

Excerpt of Chapter Two from Andrew Gaeddert's
new book,

Healing Immune Disorders

Natural Defense- Building Solutions

Immune Herbs and Nutrients

Herbs and supplements can give patients control over their health. Patients who feel like they have some control over their bodies always do better than patients who are passive. Herbs are generally safer, are slower acting, and possess fewer side effects than drugs. In some cases they can be more effective, such as some viral infections, drug-resistant bacterial conditions, and many digestive and gynecological complaints. Herbs are often used alongside standard care for conditions such as infertility, cancer, and HIV. Herbal medicine can also be used to offset the side effects of biomedical treatments such as chemotherapy.

In many patients diagnosed with immune or autoimmune conditions, herbal therapies can bring the immune system back into balance. Appropriately used tonic herbs can boost vitality and protect against infection. Anti-toxin herbs treat viral and bacterial conditions, while others have anti-fungal and anti-parasitic effects. Herbs can be used to increase blood circulation and alleviate pain.

A hallmark of Chinese herbal medicine is that it uses combinations of four to twenty herbs in a tea or tablet form. In contrast, Western herbalists usually use fewer combinations of herbs.

One benefit of Chinese herbal medicine is that the practitioner pays special attention to the individual's constitution, or root health. The constitution can be determined by taking the patient's history, along with looking at the tongue and feeling the pulse. For example, an elderly woman recovering from

chemotherapy is treated much differently if she comes down with a cold or flu, than a strapping young athlete who has similar symptoms.

Chinese herbs are prescribed to balance a patient's condition. If the patient feels hot and is running a temperature, the herbalist selects cooling herbs. In contrast, if the client feels cold and needs to put on sweaters when everyone in the house is in T-shirts, warming herbs are selected. The herbalist must always keep in mind the strength of the patient's overall health relative to the severity of the illness.

An herbalist must make an accurate diagnosis, select the most appropriate herb or formula for the individual, and select the correct method of administration and preparation. Because this process is complex, we recommend seeing a trained herbalist whenever possible. A qualified herbalist should make sure that the herbs they use are safe and effective. They should be able to make suggestions about how to combine herbs and supplements with any medication you are taking. Most herbalists keep their own pharmacy as they are trained in herbal quality control issues, whereas store personnel are usually not. Questions you might ask your herbalist include: What is your training? How much experience do you have using herbs in your practice? Have you ever treated a condition like mine? How long will it take before I get a response? The best way to find an herbalist is word of mouth. If you are not able to get a referral from a friend, family member, or other health professional, you can write to me at the address in the Resource Guide in the appendices for the name of a professional who uses herbs in your area.

Specific Remedies

Aloe

Aloe is used mainly for skin irritations and gastrointestinal complaints, and its polysaccharide components have anti-viral, antibacterial, anti-fungal, and immune-enhancing properties. Injections of acemannan – one of aloe's best-studied polysaccharides – are currently a drug approved for feline leukemia. Acemannan has also been shown to enhance T cell and interferon function. For example, in a study of fourteen HIV patients, taking 800 mg of oral acemannan produced significant increases in circulating monocytes and macrophages. Follow-up studies showed an increase in T4, T8, and T24 antigen levels. Animal research has shown promising results in sarcomas and spontaneous tumors.¹

Andrographis (*Andrographis paniculata*, *chuan xin lian*)

Andrographis is used widely both in China and in India, where it is known as *kalmegh*. It is traditionally used to treat infections, pharyngitis, laryngitis, pneumonia, herpes, skin infections, and snakebite. In Scandinavia, it is used

to treat the common cold.

Studies in the U.S. and abroad have shown that andrographis boosts white blood cell and interferon production.² In Sweden, a controlled, double-blind study of fifty patients investigated the effectiveness of andrographis extracts in treating the flu. At a dosage of 1,200 mg. a day, 68 percent of the experimental group completely recovered after four days, versus 36 percent of the placebo group. Subjects using andrographis showed less fatigue, chills, sore throat, muscle aches, rhinitis, sinus pain, and headache than those using the placebo.³ In a Chinese study of 131 pneumonia and chronic bronchitis patients, 79 percent showed an improvement in two weeks. In another Chinese clinical trial with 455 subjects, andrographis was considered 90 percent effective in treating childhood pneumonia, with an average of 3.1 days for fever to be normalized.

According to traditional Chinese medicine (TCM) theory, andrographis is used for clearing toxic heat, so it's cooling and shouldn't be used by patients with loose stools or cold signs such as low body temperature, cold extremities, and pallor. It may cause stomach pain in some individuals – if it does, the herb should be discontinued, or the dose decreased.

Artemisia (*Artemisia annua*, *qing hao*)

Artemisia has been used traditionally in the treatment of parasites and other unfriendly microbes. It has long been used in Chinese medicine to treat parasites, as a remedy for fevers, and particularly for malaria. A derivative of artemisia called artemisinin is a drug widely used to treat malaria; studies have found artemisinin to be an immunomodulator also effective in treating lupus and psoriasis. Artemisia has been used clinically to treat cancer, and has demonstrated anti-cancer activity on select cancer cells cultured in the laboratory.⁴

Astragalus (*Astragalus membranaceus*, *huang qi*)

Astragalus (*huang qi*) is traditionally used to improve the body's defensive energy, known in Chinese as *wei qi*. Astragalus is found in ancient herbal prescriptions for recovering strength following illness or exertion, fatigue, excessive perspiration, underweight, organ prolapse, and for healing burns. In the U.S. and China, astragalus is commonly used to help people with a variety of viral syndromes including HIV disease, herpes, chronic fatigue syndrome, and chronic hepatitis, and to bolster patients undergoing Western treatments for cancer. Of course, it should not be seen as a treatment for cancer, but rather as an adjunct to standard care.

Concern has been raised that astragalus may stimulate the immune system too much in autoimmune cases, but that hasn't been observed in American clinics specializing in traditional Chinese medicine (TCM). However, according to TCM theory, astragalus should not be used to treat a cold or flu because it might "tonify" the cold and make it worse, and should be used cautiously for individuals with digestive disorders because it can be difficult to digest.

