

Harmony Remedies: An Overview of Adaptogens

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The idea of using tonic remedies to restore balance and health in a person is an ancient idea. The word and concept of an “adaptogen” is a relatively new way of describing a type of remedy commonly found in traditional Chinese (Qi tonic), African (Manyasi), Tibetan, Ayurvedic (Rasayana), and Cherokee medicine. The actual word adaptogen was first used by a Soviet scientist, Dr. Nikolai Lazarev, who under grants from the military, was researching substances which produced a “state of nonspecific resistance (SNIR)¹¹”. The idea was to find ways to enhance the productivity and performance of soldiers, athletes, and workers without using dangerous stimulants. Much of the early research into adaptogens was done by Dr. I.I. Brekhman who, in the late 1950’s, studied Panax ginseng. Looking for a less expensive and more available substitute, he changed his focus to a native Russian shrub, Eleutherococcus senticosus. His first monograph of this now popular herb (Siberian Ginseng, Eleuthero) was published in 1960.

In 1969 Brekhman and Dardymov defined the general pharmacological properties of adaptogenic substances. These include¹⁵:

- a.) The substance is relatively non-toxic to the recipient.
- b.) An adaptogen has “non-specific” activity and acts by increasing resistance of the organism to a broad spectrum of adverse biological, chemical, and physical factors.
- c.) These substances tend to help regulate or normalize organ and system function within the organism.

Several theories have been suggested to explain the effects of adaptogenic substances. One theory proposed by Dardymov and Kirkorian⁹ argues that adaptogens function primarily due to their antioxidant and free radical scavenging effects. While their theory is partially accurate, it is inadequate to explain the full effects of these medicinals⁷.

More recent research postulates that adaptogens work primarily by affecting the Hypothalamic/Pituitary/Adrenal (HPA) axis and the Sympathoadrenal System (SAS)⁹. Thus, adaptogens modulate our response to stress (physical, environmental, or emotional) and help regulate the interconnected endocrine, immune, and nervous systems. This re-regulation of a disordered or highly stressed system is achieved by metabolic regulators such as cytokines, catecholamines, glucocorticoids, cortisol, serotonin, nitric oxide (NO), cholecystokinin, corticotrophin-releasing factor (CRF), and sex hormones. This broad array of biochemical activators helps explain why adaptogens also have anti-inflammatory, antioxidant, anxiolytic, antidepressant, nervine, and amphoteric effects as well. So while most or all adaptogens are antioxidants, having antioxidant properties (Green Tea, Rosemary, Cranberry) is not enough to make a substance an adaptogen. This is true of many amphoteric herbs as well. An amphoteric is a substance that normalizes function of an organ or a system within the body. I think of amphetotics as “food for an organ”. Examples include Hawthorn for the cardiovascular system, Fresh Milky Oat for the nervous system, or Helonias for the female reproductive system. All of these herbs are amphoteric, but none of them qualify as adaptogens. Brekhman and Dardymov’s list of physiological actions of adaptogens states that adaptogens help modulate system function and maintain homeostasis. So all adaptogens act as broad spectrum amphetotics to living organisms, but they rarely have a pronounced effect on only one specific organ or system.

Adaptogenic Materia Medica

1. Well-known adaptogens:

Chinese or Korean Ginseng root (*Panax ginseng*)

Red Ginseng root– Sweet, slightly bitter, warm-hot, moist

White Ginseng root– Sweet, bitter, warm, moist

Western Classification: Adaptogen, antioxidant, antiinflammatory, antiasthmatic, cardiogenic, CNS stimulant (mild), immune amphoteric.

Ginseng, especially Red Ginseng, is the most stimulating of the adaptogens. Traditionally it is used in Chinese medicine for older men with deficient kidney yang (impotence, fatigue, BPH, low back pain) or for patients with vanquished qi (CFIDS, CHF). It is a useful part of a protocol for deficient depression, exhaustion, Addison's Disease (with Licorice), deficient insomnia, diabetes, cachexia, immune deficiency allergic asthma (use with Schisandra and Licorice), erectile dysfunction, and it helps prevent or treat leucopenia in patients receiving chemotherapy or radiation for cancer. Recent human studies using Asian Ginseng showed it reduced symptoms of COPD⁵, improved survival times in patients with gastric cancer, and reduced incidence of metastases¹⁴. Overuse of Ginseng in yang (excess) people can cause insomnia, anxiety, increased blood pressure, and irritability.

