Adaptogens: Herbs For Strength, Stamina, and Stress Relief

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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 and kidney yang tonics), Tibetan, Ayurvedic (rasayanas), and other indigenous medical systems. It is important to note that while traditional tonic remedies and adaptogens overlap, many herbs known as qi tonics or rasayanas do not fit the definition of an adaptogen. The actual word adaptogen was first used by a Soviet scientist, Dr. Nikolai Lazarev in 1947. He was funded by the military to research substances which produced a "state of nonspecific resistance" (SNIR). 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 1950s, studied Panax ginseng. Looking for a less expensive and more available substitute, he changed his focus to a native Russian shrub, Eleutherococcus senticosis. His first monograph of this now popular herb (Eleuthero or Siberian Ginseng) was published in 1960.

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

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, psychological and physical factors.
c.) These substances tend to help regulate or normalize organ and system function within the organism, i.e., they act as systemic amphoterics.

Several theories have been suggested to explain the effects of adaptogenic substances. One disproven theory proposed by Davydov and Krikorian suggested that adaptogens function primarily due to their antioxidant and free radical scavenging effects. While adaptogens do have antioxidant activity (as do most, if not all, plants), this is inadequate to explain most of effects of these herbs. In fact, with the exception of Schisandra and Rhodiola, this is a secondary activity of most adaptogens. The majority of herbs that have pronounced antioxidant properties (ex: Green Tea, Turmeric, Rosemary, Sage, Cranberry) are not adaptogens, and most adaptogens are not particularly powerful antioxidants. 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 amphoterics 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 amphoterics to living organisms, but they rarely have a pronounced effect on only one specific organ or system.

Later research by Panossian postulated that adaptogens work primarily by affecting the Hypothalamic/ Pituitary/Adrenal (HPA) axis and the Sympathoadrenal System (SAS). Thus, adaptogens modulate our response to stress (physical, environmental, or emotional) and help regulate the interconnected endocrine, immune, cardiovascular, reproductive 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, eicosanoids, corticotrophin-releasing factor (CRF), and sex hormones. This broad array of biochemical activators helps explain why many adaptogens also have anti-inflammatory, antioxidant, anxiolytic, immune amphoteric, nootropic, antidepressant or nervine effects as well. Research by Panossian and Wikman (2009) states that adaptogens work not only via the HPA axis and SAS but also on a cellular level. These herbs activate molecular chaperones such as heat shock proteins (Hsp 16, Hsp 25, Hsp70, Hsp 72) which protect the mitochondria from stress-induced damage. FOXO, a forkhead protein, is also up-regulated, as is neuropeptide Y (NPY). Heat shock proteins promote correct 3-dimensional folding of proteins, prevent their aggregation and assist in refolding of misfolded proteins. Misfolded proteins are linked to a wide range of chronic degenerative diseases such as cancer, Alzheimer's disease, Parkinson's disease, ALS, rheumatoid arthritis, diabetes and the physical and mental decline associated with aging. FOXO promotes synthesis of proteins that inhibit the effects of stress, detoxify cells and enhance longevity. Neuropeptide Y is a

neurotransmitter that reduces anxiety, inhibits pain perception, lowers blood pressure, inhibits addiction and cortisol release while also upregulating expression of Hsp 72, which helps maintain homeostasis of neurons. The overall effect of adaptogens is they act a bit like a vaccine or stress mimetic (eustressor), priming the cells and organism to more effectively respond to stress. Research has also found that adaptogens can down-regulate a stress-activated protein kinase, known as JNK, that is responsible for increasing inflammatory and oxidative compounds and decreasing ATP generation. They also inhibit cortisol-induced mitochondrial dysfunction. This is one of the reasons why adaptogens are often effective as part of a treatment protocol for diverse conditions with fatigue, muscle pain, inflammation and weakness, such as CFIDS, fibromyalgia and multiple sclerosis.

Adaptogens are not all created equal and they are not "one size fits all" medicines. Some adaptogens are stimulating, others calming, some heating or cooling, nourishing, moistening or drying. It is vital to determine which adaptogen (or adaptogens) are appropriate for a given patient and for the best results, they are usually combined with "companion herbs" including nervines, nootropics or restorative tonics. I would also note that, contrary to popular belief, not everyone needs to take an adaptogen. They are not panaceas, nor are they a replacement for adequate and good quality sleep, a nutritious diet, exercise, healthy lifestyle choices and stress reduction techniques. Adaptogens can be a highly useful addition during times of stress or under situations of physical or environmental duress. They should not be used as a crutch to avoid living a healthy life and further abusing oneself.