Astragalus contains polysaccharides and flavones (isoflavone and quercetin) and saponins. Studies have shown it to have antioxidant, anti-bacterial, and anti-retroviral effects. Most of the modern research on astragalus has focused on its immune-enhancing effects. Laboratory studies have found astragalus to increase macrophages, T cell transformation, NK cell activity, interferon production, and phagocytosis. Astragalus seems to offer a preventive effect against the common cold, as reported in a Chinese study of 1,000 patients, in which subjects noticed fewer and shorter colds. The study also documented increased levels of IgA and IgG antibodies in nasal secretions after two months of treatment.⁵ In another study, breast cancer patients given a combination of astragalus and ligustrum (*nu zhen zi*) – as an adjunct to radiation treatment – showed a decrease in death rate. In a study of patients undergoing chemotherapy for advanced lung cancer, mean survival time increased from 204 to 465 days for patients diagnosed with squamous cell carcinoma who were also taking astragalus, and from 192 to 324 days for patients with adenocarcinoma, compared with the group who received only chemotherapy.⁶ Components of astragalus have been shown to reduce the immunosuppressive effects of the chemotherapy drug cyclophosphamide.⁷ Animal studies have also demonstrated that astragalus protects the liver.⁸

According to the Chinese pharmacopoeia, astragalus is graded and may be minimally processed or baked with honey. It is usually combined with other herbs in soups, teas, and pills.

Bupleurum (*Bupleurum chinense, chai hu*)

Bupleurum is an important ingredient in a long list of traditional Chinese formulas going back at least 1,800 years, and today it is one of the most popular herbs in Japan. Traditionally used to treat the liver, bupleurum formulas are also used to reduce fever and destroy viruses. In a study of 143 patients, those treated with bupleurum showed normalization of fever in 98.1 percent of influenza and 87.9 percent of common cold patients. When components of bupleurum were tested in the laboratory, results show anti-inflammatory, immune-modulating, and liver-protecting activity.⁹

While bupleurum is a safe herb, some precautions are necessary. It should always be taken under the guidance of a trained herbalist, as part of a formula, not as a single herb. Generally, bupleurum should not be used with headache, hypertension, or dry cough. It also should not be used with interferon, because a few cases of interstitial pneumonia have developed in patients using Minor Bupleurum Decoction (*xiao chai hu tang*) in conjunction with interferon treatments.

Citrus

Citrus peel is commonly used in traditional Chinese formulas to aid and smooth digestion. Modified citrus pectin and limonene are two contemporary citrus-derived supplements that are currently getting researchers' attention for their cancer-fighting potential.

Modified citrus pectin supplements have been shown to improve PSA (prostate-specific antigen) levels in two human small-scale studies. In animal studies, it has been shown to shrink colon cancer tumors, prevent breast cancer from spreading, and decrease melanoma metastasis.¹⁰ Modified citrus pectin is a form of fruit fiber, like the apple pectin used to make jam, in which the molecules have been broken down into smaller molecules so that they can move across the intestinal lining and into the bloodstream.¹¹ Modified citrus pectin seems to prevent cancer growth by surrounding the galectins on the surface of cells. Galectins help cells connect to each other, and cancer cells have more galectins than normal cells, which allow them to spread the cancer.¹²

Limonene is a substance found in the peel of citrus fruits, and is being tested for actions against cancer. It is thought to block proteins that stimulate cell growth and reproduction, thus protecting against cancer, shrinking tumors, and slowing tumor growth. A concentrated form of limonene has been found to shrink breast cancers in animals.¹³

Codonopsis (*Codonopsis pilosula, dang shen*)

Codonopsis is typically administered as a less expensive, milder substitute for Asian ginseng. It contains volatile oils, polysaccharides, insulin, saponins, glucosides, and resins. While its uses are similar to those of Asian ginseng, many practitioners consider it better than Asian ginseng for building the blood. Laboratory experiments have shown that codonopsis may enhance phagocytosis of the reticuloendothelial system, thus improving immune system function. Research has also demonstrated that codonopsis increases respiratory rate, and red blood cell and hemoglobin counts.¹⁴

Coptis (*Coptis chinensis, huang lian*)

Coptis is a dark yellow herb that contains berberine, among several alkaloids. Coptis is considered one of the strongest antibacterial herbs and is used in the treatment of dysentery, gastroenteritis, cholera, respiratory tract infections, ear, nose, and throat infections, mouth sores, and skin infections. Due to its bitter taste, it is usually administered in tablet or capsule form.

Cordyceps (*Cordyceps sinensis, dong chong xia cao*)

Cordyceps, also known as caterpillar fungus, is a tonic herb known for its ability to increase vitality, clear the lungs, and improve endurance. In Chinese medicine terms, cordyceps is said to nourish the kidney yin and yang and to protect the lungs. Today, cordyceps is used to treat respiratory conditions, to support patients undergoing chemotherapy and radiation treatment, and to treat impotence, as well as hepatitis, kidney failure, diabetes, and chronic fatigue. Cordyceps has also been used to help people recover from debilitating illness, and to boost athletes' performance.

Research shows that cordyceps contains L-tryptophan and other amino

acids. It stimulates interferon activity, inhibits bacteria and hepatitis B virus, enhances the function of the adrenal cortex, increases respiratory muscle performance, and calms the nervous system by balancing the hypothalamus/pituitary axis. It also increases the production of ATP, the body's energy storehouse molecule, by as much as 50 percent. Cardiovascular benefits include increased cardiac output and decreased platelet aggregation. Cordyceps is used in Chinese hospitals and clinics for chronic bronchitis, asthma, congestive heart disease, and tuberculosis and other respiratory conditions, and to improve a patient's tolerance for chemotherapy and radiation. Studies in China have shown that patients taking cordyceps have less coughing and wheezing, have fewer asthmatic symptoms, and catch fewer colds. Studies at Cornell University in New York found that cordyceps extract counteracted the effects of immune-suppressing chemotherapy drugs on T-helper cells, decreasing pain and fatigue, and in some cases, shrinking tumors.