American Ginseng root (*Panax quinquefolius*) – Bitter, slightly sweet, warm, moist

Western Classification: Adaptogen, antioxidant, antiinflammatory, bitter tonic, immune amphoteric.

American Ginseng is less stimulating/heating than *Panax ginseng*; making it more appropriate for regular use by younger people of both sexes. It is still of a warming (nourishing) nature and is appropriate for fatigue, recovery from pneumonia or bronchitis (especially with a dry cough), CFIDS, asthma, chronic stress with depression or anxiety, and autoimmune diseases of the lungs or GI tract. I find it of great benefit for jet lag, metabolic syndrome, adrenal deficiency, immune depletion, sexual neurasthenia, and deficient insomnia. It is much less likely to over stimulate people than is Asian Ginseng and it is better for yin deficiency conditions (dryness)¹⁷.

Eleuthero root (*Eleutherococcus senticosus*) - Sweet, slightly bitter, neutral

Western Classification: Adaptogen, anticholesteremic, antioxidant, antiinflammatory (mild), immune potentiator, nervine.

Eleuthero (formerly Siberian Ginseng) is less tonifying than the true Ginsengs (*Panax* spp.). It is neutral energetically and so is appropriate for daily use. It is indicated for the "average" American who is overstressed, undernourished but overfed, doesn't get enough sleep or exercise, has dark circles under his or her eyes, a quivering tongue, and contracting/dilating pupils. This description of HPA axis depletion without overt pathology is precisely where Eleuthero is useful. Taken regularly it enhances immune function, reduces cortisol levels and inflammatory response, and it promotes improved cognitive and physical performance. In human studies Eleuthero has been successfully used to treat bone marrow suppression caused by chemotherapy or radiation, angina, hypercholesterolemia, and neurasthenia with headache, insomnia, and poor appetite^{3,6}.

Wu Wei Zi berries/seeds (*Schisandra chinensis*, *S. splenathera*) – Sour, pungent, warm, dry

Western Classification: Adaptogen, antioxidant, antiinflammatory, astringent, antiasthmatic, hepatoprotective, immune amphoteric.

Schisandra berries mildly stimulate CNS activity and can be used with Prince Seng for neurasthenia and exhaustion. It is very useful as part of a protocol for hepatitis B&C (use with Milk Thistle and Turmeric), asthma (with Licorice), and for nervous system disorders including Parkinson's disease, Meniere's syndrome, deficient depression, and adult ADHD. Wu Wei Zi is used in Fu Zheng therapy to support immune function and prevent side effects caused by cancer chemotherapy.

Wu Wei Zi berries/seeds (con't.)

Traditionally, this herb is used to astringe a leaky jing gate (urinary incontinence, leucorrhea, diarrhea, and spermatorrhea) and to reduce excessive sweating.

Dang Shen root (*Codonopsis pilosula*) – Sweet, warm, moist

Western Classification: Adaptogen, gastroprotective, hypoglycemic agent, immune potentiator, nervine

Codonopsis, also known as “poor man’s ginseng” is used in TCM as a mild substitute for Panax. It is a spleen qi tonic and is used for poor appetite, gastric irritation, and/or ulcers, fatigue, and weak limbs. It is also a lung qi tonic and can be used for shortness of breath with a dry cough and frequent respiratory tract infections (use with Prince Seng). Dang Shen is commonly used to strengthen the immune system (cancer, HIV, mononucleosis) and is frequently used in Fu Zheng therapies to prevent side effects from chemotherapy or radiation. It increases hemoglobin levels and the number of red blood cells as well¹⁹.

