cancer, toxic drugs are frequently employed. Therefore in the recovery phase following treatment of cancer, an increased need for the nutrients of detoxification is likely.

Essential Prostaglandins (Essential Fatty Acids)

The fat in our diet is broken down into fatty acids which in turn regulate the production of prostaglandin (hormone-like messengers) in our body. Prostaglandin production can favor the production of series 1 and series 3 (anti-inflammatory) or series 2 (inflammatory) chemical messengers. Prostaglandin production can be manipulated (in favor of series 1 and series 3) by supplementing the diet with high amounts of eicosapentaenoic acid (*EPA/DHA Option*). EPA is supplemented in a separate *EPA/DHA Option* capsules and can reduce the amount of inflammatory by-products produced in the body and assist in mediating the immune system response.

Herbal Nutraceutical Support

Epidemiologic studies have illustrated a decrease in certain types of cancer with a high fiber diet. This background led researchers to the discovery of inositol hexaphosphate (IP-6) a carbohydrate component found in high concentrations in brown rice fiber, which has since proven to be a strong cell regulatory agent. Historically, there are many herbs used by herbalists in the treatment of tumors. These herbs are being researched individually in both laboratory and clinical setting. Through research, we are learning of the chemical constituents of these herbal agents and evidence is being gathered to support the immuno-supportive nature of these plants, already so familiar to the herbalists. The *Immune Response Enhanced* formula has provided these herbal ingredients together in a background of nutritional support in order to optimize the potential for synergy. Full doses of grape seed extract, lycopene, green tea extract, panax ginseng, and turmeric are all provided in this unique blend. Andrographis Paniculata has been added to enhance and modulate the immune system. More importantly, there is strong evidence using Andrographis Paniculata to support the redifferentiation of cancer cells to normal cells via a “cell signaling transduction” between the cell wall and mitochondria.

Conclusion

Immune Response Enhanced Powder is designed to meet the needs of the physician in integrated medicine with optimum results for your patients at a fraction of the cost of equivalent nutraceuticals, vitamins, minerals and immune modulators in tablet and capsule form.

ImmuneOption Enhanced / Immune Response Enhanced

Each serving scoop: rounded tablespoon (approx. 20 grams) provides:

Co-Enzyme Q10	80 mg	Zinc	10 mg
Grape Seed Extract (95%)	40 mg	Potassium	75 mg
Alpha Carotene	5 mg	Chromium	50 mcg
Alpha Lipoic Acid	15 mg	Molybdenum	25 mcg
Lycopene	1 mg	Manganese	0.5 mg
Vitamin E (Mixed Tocopherols)	66 IU	Selenium	35 mcg
Vitamin C (Cassava Root Source)	1000 mg	Iodine	25 mcg
Folic Acid	90 mcg	MSM (Methylsulfonylmethane)	100 mg
Vitamin A (Acetate)	800 IU	Beta Carotene (Mixed natural carotenoids)	2500 IU
Vitamin B-1	5 mg	Tocotrienols	25 mg
Vitamin B-2	6 mg	Bioflavenoid Complex	40 mg
Vitamin B-3 (Niacinamide and niacin)	74 mg	TMG (Trimethylglycine)	200 mg
Pantothenic Acid	40 mg	Sulforaphane (Broccoli)	45 mg
L-Glycine	500 mg	Beta Glucan	50 mg
Vitamin B-6	6 mg	Olive Leaf Extract	80 mg
Vitamin B-12 (Cyanocobalamine)	400 mcg	Milk Thistle Extract (80% Silymarin)	25 mg
Biotin	55 mcg	Green Tea Extract (40% Catechines)	45 mg
IP-6 (Inositol hexaphosphate)	200 mg	Mushroom Extract Reishi-Ganoderma lucidum, Shitake-Lentinus edodes, Maitake,-Grifol frondosa, Cordyceps sinensis, Coriolus versicolor, Tremella fuciformis	2200 mg
Choline	60 mg	Agaricus Blazei	200 mg
Germanium Sesquioxide	25 mg	Andrographis Paniculata	50 mg
N-Acetyl -L-Cysteine	100 mg	Bromelain	175 mg
L-Glutathione	150 mg	Turmeric Extract (Curcumin 95%)	90 mg
L-Carnitine	100 mg	Panax Ginseng	15 mg
Calcium (Ascorbate)	40 mg	Cats Claw	150 mg
Magnesium	80 mg	L-Taurine	100 mg
Vitamin D-3	65 IU	Lactoferrin	60 mg

Other ingredients: Oat Bran, Rice Bran, Psyllium Husks, Whey Protein Concentrate, ISO Malt, Natural Raspberry Flavor, Silicon Dioxide, Stevia