Adaptogenic Materia Medica

1. Well-researched adaptogens:

American Ginseng root (Panax quinquefolius) – Bitter, slightly sweet, neutral to slightly warm, moist
Western Classification: Adaptogen (nourishing), antioxidant, anti-inflammatory, bitter tonic, immune amphoteric.

American Ginseng is milder acting and less stimulating than Panax ginseng. It is nourishing and moistening and is appropriate for fatigue, including cancer-related fatigue (Barton, et al, 2013), 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 (De Souza, et al, 2015), adrenal depletion, immune insufficiency, sexual neurasthenia, and deficient insomnia. In a human study, the use of an American Ginseng extract significantly reduced the incidence, severity and duration of respiratory tract infections in elderly populations (McElhaney, et al, 2011). It is less likely to cause insomnia or nervousness than Asian Ginseng, making it more appropriate for regular use by middle-aged (40-65) people of both sexes. In a human study, a single dose of American Ginseng improved cognitive function in middle-aged adults (Ossoukhova, et al, 2015). In other studies, long-term use of this herb decreased arterial stiffness and systolic blood pressure (Mucalo, et al, 2013), increased insulin sensitivity (De Souza, et al, 2015) and decreased cancer-related fatigue (Barton, et al, 2013).

Dose: tincture (1:5): 3–5 ml TID
tea: 1–2 tsp. dried cut/sifted root to 12 oz. water. Gently simmer for 1/2 hour, steep an additional 1/2 hour. Take 4 oz. three times per day.

Ashwagandha root (Withania somnifera) – Bitter, sweet, warm, dry
Western Classification: Calming and nourishing adaptogen, anti-inflammatory, antioxidant, antispasmodic, astringent, immune amphoteric, sedative (mild), thyroid stimulant.

This herb is one of the most prominent rasayana (rejuvenative) remedies of Ayurveda. It is a calming adaptogen and has traditionally and clinically been used for anxiety (Majeed, et al, 2023; Chandrasekhar, et al, 2012), bad dreams, mild OCD, insomnia, and nervous exhaustion. It acts as an antispasmodic and anti-inflammatory and is very useful for treating fibromyalgia (with White Peony, Black Cohosh and Achyranthes/Huai Niu Xi), restless leg syndrome, mild Tourette's syndrome, and osteoarthritis. In human clinical studies it improved endocrine and nervous system function, as well as muscle tone and strength (Wankhede, et al, 2015; Sandhu, et al, 2010). 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 sperm count and sperm motility (Nasimi Doost Azgomi et al, 2018) and, due to its iron content, it benefits iron-deficient anemia (take it simmered in milk with molasses added) and autoimmune hemolytic anemia.

Ashwagandha also stimulates thyroid function (Gannon, et al, 2014). Studies in mice showed significant increases of serum T3 (18%) and T4 (111%) after 20 days of use (Panda & Kar, 1999; Panda, et al, 1998). I use it with Bacopa, Blue Flag, Gum Guggul and Bladderwrack for hypothyroidism and Hashimoto's thyroiditis. In other human clinical trials, Withania enhanced cognitive and psychomotor performance (Pingali, et al, 2014), cardio-respiratory endurance (Tiwari, et al, 2021; Choudhary, et al, 2015), female sexual functioning (Dongre, et al, 2015), muscle strength and recovery (Wankhede, et al, 2015) and it helped prevent stress-induced weight gain (Choudhary, et al, 2017) food cravings and impaired sleep (O'Connor, et al, 2022). A recent study found that Ashwagandha was effective for reducing stress and anxiety by modulating stress hormones (reducing cortisol and increasing serotonin levels) in healthy adults (Majeed, et al, 2023).

Dose: tincture (1:5): 1.5-2 ml TID
tea: 1/2 tsp. dried root in 8 oz. water, decoct 10 minutes, steep 1/2 hour. Take 4 oz. TID. The dried root starts to lose its activity after two years.