Licorice rhizome (*Glycyrrhiza glabra*, *G. uralensis*) – Sweet, slightly bitter, warm, moist

Western Classification: Adaptogen, antihistamine, antiinflammatory, antidiuretic, antioxidant, antitussive, antiviral, demulcent, hepatoprotective, immune amphoteric, gastroprotective.

Gan Cao (Licorice) is a versatile and commonly used herb in TCM, Unani-Tibb and European herbal traditions. It is an immune amphoteric and can be useful for autoimmune disorders (Lupus, Scleroderma, Crohn’s disease, R.A.) as well as immune deficiency conditions (cancer, HIV, CFIDS). It strengthens adrenal function and can be used with Panax ginseng for Addison’s disease. It is also useful for allergies, ulcers, elevated cortisol levels, PCOS (with Serenoa and Paeonia), and spasmodic coughs. Excess doses of Licorice can have a hyperaldosterogenic effect (increased retention of sodium and excretion of potassium). Women are more sensitive to this effect than men and patients with hypertension should avoid using this herb on a continual basis.

Ashwagandha root (*Withania somnifera*) – Bitter, sweet, warm, dry

Western Classification: Adaptogen, antiinflammatory, antioxidant, antispasmodic, astringent, immune amphoteric, sedative (mild).

This herb is one of the Rasayana (rejuvenative) herbs of Ayurveda. It is one of the few calming adaptogens and has traditionally been used for anxiety, bad dreams, mild OCD, insomnia, and nervous exhaustion. It acts as an antispasmodic & antiinflammatory and is very useful for fibromyalgia (with Kava and Scullcap), restless leg syndrome, mild Tourette’s syndrome, and osteo-arthritis. It is an immune amphoteric useful for hyper- and hypo-immune conditions. I find it especially useful for autoimmune conditions affecting the muscles and joints such as rheumatoid arthritis, Ankylosing Spondylitis, polymyositis, and polymyalgia rheumatica (PMR). It enhances male fertility (sperm count and sperm motility) and, due to its iron content, it benefits iron-deficient anemia. Ashwagandha also stimulates thyroid function. Studies in mice showed significant increases of serum T3(18%) and T4(111%) after 20 days of use⁸.

Cordyceps fungus (*Cordyceps sinensis*) – Sweet, slightly acrid, warm, moist

Western Classification: Adaptogen, antiasthmatic, antileukemic, antioxidant, hepatoprotective, immune potentiator, nephroprotective, sedative (mild).

The caterpillar fungus (winter insect, summer plant) is one of the more unusual adaptogens. While the parasitized larvae are still available, most Cordyceps is now grown on soybeans. It is used in TCM for deficient kidney yin and yang caused by chronic disease or extremely rigorous labor/athletic training. It improves libido and sperm count, relieves fatigue, anemia, chronic coughs, and bone marrow (erythroid) suppression due to radiation therapy.

Cordyceps fungus (con't.)

Cordyceps also has active antitumor and antileukemic activity (use with Panax notoginseng), it enhances circulation and cardiac output, as well as lung capacity. Cordyceps combined with Nettle Seed and Unprocessed Rehmannia is very useful for treating degenerative kidney disease. In human studies Cordyceps has shown significant benefit for male sexual dysfunction, hyperlipidemia, low platelet counts, allergic rhinitis, tinnitus, and chronic tracheitis³.

2. New Adaptogens

Holy Basil herb (*Ocimum sanctum*) – Pungent, sweet, warm, neutral

Western Classification: Adaptogen, antibacterial, anticholesteremic, antidepressant, antioxidant, antiviral, carminative, expectorant, immune amphoteric.

Tulsi, or Holy Basil, has a long tradition of use in Ayurvedic, Siddha, and the Unani-Tibb systems of medicine. It is considered a Rasayana or rejuvenative medicine and is traditionally used to improve memory, to treat coughs, colds, indigestion, asthma (with Black Pepper), and fatigue. More recent research has shown it reduces excess immune response in allergic asthma and allergies while enhancing normal immune function. In addition, in animal studies, it increases endurance, inhibits ulcer formation, and protects against gamma radiation. In a human trial, Tulsi showed benefits in NIDDM, reducing fasting blood glucose (17.6%) and postprandial blood glucose (7.3%)¹².

