

An Herbal Education Series
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Host Defense Potentiators

Immune Factor Herbs

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America spent \$950 Billion on health care maintenance in 1992 and the costs keep escalating. The primary assault of the medical community has been aimed at eradicating the bacteria and viruses, mutant cells and genes that cause diseases as short term as the common cold and as life threatening as cancer and HIV.

Despite the excessive resources employed against debilitating life threatening disease, statistics give an ominous premonition in skyrocketing cancer and HIV rates and the growing ineffectiveness of yesterday's miracle drugs, including what was once hailed as the "cure all": **Antibiotics.**

The medical community is facing a crisis, if not a 'meltdown', as drugs used to overpower disease are now being recognized as the very cause of what is undermining the patient's health and vitality, causing well documented side effects that enhance the proliferation of the disease process.

Over 300,000 annual deaths in America are attributed to drug and surgery complications, affectionately called iatrogenic deaths. According to the FDA, the Center for Disease Control and the Public Citizen Health Research Group, one year of adverse prescription drug reactions include:

- 61,000 people with induced parkinsonism
- 32,000 hip fractures, including 1,500 deaths
- 16,000 injurious car crashes (attributed to drug reactions!)
- 163,000 individuals with memory loss
- 659,000 hospitalizations
- 28,000 cases of life-threatening or fatal reactions to digoxin (digitalis)
- 41,000 hospitalizations, including 3,300 deaths, from aspirin-like compounds.

Approximately 9.6 million older adults each year suffer adverse drug reactions.

The evidence is clear that our emphasis must shift from what is making us sick to what can keep us well.

The immune system is the most sensitive system of the body.

In an amazing dance, 20 trillion immune cells circulate throughout our bodies to kill bacteria, virus, yeast or cancer cells. Cells throughout the body duplicate all day at a blinding pace. When they are not copied exactly as they should be, an emergency call brings elements of your immune system to find and destroy these abnormal cells. For example, experts agree that most people get cancer - a proliferation of abnormal cells - about 6 times per lifetime. However, only one in three people will develop detectable cancer due to the surveillance of an alert and capable immune system!

Historically, natural "tonics" have been used to effectively stimulate the body to maintain a strong immune response necessary to inhibit the growth of many viruses and microorganisms. Often the benefits of these natural substances are mild, however, in combination the benefits can become significant - so significant that virtually all drugs were originally developed from natural substances until a later synthetic analog could be made in the lab.

Some herbal compounds have shown their potential as "*Host Defense Potentiators*". The following information is an attempt to discuss some of the most documented potentiators of the immune system. A healthy immune system is our best line of defense against disease and the key to vibrant health.

Echinacea

E.purpurea & E.angustifolia

Originating in North America, this powerful herb has long been recognized for improving the body's own resistance in infectious conditions of all kinds, particularly influenza and colds. Its immune bolstering properties are well documented in experiments conducted in major hospitals throughout the 19th century. In more recent years, researchers have pinpointed the mechanisms by which Echinacea may work to prevent infection. One of the primary defense mechanisms of the body is known as the hyaluronidase system. Hyaluronic acid (HA) is the substance that is formed in the tissues between cells to "cement" them together. It forms a

Echinacea is probably the best detoxifying agent of any herb known to the Western Herbalist.

Jon D. Kaiser, M.D.

very effective barrier against infection. There is an enzyme that attacks HA in a way that science does not yet fully understand. When it does, the HA quickly loses viscosity, like jello turning to water. This becomes the weak link in your defense system. If the enzyme is allowed to destroy the integrity of the HA barrier, pathogenic bacteria, such as staph and strep, penetrate the tissue and make you sick.

A similar mechanism is thought to be involved in rheumatism and tumor formation and at the beginning of malignancy. Echinacea has been shown to prevent the enzyme from dissolving HA. The herb also acts to inhibit the spread of infection that may have already occurred by combining with the HA to form a complex that is resistant to enzyme invasion and that facilitates fibrous connective tissue regeneration.¹

With intense interest focused on the immune system, Echinacea provides a remarkable model for "immunostimulation"

- It exhibits **cortisone-like activity** that can account for its reputation for anti-inflammatory activity.²
- It has a **stimulating effect on the lymph system**, increasing the body's ability to carry waste tissue away from areas of infection.³
- Echinacin, the active constituent of Echinacea, encourages the body to increase its **natural production of interferon**, an important protein that blocks the multiplication of RNA and DNA containing viruses. This property has long given Echinacea the reputation for effectiveness against herpes, influenza, canker sores, etc.⁴
- German research has supported all of the benefits listed, plus demonstrated the ability of this popular herb to **stimulate T-cell activity**, an important mediator in the body's immune system.⁵

Astragalus

Astragalus membranaceus

Known as an organ toning and balancing herb, Astragalus provides a powerful stimulus to the immune system.

Astragalus is the dried root of a perennial that attains a height of about 20 feet and is grown in Northern China.