Asian Ginseng root (Panax ginseng)

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

Western Classification: Stimulating and nourishing adaptogen, antioxidant, anti-inflammatory, antiasthmatic, cardiotonic, 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), cardiac insufficiency or for people with exhaustion (CFIDS, CHF). It is a useful part of a protocol for deficient depression, (Lee & Rhee, 2017) Addison's disease (with Licorice and Cordyceps), deficient insomnia, diabetes (Vuksan, et al, 2008), metabolic syndrome (De Souza, et al, 2015), cachexia, immune deficiency, allergic asthma (use it with Schisandra and Licorice), erectile dysfunction (Kim, et al, 2009; de Andrade, et al, 2007; Hong et al, 2002), lack of libido in post-menopausal women (Oh, et al, 2010) and it helps prevent or treat leucopenia in patients receiving chemotherapy or radiation for cancer. In human studies Asian Ginseng reduced symptoms of COPD (Gross, et al, 2002), improved survival times in people with gastric cancer, while inhibiting metastases (Suh, et al, 2002), it enhanced insulin sensitivity (De Souza, et al, 2015), reduced cancer-related fatigue (Yennurajalingam, et al, 2015), prevented gynecological issues caused by bisphenol-A exposure (Yang, et al, 2014), decreased fatigue in people with CFIDS (Kim, et al, 2013) and it reduced cortisol levels and muscle damage, while enhancing endogenous antioxidant levels in people experiencing intense physical stress (Flanagan, et al, 2018). Red Ginseng is most appropriate for elderly (70-80+ years old), very deficient or people who constantly feel cold. White Asian Ginseng is less heating and less stimulating then Red Ginseng. It is nourishing and I use it often for people who are deficient but do not feel cold and are aged 55-70. Overuse of Ginseng in yang (excess) people can cause insomnia, anxiety, increased blood pressure, and irritability. Several other closely related species of Panax such as P. vietnamensis and P. japonicus are also believed to have adaptogenic activity.

Dose: tincture (1:5): 1-2 ml up to three times per day.
tea: Take 1–2 tsp. of the ground herb or one root, slowly decoct (in a nonmetal pot) for 1/2 hour. Let steep an additional hour. Take up to two cups per day.
Extract granules (5:1): 1 g. 1-3 times per day mixed in water.

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

Western Classification: Calming and nourishing adaptogen, antiasthmatic, antileukemic, antioxidant, hepatoprotective, immune amphoteric, nephroprotective, sedative (mild).

The caterpillar fungus (Dong Chong Xia Cao-winter insect, summer plant) is one of the more unusual adaptogens. While the very expensive parasitized larvae are still available, most Cordyceps is now grown on soybeans or grain and sold as a mycelial extract. It is used in TCM for deficient kidney yin and yang caused by chronic disease or extremely rigorous labor/athletic training. In a human clinical study, a combination of Rhodiola and Cordyceps enhanced short-term high-altitude training and endurance more than placebo (Chen, et al, 2014). A Cordyceps militaris extract improved maximal oxygen consumption (Vo_2max), time to exhaustion and the ventilatory threshold in people performing high-intensity exercise (Hirsh, et al, 2016). Cordyceps improves libido and sperm count, relieves fatigue, anemia, chronic coughs, tinnitus, and bone marrow (erythroid) suppression due to radiation therapy. It also has active antitumor and antileukemic activity (use with Panax notoginseng and Isatis), enhances circulation and cardiac output, as well as lung capacity. Cordyceps

combined with Nettle seed, Astragalus, Unprocessed Rehmannia, Dan Shen, or Rhubarb is very useful for treating degenerative kidney disease. In human studies Cordyceps has been shown to have significant benefits for male sexual dysfunction, hyperlipidemia, low platelet counts, allergic rhinitis, tinnitus, chronic tracheitis and to reduce adverse effects in kidney transplant patients (Ding, et al, 2011; Li, et al, 2009).

Dose: tincture (1:4 or 1:5): 1-2 ml BID/TID
tea: 1/2 tsp. mycelia powder or crushed mushroom to 10 oz. water. Gently decoct for 20 minutes, steep for 1 hour. Take 4 oz. once or twice per day
capsules (standardized proprietary extract CordyMax® Cs-4): 2 capsules per day
extract granules (1:1): 2-4 g. per day mixed in water.