Rhodiola root (*Rhodiola rosea*, *R. crenulata*) – Sweet, slightly bitter, cool, neutral

Western Classification: Adaptogen, antiinflammatory, antioxidant, antidepressant, cardioprotective, immune potentiator, nerveine.

Known as Rose Root, Golden Root, or Arctic Root, Rhodiola has a long history of use in Scandinavia, Eastern Europe, and Russia as a rejuvenative tonic. Rhodiola has been an official medicine in the Soviet Union (now Russia) since 1969, as a mild CNS stimulant, memory enhancer, cardiogenic, and immune tonic². In human studies, this root has been shown to be effective for treating mild depression, neurasthenia, nervous palpitations, impaired cognitive function⁴, ADD, CFIDS, erectile dysfunction, amenorrhea, and infertility in women. Due to its cooling nature, Rhodiola is very useful for patients with excess constitutions with hypertension, liver fire rising headaches, and yang insomnia. Traditionally, Rhodiola is used in Tibetan medicine for nourishing the lungs, to increase blood circulation, and for fatigue, altitude sickness, and weakness.

Amla fruit (*Emblica officinalis*) – Sour, sweet, cool, dry

Western Classification: Adaptogen, antioxidant, anticholesteremic, antiinflammatory, astringent, radioprotective, thyroxin inhibitor, diuretic, hepatoprotective (mild), nutritive.

Amla, or Amalaki, is a Rasayana or rejuvenative remedy used in Ayurvedic medicine. A 1999 animal study by N.N. Rege concluded that Amla was not only a useful antioxidant and antiinflammatory, but had adaptogenic activity as well. The extract was shown to protect against biological, physical, and chemical stressors¹². Amla is used clinically for connective tissue disorders (Scleroderma, R.A., Lupus, Ankylosing Spondylitis), to build blood (anemia – use with Ashwagandha), and strengthen bones, capillaries, and the eyes. It also inhibits atherosclerosis, carcinogenesis, and may help slow the degeneration caused by Alzheimer's disease.

Bryonia root (*Bryonia alba*) – Bitter, cold, dry

Western Classification: Adaptogen, antiinflammatory, analgesic/antibacterial, antioxidant, cardiogenic, immune amphoteric.

Usually thought of as a highly toxic plant, Bryonia root has been found to be both an adaptogen and non-toxic if gathered in the spring or autumn.

Bryonia root (con't.)

The summer gathered roots have a very different chemistry and are, as commonly thought, quite toxic. Bryonia (commercially known as Lostak) is available as a tonic remedy in Russia and Eastern Europe. It is used to prevent radiation-induced cell damage, side effects from chemotherapy, treat CFIDS, and it improves physical endurance and work capacity¹⁰.

Aralia manshurica, A. elata, A. schmidtii roots – Pungent, warm, moist

Western Classification: Adaptogen, antioxidant, CNS stimulant (mild), expectorant, hypoglycemic agent, nephroprotective.

These three Aralia spp. (Araliaceae) are native to Siberia and Manchuria, and are used in Russia as mild adaptogenic tonics. Aralia elata is the most researched of the three, and in animal studies it protected mice against radiation damage¹⁶. Readers should be aware that not all Aralia spp. have adaptogenic activity (Ex: A. racemosa, A. spinosa).

Jiaogulan herb (Gynostemma pentaphylla) – Sweet, slightly bitter, neutral

Western Classification: Adaptogen, antioxidant, expectorant, hypocholesteremic, hepatoprotective, immune potentiator, nervine.

This member of the Cucurbitaceae family has a long history of use in Southern China & Taiwan as a folk remedy for fatigue, weakness, asthma, hepatitis, migraines, and cancer. Due to its low cost and safety, it has become much more widely used as a “Ginseng” substitute and adaptogen throughout Southeast Asia. Interestingly, some of the active constituents, gypenosides, are chemically identical to ginsenosides found in the unrelated Panax species. Clinically, Jiaogulan is useful for hypertension, congestive heart failure, liver disease, elevated blood lipids, and to strengthen the immune system and inhibit cancer¹.