Cordyceps is traditionally taken both as a tonic food and as medicine. It may be prepared with chicken, duck, or pork, boiled as a tea, or taken in pill form. Be careful with raw cordyceps packets found in Chinatown; lead has been inserted into the picked fungus before drying to bulk up the weight. It's best to buy dry extract from suppliers specializing in Chinese medicine. The general dosage is 1 to 3 g. of extract per day. For maximum absorption, it should be taken on an empty stomach, but if intestinal gas or bloating is observed, take it with meals. General response time is two to six weeks.

Coriolus (*Coriolus versicolor*, *yun zhi*)

Coriolus is a mushroom commonly called the "turkey tail" in North America for its brown and gray variegated coloring. In Chinese medicine, coriolus is used to dispel dampness, reduce phlegm, treat pulmonary infections, and support liver health. Coriolus is extremely popular in China and Japan. In fact, in Japan, the government approved its coverage by health insurance, and it is used extensively there for people receiving chemotherapy and radiation.

More than 400 clinical studies have demonstrated that coriolus polysaccharide extracts have immune-modulating and antitumor effects. When given as an adjuvant during conventional therapy for cancer, coriolus has significantly increased survival rates. Japanese research shows that coriolus extract has antitumor effects and stimulates natural killer (NK) cells. Used in conjunction with chemo and radiation therapy, coriolus has been found to be instrumental in helping increase cancer survival rates. Coriolus also stimulates the production of killer T cells and tumor necrosis factor (TNF), and activates macrophage function. Coriolus is also used as an adjunct for hepatitis and lung infections.

In a study published in *Lancet*, a group of 262 gastric cancer patients who underwent gastrectomy followed by chemotherapy were randomly divided into two groups. The group that was placed on coriolus during chemotherapy had a survival rate of 73 percent as opposed to 60 percent for the group that underwent chemotherapy alone.¹⁵ Another study was conducted with 185 patients with stages I, II, or III non-small cell lung cancer who were treated with radiotherapy. Those with stages I or II who were administered coriolus had a 39 percent five-year survival rate as opposed to the 22 percent and 16 percent survival

rates, respectively, of patients of the same disease stages who had not received coriolus. Stage III patients who took coriolus had a 22 percent survival rate versus none for the non-coriolus group.¹⁶

Cancers reported to respond to coriolus include stomach, uterine, colon, lung, colorectal, prostate, breast, and liver. In the overall treatment of cancer, coriolus seems to be most beneficial when used as an adjunct to conventional therapeutic regimens. Researchers suggest that coriolus appears to counteract the immune suppression of the conventional therapies and the toxic processes of cancer proliferation. Ongoing research shows that coriolus also has anti-viral activity, and appears to be effective against HIV infection. Additionally, animal studies indicate that coriolus seems to have cholesterol-lowering effects, as well as diuretic and mild tranquilizing effects.

Deer antler (*Cornu cervi parvum* (pharmaceutical) or *Cervus nippon* (zoological), *lu rong*)

Deer antler – along with its extracts, such as pantocrine – is considered one of the strongest tonic herbs, and is particularly good for seniors. It is traditionally used to increase strength, build blood, heal fractures, and eliminate pain. Laboratory experiments have demonstrated that deer antler and its extracts increase oxygen uptake, increase red and white blood cells, and promote the healing of wounds and fractures.

Antler dosage should always start low, increasing over time if tolerance is good. In Chinese medicine, deer antler is considered to be very warming, and too much can cause increased body temperature, headache, bleeding, and digestive disorders. Antler is contraindicated for patients who have heat signs such as elevated body temperature, afternoon fevers, or feeling warm when others are not. Some practitioners consider antler to be contraindicated for children and adolescents. Use under professional supervision. Because it is so expensive and prone to spoilage, deer antler is usually taken as a pill or alcohol extract.

Echinacea (*purple coneflower*, *Echinacea angustifolia/purpurea/pallida*)

Echinacea is considered to be an immune stimulant because it increases the body's ability to destroy bacteria and viruses. In more than 200 scientific studies, echinacea has been demonstrated to have anti-bacterial, anti-viral, and anti-inflammatory effects. Three species of echinacea are in common use. *Angustifolia* was the most widely used in the U.S. until the 1980s, when *purpurea* became more popular because it is easier to cultivate; therefore, most of the research has been conducted with *purpurea*. *Pallida* is mostly used as a cheaper substitute for the other species.

In a double-blind, placebo-controlled study, *Echinacea purpurea* was administered to 180 patients, comparing two different dosages. Subjects taking 900 mg. per day had statistically significant improvement in symptoms such as stuffy nose, sneezing, sore throat, and headache, as compared to the placebo

group. Interestingly, patients taking 450 mg. of echinacea did not show a significant improvement.¹⁷ Echinacea comes in many forms: solid, extract, tincture, tea, juice, and powder. Echinacea is available by itself, and also with other herbs for broad-spectrum effects. Traditionally, echinacea was not recommended for long-term use.

Eclipta (*Eclipta prostrata*, *han lian cao*)

In Chinese medicine, eclipta has traditionally been thought to nourish the liver and kidney yin, and to cool the blood to stop bleeding. It has been used to treat tinnitus, premature graying of the hair, and various kinds of bleeding. In the Ayurvedic system of medicine, preparations of eclipta are used to treat cirrhosis of the liver. According to modern research, an ethyl acetate of eclipta gave even better protection than silymarin one of the active components in milk thistle, in liver cells exposed to toxins. Leading pharmacological researcher Hildebert Wagner of Germany considers eclipta to be one of the most promising liver protective herbs.¹⁸

Eleuthero root (*Eleutherococcus senticosus*, *ci wu jia*)

Eleuthero root is a distant relative of true ginseng, and considered by traditional herbalists to be much weaker than either Asian or American ginseng. It is most extensively used and researched in Russia, where it is used to help the body adapt to stress and is given to astronauts, athletes, and rescue workers to increase performance. Since 1962, 6,000 patients have been involved in clinical trials in which eleuthero was found to improve mental alertness and work quality with minimal side effects.¹⁹

Forsythia (*Forsythia suspensa*, *lian qiao*)

Known for its bright yellow flowers, forsythia is traditionally used in formulas that detoxify and dispel heat, including *Yin Chao*, a popular Chinese cold remedy. Modern laboratory studies have found forsythia to offer broad-spectrum anti-bacterial effects. It is often used today in formulas for fever, sore throat, carbuncles and other inflammatory skin conditions, swollen lymph nodes, and urinary tract infections. In one case study, eight patients with acute nephritis all experienced reduced edema and blood pressure after taking forsythia as a decoction three times per day before meals.²⁰

Garlic

Garlic is used throughout the world for its anti-microbial properties, and in Asia, it's been used medicinally for several thousand years. And for good reason—garlic offers a broad-spectrum effect against bacteria, viruses, fungus, and parasites. Garlic inhibits a long list of bacteria including staphylococcus aureus

(staph), streptococcus (strep), E. coli, salmonella, citrobacter, klebsiella pneumoniae, and mycobacteria. It also fights fungus, including candida. In addition, garlic kills common and troublesome viruses such as herpes simplex 1 and 2 virus, rhinovirus, vaccinia virus, and vesicular stomatitis. In China, it's been observed that there is less cancer among the populations that consume the most garlic.