Eleuthero root (Eleutherococcus senticosus) - Sweet, slightly bitter, neutral
Western Classification: Mild adaptogen, antioxidant, anti-inflammatory (mild), hypocholesterolemic, immune potentiator, nervine.

Eleuthero (formerly Siberian Ginseng) is mild and much less tonifying than the true Ginsengs (Panax spp.). It is neutral energetically, so can be used in hot and cold, damp and dry conditions and is appropriate for daily use. It is especially indicated for the younger person who is overstressed, undernourished but overfed, doesn't get enough sleep or exercise, has dark circles under their 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 (Bohn, et al, 1987), reduces cortisol levels and inflammatory response, and it promotes improved cognitive (Cicero, et al, 2004) and physical performance (Kuo, et al, 2010). In human studies Eleuthero has been successfully used to treat bone marrow suppression caused by chemotherapy or radiation, angina, hypercholesterolemia, neurasthenia with headache, insomnia or poor appetite and in a RCT it inhibited a stress-induced rise in blood pressure (Facchinetti, et al, 2002). In clinical practice I also use Eleuthero for white coat hypertension (along with Linden flower, Motherwort, and Chrysanthemum flower), jet lag, and ADHD.

Dose: tincture (1:4): 4-5 ml TID/QID
fluid extract: 1/2 tsp. 2-3 times per day
tea: 1–2 tsp. dried powdered root to 12–16 oz. of water. Decoct slowly for 20–30 minutes, steep 1 hour. Take up to three cups per day.
extract granules (5:1): 0.5 g., 1-3 times per day mixed in water

Rhaponticum root (Rhaponticum carthamoides) synonym: Leuzea carthamoides – Bitter, cool, dry
Western Classification: Anabolic adaptogen, anticoagulant, antioxidant, antitumor, cardiac tonic, hepatoprotective, hypoglycemic, immune stimulant, nervine

Is a Russian herb used as a mild CNS stimulant, anabolic adaptogen and as a restorative agent to the nervous system. Animal studies have shown immunostimulant, antitumor, and cognitive enhancing effects. In human studies it exhibited adaptogenic, antidepressant, especially for depression due to alcohol withdrawal (Ibatov, 1995), immunostimulant, hepatoprotective, and hypoglycemic activity. It has been listed as an official medicine in the Soviet (now Russian) pharmacopoeia since 1961 and is a popular tonic for athletes and people who have physically demanding jobs (it promotes muscle building and enhances lactic and uric acid excretion). In a human study, it reduced physical and mental exhaustion as well as immune depletion caused by chronic stress, overwork or overtraining in athletes (Azizov, et al, 1997). Regular use of the root reduces LDL cholesterol levels, blood viscosity, and blood pressure (Kokoska & Janovska, 2009). Clinically I also use it for elderly people with muscle wasting.

Dose: tincture (1:4) 2-4 ml TID
tea: 1-2 tsp. Dried root, 12 oz. water, decoct 15-20 minutes, steep 40 minutes, take 4 oz. TID

Rhodiola root (Rhodiola rosea) – Slightly sweet, slightly bitter, fragrant, cool, very dry
Western Classification: Stimulating adaptogen, anti-inflammatory, antioxidant, antidepressant, cardioprotective, immune potentiator, nootropic.

Known as Rose Root or Golden 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, nootropic, cardiotonic, and immune tonic. In human studies, this root has been shown to be effective for treating mild depression (Amsterdam & Panossian, 2016; Mao, et al, 2015; Darbinyan, et al, 2007), neurasthenia, chronic stress (Edwards, et al, 2012), impaired cognitive function (Concerto, et al,

2018; Spasov, et al, 2000), CFIDS (Lekomtseva, et al, 2017), "burnout syndrome" (Kasper & Dienel, 2017), ADHD, fatigue (Olsson, et al, 2009), erectile dysfunction, amenorrhea, and infertility in women. As a stimulating adaptogen, it is indicated for tired, lethargic and depressed people. I find Rhodiola useful for people with deficient (asthenic) depression, altitude sickness (use it with Cordyceps, Reishi, and Holy Basil), and to aid in recovery from head trauma injury. It has also been shown to enhance energy and physical performance (Ballmann, et al, 2018; Noreen, et al, 2013, De Bock, et al, 2004) and memory and mental status (Dimpfel, 2014). Avoid using Rhodiola in anxious, manic, or bipolar patients, it can also deplete the yin and exacerbate dry coughs, dry eyes, skin or vaginal dryness. Traditionally, several species of Rhodiola are used in Tibetan medicine for nourishing the lungs, to increase blood circulation, for relieving fatigue, altitude sickness, and weakness. There are a number of other species of Rhodiola (R. sacra, R. integrifolia, R. sachalinensis, R. crenulata, R. kirilowii) which may also have adaptogenic activity but are lacking the active rosavins (they do contain salidrosides, another group of active compounds).