According to traditional Chinese Medicine, Astragalus is classified as a warm, sweet tonic that enhances the functioning of the spleen and lung. It is recommended for general strengthening, treating excessive perspiration, eliminating toxins and promoting the healing of damaged tissues. In addition, it is used for the treatment of edema, night sweats, skin ulcerations and abscesses.

Analysis of Astragalus has revealed some of the following components that are responsible for its active effect: *polysaccharides, gluconic acid, mucilage, amino acids, choline, betaine, folic acid, kumatakenin, and flavones, including quercetin, isorhamnepin and ramnocitrin.*

Several fractions of polysaccharides are believed to be responsible for the major immune stimulating effect of Astragalus. When injected into rats, they increase the number of macrophages, enhance T-cell transformation (from suppressors to helpers), and increase phagocytosis. In mice, Astragalus has been shown to promote the ability of the immune system to produce interferon and increase the cleaning rate of toxins.⁶

In human and clinical trials, Astragalus has demonstrated its ability to substantially increase the one, three and five year survival rate of cancer patients receiving chemotherapy or radiation therapy.

Additionally, Astragalus has been shown to increase the number of antibodies (IgA and IgG) in the blood and to induce the production of interferon by white blood cells.⁷

Astragalus may also be an effective protector against the ravages of chemotherapy. Some of the standard anticancer drugs cause degeneration of the liver which expresses itself as an elevation of key liver enzymes. Such enzyme activity was not elevated in a group of animals that received Astragalus in addition to chemotherapy.⁸

Gold Thread

Coptis chinensis

This herb, Coptis chinensis, is known in Chinese Medicine for its ability to dispel excessive body moisture (dampness or edema) and heat. (Heat in Chinese herbology means hyperactive function, not necessarily a feeling of heat.) In addition, it is known to stimulate the secretion of saliva, gastric and pancreatic juices, as well as stimulate the activities of the gastrointestinal tract.

Gold Thread contains a substance (berberine) which increases formation of bile and reduces its thickness (to help the flow of bile). It is very good for chronic gall bladder inflammation. Some references indicate that it is known for its natural antibiotic effect, especially when some bacterium have developed resistance to chemical drugs. It appears to strengthen the body in its effort to inhibit the influenza virus.

Other references indicate its effectiveness against symptoms of excessive heat, high fever, delirium, disorientation, anxiety, irritability, insomnia, emaciation, thirst, sore throat and red tongue.

Chinese references recommend Gold Thread for abdominal pain and cramps, vomiting, acid regurgitation, diarrhea and dysentery. It is also used for tenesmus (ineffectual and painful straining at stool).

In vitro (test tube), Gold Thread has a strong inhibitory action against hemolytic streptococcus pneumonia (the organism most often causing lobar pneumonia.)

It is also recommended as a treatment for tumors, boils, and carbuncles (inflammations under the skin).⁹

Reishi Mushroom

Ganoderma lucidum

Ganoderma is a fungus of the Ganoderma lucidum family. This family contains many important Chinese herbs.

In Japan, where it is extremely famous, it is known as the "Reishi Mushroom". In China it is called the "marvelous Herb".

This herb is relatively rare and, as a result, costly. Commercial growers have recently produced sufficient supplies to lower the price. Normally the Reishi Mushroom grows on old, broadleaf trees and often attains a weight of over one pound.

Few, if any, of the mushrooms have such historic significance. It is often depicted in Chinese art due to its high regard.

According to traditional Chinese medical theory, herbs such as the Reishi Mushroom are classified as "superior" and fit into a category called Fu-Zheng. The primary function of Fu-Zheng herbs is to increase disease resistance and normalize bodily functions. Some herbalists consider these to be longevity and harmonizing herbs.

Today, through scientific research, we are able to understand why the Reishi Mushroom has achieved its tremendous reputation as an enhancer of immune function.¹⁰

As such, it is now being classified by scientists as a "Host Defense Potentiator".

The Reishi Mushroom contains polysaccharides and triterpenoids that are known to enhance the functioning of the immune system. In various laboratory studies, these polysaccharides suppress the growth of implanted tumor cells. This mechanism of action involves an increase in T-cell and macrophage activity.¹¹

Cat's Claw

Uncaria tomentosa

Cat's Claw may well be one of the most wondrous herbs of the Peruvian Rain Forest.

In Peru and other Spanish speaking countries, the common name for Uncaria tomentosa is "una de Gato". In English it is translated as "Cat's Claw".

It has been used for hundreds of years, perhaps thousands, by the native Ashaninka Indians for treatment of a wide range of health problems associated with the immune and digestive systems.