The best way to use garlic for its anti-microbial qualities is to crush a whole clove, let it sit for ten to twenty minutes, then add to homemade yogurt or mix with pure water before consuming. In terms of TCM, garlic is considered warming and should be used only with caution if heat signs are present. Furthermore, some clients have digestive intolerance to garlic. General therapeutic dosage is one to three cloves per day.

Ginseng (*Panax, American, eleuthero, codonopsis*)

The three popularly used species of ginseng are Asian ginseng (also called *panax ginseng*, ren shen), American ginseng (*panax quinquefolium*, xi yang shen), and tienchi (*notoginseng*, san qi). Common substitutes for ginseng include eleuthero, also known as Siberian ginseng (*eleutherococcus senticosus*, ci wu jia), and codonopsis (dang shen).

American Ginseng (*Panax quinquefolium l., xi yang shen*)

American ginseng typically grows on the east coast of Canada and the U.S. It has an anti-stress effect similar to that of Asian ginseng, with several important differences. First, while Asian ginseng is considered warming in TCM, American ginseng is cooling, and so more suitable for patients who are physically robust, and have symptoms like afternoon fevers, dry cough, and digestive disorders. It is usually more appropriate for children because they're generally more active, yang, and warm. It's also more effective for diabetes. American ginseng's mild taste makes for a better beverage than Asian ginseng, but vials and pre-made teas containing any form of ginseng may also contain a lot of sugar, honey, or even artificial sweeteners, which is why I don't suggest "instant" forms of ginseng. In Chinese hospitals, patients drink American ginseng infused in hot water throughout the day, along with their other herbal decoctions.

Asian Ginseng (*Panax ginseng, ren shen*)

Asian ginseng has a special place in the Chinese pharmacopoeia. The name *panax* is derived from the Greek word for "all healing," as in *panacea*. Asian ginseng has special properties for rescuing the dying by preventing heart collapse, tranquilizing the spirit, and generating fluids. In TCM, Asian ginseng is a general tonic for "invigorating the primal qi," and is used in many ancient prescriptions for a multitude of conditions. Ginseng is not, however, by itself,

good for the same multitude of conditions, and this creates a misunderstanding. Asian ginseng's benefits vary depending on the herbs it's combined with. Asian ginseng is particularly good for people of advanced age or in a debilitated state. It is used in formulas for general weakness, fatigue, anemia, diabetes, chronic fatigue syndrome, fibromyalgia, impotence, and infertility.

Wild ginseng is most revered, and it is exceptionally expensive, easily running several thousand dollars for a few grams. Even cultivated ginseng can cost several thousand dollars per pound. There are various grades of ginseng, depending on the growing region, as well as the size and appearance of the root. Traditionally, only the roots were used, but scientific experiments have shown that leaves, flowers, and stems all have medicinal value, but because not much is known about their use, they are not recommended for general consumption. A further distinction is made depending upon how the ginseng is prepared. For example, white ginseng is prepared simply by drying the roots after removing the outer layer, and is considered neutral and moistening. Red ginseng is made by steaming the root, giving it a reddish brown appearance, and is considered warming. Tienchi (panax notoginseng), a relative of ginseng called *san qi* in Chinese medicine, is primarily used to increase blood circulation, especially in the treatment of injuries due to trauma, surgery, or cancer.

Asian ginseng enhances phagocytosis and nonspecific immunity. Experimental studies have demonstrated that ginseng helps the body adapt to stress, and can reactivate the pituitary and adrenal systems. In animal experiments, ginseng has been shown to stimulate protein synthesis, and to suppress the growth of cancer cells. Ginseng enhances phagocytosis of the reticuloendothelial system, increases erythrocytes, hemoglobin, and leukocytes, and protects against radiation damage.²¹ A survey of more than 1,800 patients at a hospital in Seoul, Korea, found that people who consumed ginseng were less likely to have cancer. Animal studies show ginseng and some of its constituents inhibit the growth of ovarian cancer cells, lung tumors, and liver tumors.²²

Asian ginseng contains trace amounts of vitamins, amino acids, enzymes, and saponin glycosides termed ginsenosides. At least thirty different ginsenosides have been identified by Chinese, Japanese, and Korean researchers. Although in the West one can find ginseng products advertised for their "ginsenoside" content, these products are rarely used by doctors of TCM, who prefer to make tea or concentrates of the whole plant. In fact, some of those ginsenoside products are made from the weaker leaf.

Asian ginseng is not traditionally used for children, unless they are exceptionally weak. It is contraindicated for excess conditions such as fever, irritability, facial flushing, nosebleeds, and digestive cramping and bloating. It is also not traditionally used for people with parasitic infections. Ginseng should not be used along with other stimulants, such as caffeine.

Goldenseal

Known as "king of the mucous membranes," goldenseal has been traditionally used as a wash for eye conditions, and as an antiseptic, astringent, and anti-inflammatory for the mouth, sinuses, throat, lungs, digestive tract, and skin. Goldenseal contains berberine, which has anti-bacterial, anti-fungal, and anti-

parasitic effects. It is generally recommended that goldenseal be taken for short periods of time—for most cases, using goldenseal for longer than ten days is inappropriate. Dosage is 1,000–3,000 mg per day. Contrary to popular belief, goldenseal does not mask the presence of illegal drugs.