Dose: tincture (1:4): 2-3 ml TID
tea: 1–2 tsp. of the cut/sifted dried root and decoct in 8–10 oz. of water for 15 minutes, steep (covered) an additional 45 minutes. Take one to three cups per day. Avoid taking it in the evening as it may cause insomnia in sensitive people.
standardized extract (3% rosavins and 1% salidrosides): 1/2-1 tablet per day
extract granules (5:1): this is probably not R. rosea, but another Rhodiola species: 0.5 g. 1-2 times per day mixed in water.

Schisandra berries/Wu Wei Zi (Schisandra chinensis) – Sour, pungent, warm, dry
Western Classification: Calming adaptogen, antioxidant, anti-inflammatory, astringent, antiasthmatic, hepatoprotective, immune amphoteric.

Schisandra is a calming adaptogen which helps create a relaxed, focused and alert state of mind. It can be used with Codonopsis or American Ginseng for neurasthenia and exhaustion. In animal studies it has been shown to re-regulate HPA axis function and reduce stress-induced cortisol levels (Xia, et al, 2016) and decrease serum glucose levels while enhancing immune competence (Xia & Li, 2016; Li, 2015). It is very useful as part of a protocol for hepatitis B or C or autoimmune hepatitis (use it with Milk Thistle and Turmeric), asthma or allergic asthma (with Licorice), and for nervous system disorders including Parkinson's disease, Meniere's syndrome, deficient depression, anxiety and teenage or adult ADHD. Wu Wei Zi is used in Fu Zheng therapy to support immune function and prevent side effects caused by cancer chemotherapy. Traditionally, this herb is used to astringe a leaky jing gate (urinary incontinence, leucorrhea, diarrhea, and spermatorrhea) and to reduce excessive sweating. In a RCT of menopausal women, a Schisandra extract significantly reduced hot flashes, night sweats and heart palpitations compared to placebo (Park & Kim, 2016). In Russia Schisandra is widely used to enhance endurance, to reduce elevated cortisol levels and to treat gastritis, hypotension, drug withdrawal, asthenia and impaired vision (Panossian, 2008).

Dose: tincture (1:5): 2-4 ml TID/QID
tea: 1 tsp. of the dried berries to 8–10 oz. water, decoct 5–10 minutes, steep 20–30 minutes. Take 4 oz. TID
extract granules (5:1): 0.5 g. 1-3 times per day mixed in water.

Shilajit (Asphaltum) – Bitter, slightly pungent, warming
Western Classification: Adaptogen, analgesic, antiallergic, anti-inflammatory, antioxidant, antiulcer, hypoglycemic, immune amphoteric, nootropic

Is an Ayurvedic herbo-mineral remedy used to enhance immune function and tonify the heart, liver, and kidneys. It is hepatoprotective, anti-inflammatory and has antihistamine and gastroprotective effects. It is used clinically to treat diabetes (mixed 50/50 with Triphala), hepatitis, constipation, digestive disorders, cancer, degenerative kidney disease (use it with Cordyceps), BPH, altitude sickness, low sperm count (Biswas, et al, 2010) and anemia. In an animal study, it improved symptoms of Chronic Fatigue syndrome by alleviating CFS-induced mitochondrial dysfunction and is believed to work via the HPA axis (Surapaneni, et al, 2012). In human studies, Shilajit (500 mg/day) promoted maximal muscle strength after muscle exhausting exercise and inhibited collagen breakdown (Keller, et al, 2019), it increased serum levels of serum pro-c1a1, a biomarker of type 1 collagen synthesis (Neltner, et al, 2024), it decreased unhealthy blood lipids and improved endogenous antioxidant status (Stohs, et al, 2014) and increased testosterone levels in middle-aged men (Pandit, et al, 2018).