As a result of extensive research at Institutes and Universities in Peru, Austria, Germany, England, Hungary and Italy, there is evidence to suggest that Uncaria tomentosa may be beneficial in the treatment of cancer, arthritis, bursitis, rheumatism, genital herpes and herpes zoster, allergies, ulcers, systemic candidiasis, PMS and irregularities of the female cycle, environmental toxin poisoning, numerous bowel and intestinal disorders, organic depression and those infected with the HIV virus.¹⁵

Dr. Brent W. Davis D.C., who worked with cat's claw for a number of years refers to this herb as "the opener of the way." Because of its remarkable ability to cleanse the entire intestinal tract, he has used it successfully to help patients suffering from Crohn's disease, diverticulitis, leaky bowel syndrome, colitis, hemorrhoids, fistulas, gastritis, ulcers, parasites and intestinal flora imbalance.¹⁶

In wisdom we look at the whole, in ignorance we look at the parts.

Plato

Reishi Mushroom Con't

- In treatment of viral hepatitis, the Reishi Mushroom has been shown to improve symptoms such as anorexia, insomnia, malaise and liver swelling.¹²
- It has been shown to reduce lipids and cholesterol in the blood.¹³ In addition, it is a stress reducing herb effective in treating conditions such as stomach ulcers and high blood pressure.
- In people suffering from insomnia, it enhances the relaxation of muscles and increases sleeping time.¹⁴

Possibly the most exciting news of this herb came about in 1989 when a research scientist by the name of Dr. Klaus Keplinger successfully isolated six oxindole alkaloids from the root of Uncaria tomentosa. In his 10 page technical patent he states that all but two of the alkaloids "are suitable for the unspecific stimulation of the immunologic system."

According to his patent, the most immunologically active alkaloid is Isopteropodine. Isopteropodine (referred to as Isomer A) and, to a lesser extent, three of the other alkaloids have been shown in laboratory testing to have a pronounced enhancement effect on phagocytosis (the ability of the white blood cells and macrophages to attack, engulf and digest harmful microorganisms, foreign matter and debris).¹⁷

According to research conducted at the Shanghai College of Traditional Chinese Medicine, Rynchophylline, one of the remaining two alkaloids, which does not have immuno-stimulating properties, does have the ability to inhibit platelet aggregation and thrombosis. This, of course, suggests that this alkaloid may be quite useful in the prevention of stroke and reducing the risk of heart attack by lowering blood pressure, increasing circulation and inhibiting both the formation of plaque on the arterial walls and the formation of blood clots in the vessels of the brain, heart and arteries.¹⁸

In an article titled "A New World Class Herb for A.K. Practice," Dr. Davis talks of Uncaria tomentosa's ability to break through severe intestinal derangements that no other available product could touch.

Dr. Richard Gerben M.D. in his book entitled Vibrational Healing states, "the herb shows great promise for the treatment of arthritis when taken internally, either by making a tea or taking capsules of the herb." He suggests that this herb can be beneficial for individuals who suffer from painful joints and cannot take conventional medicines because of unpleasant side effects. He emphasizes that it might be helpful in reducing the side effects of radiation and chemotherapy associated with cancer treatment.

In the words of Dr. Bret Davis, "Uncaria tomentosa is a world class herb which has the power to arrest and reverse deep-seated pathology."

Aloe Vera

Aloe Barbidensis

Aloe Vera is a garden succulent well known as the first aid plant. It has been used medicinally since ancient times. It is mentioned in early Egyptian writings as an effective treatment for infections, skin ailments and constipation. Alexander the Great is said to have fought a war to obtain a supply of this plant for his wounded soldiers.

While there are over 200 species of Aloe, the Aloe Barbidensis is perhaps the best known for its medicinal properties and is cultivated commercially for use in a myriad of cosmetic products and for popular Aloe Juices that are rich in enzymes and effective in treating digestive disorders.

Aloe cleans, soothes and heals, making it a popular ingredient in soothing preparations for cuts and burns. It also contains antibiotic properties. It contains properties which promote the removal of dead skin and stimulate the normal growth of living cells, which can stop pain and reduce the chance of infection and scarring while helping the healing process.

The gel-like juice of the Aloe Vera is well known for its use for intestinal ailments and colon cleansing, and reputedly can help restore the bowels to normal functioning. Modern clinical use of this gel began in the 1930's with the successful treatment of x-ray and radium burns. Aloe Vera has maintained its reputation for healing internal tissues damaged by radiation exposure, such as x-rays and radiation.

Aloe contains polysaccharides. Over the last two decades, Japanese scientists in particular have shown that polysaccharides resemble natural parts of the cell walls of bacteria, and therefore can stimulate an immune response in people.¹⁹

In Russia, extensive studies have shown the effectiveness of Aloe Vera in removing toxins from the body and in acting as a nonspecific booster of the immune system.

Modern technology now offers Aloe Vera in a variety of forms, from the fresh juice to an array of concentrates, including freeze dried powders that make Aloe Vera convenient to use as a daily tonic.

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The ideas, procedures and suggestions in this article are intended to supplement, not replace, the medical advice of trained professionals. In addition, all matters regarding your health require medical supervision. Consult your physician about any condition that may require diagnosis or medical attention.