Green Tea

Next to water, tea is the most popular beverage in the world, and for good reason, green tea has a long list of health benefits. Tea comes from *camellia sinensis*, a shrub native to Asia. Unlike black or oolong tea, green tea is not fermented, and so is cooler in nature, and better for people with inflammation or heat symptoms.

Tea is rich in powerful antioxidant flavonoids called catechins, which are very well absorbed by the body compared with other flavonoids. Catechins have been shown to inhibit certain cancers, improve blood flow in the cardiovascular system, and reduce LDL cholesterol oxidation. In addition, recent research has shown the catechins in green tea to be thermogenic, helping dieters shed fat, according to research published in the December 1999 issue of the *American Journal of Clinical Nutrition*. Other new research shows that green tea catechins are strong vasodilators, increasing blood flow.

Green tea may be good for diabetics, because it lowers serum glucose levels by inhibiting the starch-digesting enzyme amylase, so that starch is absorbed more slowly, and insulin levels decrease. Diphenylamine, a compound found in green tea, also seems to lower blood sugar. Green tea has been shown to lower intestinal fat absorption as well. Green tea also raises brain levels of serotonin and dopamine, which control both the appetite and satiety response, as well as mood.

Laboratory experiments have demonstrated that constituents of tea reduce the growth of cancer cells and the growth of certain tumors. A lowered incidence of stomach cancer has been observed in populations that drink green tea regularly. Additional studies suggest that green tea may also reduce the risk of colon and pancreatic cancer.²³ In a study of 8,552 Japanese men and women over the age of forty, the people who drank tea regularly had a lowered incidence of cancer.²⁴ In a seven-year study of 472 women with breast cancer, increased green tea consumption was associated with decreased numbers of lymph node metastases in pre-menopausal women with stage 1 and 2 breast cancer. Longterm consumption of more than five cups of tea daily was also significantly associated with decreased cancer recurrence in stage 1 and 2 patients who were in remission at the time of the follow-up study six years later. Green tea showed no effect in stage 3 breast cancer patients.²⁵

Tea's anti-inflammatory effects are similar to those of COX-2 anti-inflammatory drugs. Black and green tea both deactivate viruses, metabolize fat, improve artery function, and inhibit cancer growth. According to researchers at Rutgers University, a compound in black tea called TF-2 caused colorectal cancer cells to "commit suicide." Normal cells were unaffected according to Rutgers researcher Kuang Yu Chen, Ph.D. Tea consumption has also been tied to a lower risk of stomach, colon, and breast cancer.²⁶ Tea contains theanine, an amino acid that may reduce the toxicity of chemotherapy. Theanine improves

anti-tumor activity in bone marrow and in the liver, and protects against ovarian cancer.²⁷ In addition, tea helps prevent DNA damage to the skin and helps minimize UV effects, which could minimize the risk of skin cancer and aging.

How does tea work? Green tea has a constituent called polyphenols, which are potent antioxidants. Green tea's polyphenols appear to detoxify cancer-causing agents, suppress the activity of carcinogens, and inhibit the formation of cancer-causing compounds such as nitrosamines.²⁸ Lab studies show that green tea extracts inhibit the growth of breast cancer cells.²⁹

Green tea is best taken in tea form to get the highest dose with minimal additives and processing. Three cups per day is an average suitable dose, in place of less helpful caffeine-containing beverages like coffee or soda. As with any caffeinated product, reduce the dosage if nervousness, anxiety, or insomnia occur. Green tea polyphenols are also available in supplement form. Typical dosage is 200–500 mg daily.

Isatis (*Isatis tinctoria*, *da qing ye* and *ban lan gen*)

The isatis plant is the source of indigo, and has two medicinal parts: the root, known as *ban lan gen* in Chinese, and the leaf, known as *da qing ye*. The root is more widely used in the U.S. Isatis is traditionally used to clear heat and fever, decrease inflammation, and detoxify. It is widely used for a variety of bacterial and viral infections including influenza, hepatitis, mononucleosis, and chronic fatigue syndrome. Isatis root contains indoxylbeta-glucoside, indirubin, as well as resins and polysaccharides.

Laboratory studies have demonstrated isatis' anti-inflammatory, phagocyte-enhancing and fever-reducing properties, and its ability to inhibit a long list of pathogens, including: staphylococcus aureus, diplococcus pneumoniae, alpha streptococcus, haemophilus influenzae, E. (escherichia) coli, salmonella typhi, and shigella dysenteriae.

Clinical studies confirm isatis' healing properties. In one study of 326 cases of upper respiratory infection, the herb decoction was considered effective in all cases.³⁰ In the treatment of 300 cases of acute bacillary dysentery and gastroenteritis, fever subsided after one day of taking the decoction, and stool examination was normalized within five days.³¹ In 43 cases of mononucleosis, subjective symptoms improved significantly in three to five days, along with a reduction in fever and a decrease in abnormal lymphocytes. According to researchers, isatis was more effective in young children than adults.³² Isatis was also judged to be 76.4 percent effective in case reports on the treatment of viral skin conditions such as herpes simplex and herpes zoster.³³

Isatis leaf contains similar constituents to the root, and acts against a similar list of pathogenic organisms in lab tests (see above). It is traditionally used for its heat-clearing, fever-reducing, and anti-inflammatory effects. Today it is used as a remedy for fever, pharyngolaryngitis, and carbuncles, as well as skin and digestive tract ulcerations. Isatis preparations are well tolerated, though they should not be used with low body temperature or subjective complaints of cold without fever, and should be used cautiously with diarrhea.

Licorice (*Glycyrrhiza uralensis, gan cao*)

Licorice is called “sweet root” by many cultures, and Chinese herbalists call it the “great harmonizer.” Licorice is traditionally used in Chinese formulas as a harmonizing ingredient, and one that boosts spleen qi. In the West, licorice is primarily used as a sweetener and for treating ulcers. In regards to immunity, licorice has been shown to have anti-inflammatory, anti-tumor, antiallergic, and liver-protecting effects. Licorice increases the production of interferon and NK cell activity.