Dose: capsules or pills: 1-2 TID

2. **Probable Adaptogens**

Holy Basil herb (Ocimum tenuiflorum) – Pungent, sweet, warm, neutral
Western Classification: Mildly stimulating adaptogen (probable), antibacterial, antidepressant, antioxidant, antiviral, anxiolytic, carminative, expectorant, hypocholesterolemic, hypoglycemic, immune amphoteric, nootropic.

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. It also improved cognitive function, reduced anxiety and cortisol levels in healthy adults (Sampath, et al, 2015). In two human trials, Tulsi showed benefits in NIDDM, reducing fasting blood glucose (17.6%) and postprandial blood glucose (7.3%) (Winston & Maimes, 2019) and it reduced triglycerides, LDL-C, VLDL-C, BMI and insulin resistance in young people who were obese (Satapathy, et al, 2017). I use Tulsi for stagnant depression (along with Lavender, Lemon Balm, Rosemary, and/or Damiana), to help speed recovery from head trauma injuries and for poor concentration or mental fog due to menopause or excessive Cannabis use. In addition, in animal studies, it seems to affect the HPA axis by inhibiting cortisol release and having corticotrophin-releasing hormone receptor (CRHR1) antagonism activity (Gowda, et al, 2023; Jothie Richard, et al, 2016). It also increases endurance, inhibits ulcer formation, and protects against gamma radiation.
Dose: tincture (1:5 or 1:2): 2-3 ml TID
tea: 1 tsp. dried leaf to 8 oz. hot water, steep, covered, 5–10 minutes. Take 4 oz. BID/TID

Morinda root (Morinda officinalis) – Pungent, sweet
Western Classification: Nourishing adaptogen (probable), antidepressant, antioxidant, hypoglycemic agent, immune tonic, reproductive tonic

Known as Ba Ji Tian in Chinese medicine, this root is used for deficient kidney yang patterns. This includes lack of libido, impotence, low back pain, male and female infertility, and urinary frequency. It is also used for strengthening the muscles and bones and for asthma (along with Schisandra and Licorice) caused by the "kidneys not grasping the lung qi" (wheezing and an inability to fully inhale). Animal research suggests that this herb also has antidepressant and antistress (adaptogenic) effects (Zhang, et al, 2002).
Dose: tincture (1:5): 1.5-2.5 ml TID
tea: 1-2 tsp. dried root, 10 oz. water, decoct 15 minutes, steep 45 minutes, take 4 oz. TID
extract granules (5:1): 1 g. 1-2 times per day mixed in water.

Rou Cong Rong herb (Cistanche deserticola, C. tubulosa, C. salsa)
Western Classification: Adaptogen (probable), anti-inflammatory, antioxidant, astringent, hepatoprotective, laxative, reproductive tonic

Is used in TCM as a kidney yang tonic and a xue (blood) tonic. As a kidney yang tonic it is used (usually with Suo Yang/Cynomorium) to treat impotence, low back pain, weak knees or ankles, lack of libido and fatigue. In animal research it has been found to have hypotensive, hypoglycemic, anti-inflammatory, osteoprotective and neuroprotective effects (Wu, et al, 2014, Xiong, et al, 2013, Lin, et al, 2002). Three other animal studies suggest the herb may be an adaptogen. In one, it showed a significant "anti-fatigue" effect, reducing lactic acid build up, decreasing muscle damage and enhancing energy storage (Cai, et al, 2010). In a second study it extended the life span of mice, improved immune competence and decreased inflammatory cytokines (Zhang, et al, 2014). In a more recent animal study, Cistanche reduced cortisol levels, enhanced dopamine levels, memory and antioxidant activity, as well as reducing stress (Wang, et al, 2017). In addition, in a human RDBPC trial a combination of Rou Cong Rong (300-450 mg) and Ginkgo (120-180 mg) extracts substantially improved CFIDS symptoms compared to placebo. The people receiving the herbal combination (low dose and high dose) had reduced physical and mental fatigue, improved quality of life, better sleep and lower levels of blood ammonia and lactic acid (Kan, et al, 2021).
Dose: tincture (1:5): 2-3 mL TID
tea: 1-2 tsp. dried herb, 8 oz. water, decoct 5-10 minutes, steep 45 minutes, take 2 cups/day
extract granules (5:1): 1 g. 1-2 times per day mixed in water.