Guduchi stem (Tinospora cordifolia) – Bitter, warm, dry

Western Classification: Adaptogen, antiinflammatory, antioxidant, hepatoprotective, diuretic, immune amphoteric.

Guduchi is another of the Ayurvedic Rayana remedies. It is traditionally used for impotence, gout, edema, arthritis, and general weakness. Human and animal studies have shown it increases uric acid excretion, is a powerful antiinflammatory for arthralgias, acts as an immunomodulator (useful for cancer patients undergoing chemotherapy), hepatoprotective agent (hepatitis B&C), and it reduces elevated blood sugar levels.

3. Little-Known Adaptogens

Oplopanax elatus /Echinopanax elatus bark– Korean Araliaceae

This herb has been reported to have adaptogenic and antioxidant qualities in Russian literature.

Trichopus zeylanicus seed

Is used by the Kani tribe of India for energy, to increase stamina, and to promote immunity and vitality. It has been shown in animal studies to increase adrenal corticosterone levels, act as a hepatoprotective agent, and an aphrodisiac¹³.

Hoppea dichotoma root

An Ayurvedic plant traditionally used as a nerve tonic. It has been reported in the literature to have adaptogenic properties.

Rhaponticum carthamoides root/Leuzea carthamoides

A Russian herb used as a CNS stimulant and as a restorative agent to the nervous system. Animal studies have shown immunostimulant, antitumor, and cognitive enhancing effects.

Shalajit-bitumenous pitch – Bitter, slightly pungent, warm

An Ayurvedic mineral remedy used to enhance immune function and tonify the heart, liver, and kidneys. It is hepatoprotective, antiinflammatory, antihistamine, and gastroprotective. It is used clinically to treat diabetes, hepatitis, constipation, digestive disorders, cancer, degenerative kidney disease (use with Cordyceps), and anemia.

4. Possible Adaptogens

Mimosa flowers or stem bark (*Albizzia julibrissin*) – Sweet, neutral

Western Classification: Mild adaptogen (?), antidepressant, antioxidant, anxiolytic, nervine.

Japanese researchers have suggested *Albizzia* has adaptogenic effects. There is little data to support this statement, but the flowers and bark of this small, shrubby tree are superb mood-elevators and I use it with Hawthorn and Rose petals to treat “broken hearts”. In TCM the bark (and flowers) are used for emotional problems caused by liver qi stagnation – short temper, depression, irritability, impaired memory, and PMS/menopausal mood swings³.

Saw Palmetto berries (*Serenoa repens*) – Acrid, sweet, warm, moist

Western Classification: Mild adaptogen (?), antiinflammatory, diuretic, expectorant, immune potentiator, nutritive.

Saw Palmetto is thought of as a “prostate herb”, but in reality it is much more. When it was introduced into Western medical practice in 1877 it was used for cachexia, neurasthenia, anorexia, and general depletion. From a TCM standpoint, it is a tonic to the kidney yin, lung, and spleen. These qualities are consistent with most, if not all, Chinese adaptogenic remedies. I use it in practice for asthenic, deficient patients who are underweight, have difficulty breathing, and have dry hair and skin¹⁷.

Eucommia bark (*Eucommia ulmoides*) – Sweet, slightly pungent, warm, neutral

Western Classification: Mild adaptogen (?), antiinflammatory, antioxidant, antispasmodic, diuretic, gastroprotective, hypotensive.

Japanese research suggests *Du Zhong*, *Eucommia* bark or leaves, have adaptogenic effects. Traditionally, it is used for hypertension, deficient kidney yang (low back pain, impotence), strengthening bones, ligaments, and muscles, and preventing miscarriage. Recent data indicates this herb promotes collagen synthesis, protects against gastric ulcers, and relieves stress and hypertension. It also lowers LDL & VLDL cholesterol levels and increases phagocyte activity^{3,19}.