Researchers in China and Japan consider the component glycyrrhizia to be central to licorice’s immune-regulating effects. Laboratory reports have shown that licorice enhances phagocytic function, induces interferon, anti-allergic, anti-inflammatory, and possibly tumor-inhibiting effects. Licorice prolongs the action of cortisol³⁴ by stimulating the adrenal cortex. Licorice is thought to transform toxins in the liver into insoluble waste products, thus improving liver function. Chinese studies have demonstrated its ability to reduce liver pain and hepatomegaly in hepatitis patients.

Licorice may raise blood pressure in susceptible individuals, especially at doses of more than 5 g. per day. High doses of licorice have been shown to produce edema, headache, and upset of sodium/potassium levels. For these reasons, it is important to use licorice with supporting herbs to mitigate potential side effects. Professional guidance is recommended if you are consuming licorice by itself for longer than three months.

Ligustrum (*Ligustrum lucidum, nu zhen zi*)

Ligustrum is a small fruit that contains oleanolic acid and oxalic acid, along with other constituents including syringin, nueshenide, linolenic acid, palmitic acid, and oeuropenin. In Chinese medicine, ligustrum is known as a yin tonifying herb and is used in formulas for infertility, backache, dizziness, ringing in the ears, and blurred vision. Because it increases white blood cell production, ligustrum is used in China to prevent and treat leukopenia caused by chemotherapy and radiotherapy.³⁵ In a clinical evaluation at MD Anderson Hospital in Houston, Texas, ligustrum improved subjects’ tolerance for chemotherapy and radiation. Ligustrum leaf has been studied in China to treat bronchitis.

Lonicera (*Lonicera japonica, jin yin hua*)

Known as honeysuckle in the U.S., lonicera’s Chinese name *jin yin hua* translates as “gold and silver flower.” Its anti-bacterial and anti-viral effects make lonicera one of the chief ingredients in *Yin Chao* – a well-known cold remedy – and it is widely found in herbal formulas used to treat colds, flus, upper respiratory infections, conjunctivitis, mastitis, tonsillitis, pneumonia, dysentery, appendicitis, fever, nasal infections, carbuncles, ulcerative colitis, hepatitis, and cervical infection. Lab experiments have shown lonicera to have a strong anti-

bacterial effect against salmonella typhi, pseudomonas aeruginosa, staphylococcus aureus, and staphylococcus pneumoniae.

Lycium (*Lycium chinense*, *gou qi zi*)

Lycium is a bright red fruit that has traditionally been used by itself as a food, or with other herbs, as a longevity tonic. In Chinese medicine, it is used to nourish the blood, improve function of the eyes, and when combined with other kidney tonics, treat a variety of age-related conditions. In lab experiments, lycium polysaccharides enhanced macrophage, T- and B-lymphocytes, and NK cells.

Lycium tastes sweet, so it can be taken by itself, or combined with foods, or in decoctions or pills. It is generally well tolerated, though it may cause digestive symptoms in some patients. The bark of the lycium tree—*di gu pi* in Chinese—is used to reduce night sweats, inflammation, and heat.

Marijuana

Marijuana has been used since biblical times, though today it is illegal in many countries. Some states, including California, have passed medical marijuana laws that enable citizens to use marijuana for medical purposes without fear of arrest. As one experienced doctor attests, “Working with AIDS and cancer patients, I repeatedly saw how marijuana could ameliorate a patient’s debilitating fatigue, restore appetite, diminish pain, remedy nausea, cure vomiting, and curtail down-to-the-bone weight loss.” Synthetic THC, the active ingredient in marijuana, is available in the prescription drug dronabinol (Marinol), which is approved by the FDA to treat nausea and vomiting associated with chemotherapy, and to treat appetite loss and weight loss in people with AIDS. Many cancer and HIV patients, however, have found that smoked marijuana works faster and is more effective than the synthetic version. Smoked marijuana also allows the patient to control the dose.

Is marijuana a cure-all? No. While it may have promise as a medicine for people with AIDS, cancer, and chronic pain, most people with immune disorders should use it cautiously for a number of reasons. Laboratory experiments have shown that the component chemicals in marijuana reduce resistance to bacterial, protozoan, and viral infection. Cannabis plants may be contaminated by fungal spores, increasing the risk of fungal infection. Marijuana use can contribute to birth defects if used during pregnancy, change the balance between male and female sex hormones, reduce sperm counts, and cause irregular menstruation. It may also cause symptoms of anxiety including overreaction, apprehension, sweating, tremors, and shakes. Additionally, marijuana can increase the heart rate and disturb heart rhythms. Marijuana smokers predispose themselves to lung cancer, sinus problems, coughing, and sore throats. Smoking marijuana is associated with chronic bronchitis, coughing, phlegm production, shortness of breath, and wheezing, according to a study published in the *Journal of General Internal Medicine*,³⁶ which based its results on 6,728 questionnaires completed by adults twenty to fifty-nine years of age.

Marijuana may also increase susceptibility to infection and disable the immune system. Other side effects of marijuana use include impaired coordination, judgment, and short-term memory, mood swings and irritability due to low blood sugar reactions, and blunted emotional development, especially in teenagers and preteens, which leads to coping problems. It is estimated that two million adult Americans are heavy marijuana users.

How does it work? Marijuana produces mild euphoria by releasing dopamine. It typically lasts longer than alcohol. Marijuana is much stronger now than it was in the 1970s. Today's marijuana contains up to 14 percent of the active ingredient THC (tetrahydrocannabinol), compared to 2–4 percent in the past. This increase in potency produces a longer, stronger high, and also a greater chance for addiction. THC lodges in the fatty cell walls of the brain and lingers in the body longer than other drugs and alcohol. Some people who are dependent on marijuana go into withdrawal right away; others notice withdrawal as it gradually clears the body. In order to break a habit with any drug, it is important to look at the reasons you use it. Do you use it to relax, do you use it for pain relief, or does it give you more energy? While smoking marijuana occasionally may not be any more harmful than occasional alcohol use, if your use is daily or even weekly, or if certain activities are just not the same without marijuana, it makes sense to get treatment. Further information can be found at www.marijuana-anonymous.org.³⁷

Milk Thistle

Milk thistle has been used for hundreds of years to protect the liver, and also to increase breast milk. Silymarin, milk thistle's most important liver-protective constituent, has been shown to increase the glutathione content of the liver, which in turn increases the liver's detoxifying capacity. In addition, it has antiinflammatory, antioxidant, and immune-modulating capabilities. Today milk thistle extracts, standardized to contain 80 percent silymarin, are used in Europe and North America to prevent liver damage and rebuild new liver cells. Milk thistle extract is also often recommended as a treatment for psoriasis.