Suma bark (*Pfaffia paniculata*) – Acrid, sweet, neutral

Western Classification: Mild adaptogen (?), antitumor, anticholesteremic, immune potentiator.

Incorrectly called “Brazilian Ginseng”, *Pfaffia* is reported to have a long history of ethnobotanical use. Modern phytochemical studies were initiated in Japan in the 1980’s and among the constituents identified is Ecdysone. This substance is a type of biologically active phytosterol that mimics insect hormones and is of great interest to researchers. Clinically, *Suma* has been used to regulate hormones (Diabetes, BPH, menopausal symptoms), enhance immunity, and inhibit tumor growth.

Reishi fungus (*Ganoderma lucidum*) – Bitter, warm, neutral

Western Classification: Mild adaptogen (?), anticholesteremic, antiinflammatory, antioxidant, cardiotoxic, immune amphoteric, nervine.

Known in TCM as Ling Zhi, the mushroom of immortality, there is no question that this herb is a powerful tonic remedy. Whether it affects the HPA axis and SAS are yet to be determined. It is an important immune amphoteric useful for hypo-(HIV, cancer, CFIDS) or hyper-(allergy, autoimmune disease) immune disorders. It acts as a calming nervine, mildly lowers blood pressure, relieves angina pain, and protects the liver against chemical or viral insult. It is an important part of most Fu Zheng formulas, used in China to enhance chemotherapy and reduce side effects of cancer treatment. In clinical studies *Ganoderma* has been effective for treating asthma, hyperlipidemia, leucopenia, anxiety, and angina³.

Shatavari (*Asparagus racemosus*) – Sweet, bitter, warm, moist

Western Classification: Mild adaptogen (?), antispasmodic, antitussive, gastroprotective, aphrodisiac(?), demulcent, diuretic, immune potentiator.

This Indian species of *Asparagus* is used as a Rasayana remedy in Ayurveda. It has long been used as a tonic remedy, especially for women, promoting fertility and reducing menopausal symptoms. It is also used for dry coughs, to heal or prevent gastric ulcers, as a nutritive tonic for cachexia, and as a soothing diuretic. Recent research indicates Shatavari enhances immune function, increases corticosteroid production, and promotes cell regeneration¹².

Prince Seng root (*Pseudostellaria heterophylla*) – Sweet, slightly bitter, warm, moist

Western Classification: Mild adaptogen (?), demulcent, immune potentiator, pectoral.

Known in TCM as Tai Zi Shen (or Hai Er Shen), Prince Seng is often referred to as “Ginseng of the Lungs”. It is a very important lung yin tonic for dry coughs, emphysema, lung damage, or hot/dry lung conditions. It mildly stimulates the immune system and has been used to treat malaise, neurasthenia, CFS (use with *Schisandra*), IBS, and asthma. It is a useful remedy for deficient, sensitive patients who need tonics, but get easily over stimulated by stronger adaptogens³.

Huang Qi (*Astragalus membranaceus*) - Sweet, warm, moist

Western Classification: Mild adaptogen (?), antidiaphoretic, antioxidant, antitumor, hepatoprotective, immune potentiator.

Astragalus is a major tonic remedy in TCM. It is traditionally used for organ prolapse (spleen qi tonic), to strengthen the Wei qi, modulate sweating, and promote the draining of abscesses. It is a potent immunostimulant and antitumor agent that has been shown to increase survival time in patients with adenocarcinoma, non-small cell lung cancer, and breast cancer (use with *Ligustrum* fruit). It is also very useful for immune deficiency conditions such as HIV, CFIDS, and TB and in human studies it helped to prevent colds and influenza. It is a lung qi tonic – for dry coughs, frequent upper respiratory tract infections, asthma, as well as a cardiotoxic (CHF, angina), and it protects the kidneys against nephrotoxic medications. The combination of Huang Qi and Shan Yao (*Dioscorea opposita*) is used in China for type II diabetes with qi and yin deficiency³.

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