In clinical studies, milk thistle extracts have produced clinical improvements in treating hepatitis, cirrhosis, and alcohol- and chemical-induced liver damage. In a study of 29 patients with viral hepatitis, those who took milk thistle showed decreased liver enzymes and bilirubin levels, when compared with a placebo group.³⁸ In a study of patients with chronic hepatitis, subjects taking 420 mg. of silymarin for three to twelve weeks experienced a reversal of liver cell damage and a decrease in liver enzymes. Subjects also reported improved appetite, digestive function, and energy levels.

Typical dosage is 140–160 mg. of silymarin three times daily, or three 200 mg. tablets containing 80 percent silymarin. Milk thistle extracts are generally safe for long-term use. If loose stools are noticed, decrease the dosage, and then increase it again when stools normalize.

Pau D'Arco (*Lapachol*)

Most popularly used as a treatment for intestinal and vaginal candida, Pau D'Arco is a South American herb that has traditionally been used to treat infections, digestive disorders, and skin disorders. In modern experiments, it has been found to have antibacterial, anti-viral, and anti-fungal properties. It has also been studied for its antineoplastic or tumor-reducing properties.

Take as a tea, two to eight cups a day. Boil 1 tsp. of Pau D'Arco for ten to fifteen minutes, and let it steep for ten minutes or longer. For vaginal candida, vaginitis, and cervicitis soak tampons in the decoction. Change at least every twenty-four hours, until the condition is resolved.

Phellodendron (*Phellodendron amurense* or *Phellodendron chinense, huang bai*)

Phellodendron contains berberine, which gives it its bright yellow color. Other plants containing berberine include goldenseal, coptis, and scute. Phellodendron is traditionally used for its heatclearing effects. It is widely found in Chinese formulas for inflammatory conditions, skin infections, jaundice, fever, and hot flashes. Today in China, phellodendron is used in herbal formulas as a throat spray and in injectable forms.

In the laboratory, phellodendron has been found to inhibit many bacteria including staphylococcus aureus, streptococcus hemolyticus, E. coli, salmonella typhi, shigella, and mycobacterium tuberculosis. It also has an anti-fungal effect against trichomonas vaginalis, microsporum audouinii, and epidermophyton floccosum.

Reishi (*Ganoderma lucidum, ling zhi*)

Sometimes called the "mushroom for immortality," ganoderma has traditionally been used as a sedative and a Qi and blood tonic, and was used by monks to promote calmness, memory, and a meditative life, and to treat chest and heart conditions. Today, reishi is widely used to support the immune system in cancer patients, to protect the liver, to reduce cholesterol, blood glucose, and insomnia, and to treat hepatitis, bronchitis, cardiovascular disease, and autoimmune diseases including myasthenia gravis.

Clinical studies show reishi to improve symptoms of chronic bronchitis, and that it is particularly effective for cold and damp symptoms. It's also been shown to increase T-lymphocyte counts in patients with leukopenia caused by radiation and chemotherapy, and to lessen the side effects of these therapies.³⁹

Under the microscope, ganoderma preparations promote regeneration of healthy liver cells and reduce inflammatory infiltration of hepatic lobules in mice. In the lab, ganoderma polysaccharides have been shown to increase lymphocytes both in normal spleen cells and in spleen cells suppressed by hydrocortisone. Lab experiments have also shown that ganoderma extract has anti-tumor properties, inhibiting a type of sarcoma and other tumor cells in mice. In

the market there are two types of reishi, red and black. By far the most research has been done on the red reishi. We also recommend products made from the whole mushroom as opposed to the mycelium.

We don't recommend reishi tinctures because reishi is poorly soluble in alcohol, so tinctures don't give you an adequate dosage of active ingredients. Occasionally people get a rash from using reishi. If this occurs, stop taking it.

Rhubarb

Rhubarb is used as a laxative in both Chinese and Western herbology, but in TCM, it is also used to treat infection. Experimental studies show that rhubarb inhibits staphylococcus, streptococcus, typhoid, dysentery bacillus, and diphtheria bacillus. It also inhibits fungus, influenza virus, amebic dysentery, and trichomonas vaginalis.⁴⁰ In addition, rhubarb assists in removing endotoxins, the toxins created by harmful bacteria. According to Chinese experiments, rhubarb reduces platelet aggregation and bronchial spasm. Rhubarb is rarely taken by itself, and should be used as part of an herbal formula dispensed by a trained practitioner.

Schizandra (*Schizandra chinensis*, *wu wei zi*)

In Chinese, schizandra is known as *wu wei zi*—meaning “fiveflavored fruit”—because it contains the five tastes of Chinese medicine: bitter, sweet, salty, sour, and pungent. In TCM, schizandra has been used as an astringent for the lungs and kidneys to reduce phlegm, sweating, incontinence, and coughing. It is traditionally used for nervous exhaustion, fatigue, insomnia, depression, diarrhea, and forgetfulness. Today, schizandra is considered to be an adaptogen that helps the body cope with stress, and is also used for its liver-protecting effects, especially in treating hepatitis.

Chinese studies including thousands of cases of hepatitis have shown specially processed schizandra to lower SGPT levels, and increase liver and glycogen synthesis.⁴¹ One study noted that SGPT levels tended to rise six to twelve weeks after treatment was discontinued, which is why schizandra should not be discontinued suddenly, but rather, the dosage should be tapered off gradually. Animal studies have confirmed the liver-protecting effects of schizandra.⁴²

Since the 1950s, Russian research has focused on schizandra's adaptogenic properties, which help the body adapt to stress, and its positive effects on mental and physical performance. For example, telegraph operators taking schizandra (5–10 mg./kg.) were found to increase productivity by 22 percent, with less fatigue.⁴³ In a study of 59 flight attendants taking schizandra, the experimental group did not notice an increase in heart rate or blood pressure while flying, as the controls did. And in a study of soldiers and athletes, “physical work capacity” was increased after twenty-one days of treatment, while it was unchanged in the placebo group.

To have an effect at reducing liver enzymes, schizandra must be specifi-

cally processed. For other indications, a standard preparation is suitable. Schizandra may aggravate peptic ulcers or stomach acidity, so it should be discontinued if this effect is noticed. It is also traditionally avoided in the early stages of colds, flu, and rashes, and not used with the Chinese herb *yu zhu* (polygonumodoratum).

Scute (*Scutellaria baicalensis*, *huang qin*)

Scute is found in several ancient Chinese herbal prescriptions, including *Xiao Chai Hu Tang*. It contains berberine, is considered bitter and cold, and is traditionally used in formulas for liver disorders, fever, cough, conjunctivitis, hypertension, and carbuncles. In laboratory experiments, scute has been shown to inhibit many viruses and to have anti-inflammatory broad-spectrum antibacterial, anti-allergy, diuretic, and fever-reducing effects. Baicalein, a constituent of scute, inhibits cancer cell multiplication.

Clinical studies in China have shown it to be useful in treating upper respiratory infections and bronchitis, and it has been used in Chinese hospitals to treat acute and chronic hepatitis, pancreatitis, and cholecystitis (gallbladder infection). Because scute is a cooling herb, it should be used cautiously with diarrhea and digestive conditions. A related herb, *Scutellaria barbata*, is used in Chinese clinics to treat cancer.

Shiitake

Shiitake is a medicinal and gourmet mushroom used for broadspectrum immune support. In Japan, a shiitake extract called lentinan is used in injectable form. Shiitake appears to work by improving the body's immune response, instead of attacking tumors, viruses, or bacteria directly. Laboratory studies have shown shiitake to increase natural killer (NK) cells; tumor necrosis factor, which helps fight tumors; and interleukin-1 and -2, which stimulate T cells.⁴⁴ Although shiitake extracts are available, I recommend consuming three to four large shiitake mushrooms daily in soup or tea form. Simmer for fifteen minutes—adding ginger and dates if desired for more flavor—then drink the broth and eat the mushrooms.

Smilax (*Smilax glabra*, *tu fu ling*)

Smilax is traditionally used to treat urinary tract infections, tumors, gout, and skin conditions. Smilax works by binding endotoxins, which aggravate the inflammatory process. In a study of 92 psoriasis patients, extracts of smilax greatly improved conditions in 62 percent of patients.⁴⁵ Despite attempts to market smilax as a natural testosterone supplement, there is no evidence that it is a sexual or bodybuilding aid.

Soy

Soy is high in isoflavones, a group of plant hormones, or phytoestrogens, similar to, though weaker than, human estrogen. Isoflavones offer a number of well-documented health benefits including reducing arterial plaque, thus reducing the risk for heart disease and stroke, reducing osteoporosis by stimulating bone formation, and relieving menopausal symptoms.

Commonly known for its usefulness in women's health issues including menopausal symptoms and osteoporosis, soy is currently being studied for its ability to prevent cancer, particularly prostate cancer. In an Australian study of 29 men with prostate cancer, patients who ate 2 oz. of soy grits a day saw a quick improvement in PSA (prostate-specific antigen) levels, which are used to screen for and to track prostate cancer.⁴⁶

While soy has also been studied for its effect on breast cancer, these findings have been more mixed. High estrogen blood levels are associated with a higher risk for breast cancer, so by competing for space at estrogen receptors, the weaker soy isoflavones block the stronger human version, and thus lower estrogen blood levels. However, while some studies show isoflavones to have a protective effect against breast cancer, others suggest they may increase cancer risk.

St. John's Wort

Although chiefly known today as an herbal antidepressant, St. John's wort was traditionally used as a topical and internal remedy for nerve pain. In Europe, St. John's wort is a folk treatment for wounds, burns, and inflammation. St. John's wort contains hypericin, hyperiform, flavonoids, and essential oils. Lab studies have demonstrated the anti-viral effects of hypericin and pseudohypericin against herpes, influenza, and vesicular stomatitis virus.⁴⁷

Look for a whole-herb, broad-spectrum extract that contains both hypericin and hyperiform. Typical dosage is 1 to 3 g. per day. Due to its cooling nature, St. John's wort can cause diarrhea and other digestive complaints. St. John's wort may also cause photosensitivity, so remember to wear sunscreen and a hat if you are outdoors while taking it.

Tang kuei (*Angelica sinensis*, *dang gui*)

Although known as a woman's herb in the U.S. because of its menstrual regulating effects, tang kuei is used in Chinese formulas for immunity, respiratory, and circulatory conditions, as well as in trauma, anti-spasmodic, and pain-relieving formulas. It is traditionally used for its blood-building and circulation-improving properties.

Tang kuei contains vitamin B12, biotin, folic acid, and volatile oils. In laboratory studies, it has been used by itself and in traditional formulas such as *Si Wu Tang*, and has demonstrated nonspecific immunological function.⁴⁸ Tang kuei and astragalus have proved useful in the treatment of immune pancytopenia and thrombocytopenic purpura. In one study, tang kuei tablets provided

pain relief in twenty-three cases of herpes zoster. Ear acupoint injections of tang kuei have proved useful for skin diseases including hives, eczema, neurodermatitis, vitiligo, rosacea, and alopecia.

Tang kuei has a laxative effect, and may cause indigestion, especially if taken by itself. A literature review reveals that tang kuei does not have an estrogenic effect, although it has that reputation.

Viola (*Viola yedoensis, zi hua di ding*)

Viola was traditionally used in formulas for feverish conditions such as red eyes, painful throat, and mumps, and topically and internally for infections like carbuncles, boils, and breast abscess. It has also been used in both European and Chinese folk medicine as a cancer treatment. Viola has been shown to have antibacterial and anti-viral effects in laboratory experiments. For example, a 1988 study of twenty-seven herbs showed viola to have the strongest inhibitory effect against HIV in vitro. In Chinese medicine terms, viola clears heat, eliminates toxins, and relieves inflammation. Classical formulas that treat carbuncles, furuncles, and malignant lesions often have viola as one of their main ingredients. Viral infections such as mumps may also be treated with viola.

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