Shatavari root (Asparagus racemosus) – Sweet, bitter, warm, moist
Western Classification: Nourishing adaptogen (probable), antispasmodic, antitussive, gastroprotective, aphrodisiac (?), demulcent, diuretic, female reproductive tonic immune potentiator.

This Indian species of Asparagus is used as a rasayana in Ayurveda. It has long been used as a tonic remedy, especially for women, promoting fertility and reducing menopausal symptoms, especially vaginal dryness and lack of libido. It is also used for dry coughs, to heal or prevent gastric ulcers, as a nutritive tonic for cachexia, and as a soothing diuretic. Research indicates Shatavari enhances immune function, increases corticosteroid production, promotes cell regeneration (Rege, et al, 1999), alleviates depression by modulating the HPA axis, enhances BDNF levels and monoaminergic and GABAergic neurotransmission (Singh, et al 2023). In an animal study, Shatavari reduced stress hormone (cortisol and norepinephrine) levels and helped to normalize HPA axis and SAS function (Krishnamurthy, et al, 2013). Based on my clinical use of this herb, I believe it does have adaptogenic activity.

Dose: tincture (1:5): 2-4 ml TID
tea: 2 tsp. dried, powdered root to 8 oz. water, decoct 10-15 minutes, steep 40 minutes, take up to 2 cups per day

Suo Yang fleshy stem (Cynomorium songaricum, C. coccineum)
Western Classification: Nourishing adaptogen (probable), antioxidant, aphrodisiac, mild laxative, reproductive tonic.

Is used similarly to Rou Cong Rong (in fact they are usually used together), but it more strongly nourishes the yang, making it more effective for erectile dysfunction, low sperm count or impaired sperm motility. It is also used for fatigue, urinary frequency, female infertility, weak muscles and constipation. In animal research the herb has been shown to enhance spermatogenesis (Abdel-Magied, et al, 2001; Abd el-Rahmen, et al, 1999), reduce cortisol levels, enhance memory and cerebral function (Yoo, et al, 2014) and promote longevity by increasing telomere length (Cui, et al, 2013).

Dose: tincture (1:5): 1.5-2.5 mL TID
tea: 1 tsp. dried, powdered, herb, 8 oz. water, decoct 10-15 minutes, steep 40 minutes, take 4 oz. 3x/day
extract granules (5:1): 1 g. 1-2 times per day mixed in water.

Tienqi Ginseng root (Panax notoginseng) – Sweet, slightly bitter, warm, dry
Western Classification: Adaptogen (probable), antihemorrhagic, anti-inflammatory, antileukemic, antioxidant, cardiotonic, hepatoprotective, neuroprotective, styptic, vulnerary

San Qi, or Tienqi, is mostly used in TCM as a cardiotonic and to stop bleeding. It is highly effective for this and is the most prominent ingredient in the well-known patent remedy Yunnan Pai Yao. Panax notoginseng contains higher levels of ginsenosides than does American or Asian Ginseng (Sun, et al, 2011) and some reports suggest it has adaptogenic activity, although it is not traditionally used for this purpose. Several other Panax species, including Vietnamese Ginseng (Panax vietnamensis) and Japanese Ginseng (Panax japonicus) may also have adaptogenic activity.

Dose: tincture (1-5): 1.5-2.5 ml QID
tea: 1 tsp. dried, powdered root, 12 oz. water, decoct 20 minutes, steep 1 hour, take 4 oz. 4x/day
extract granules (1:1): 4 g. 1-2 times per day mixed in water.

3. Possible Adaptogens

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 to prevent recurrent respiratory tract infections (use it 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 well. It is also indicated for insulin resistance, metabolic syndrome and NIDDM along with Chinese Dioscorea, Astragalus, and Goji berry.

Dose: tincture (1:4 or 1:5): 2-4 ml TID/QID
tea: 2-3 tsp. of the dried cut/sifted root or whole root and slowly decoct in 16 oz. of water for 1/2 hour. Steep an additional hour. Take up to two cups per day.
extract granules (5:1): 2 g. 1-3 times per day mixed in water.

Epimedium/Yin Yang Huo leaf (Epimedium spp.) – Acrid, sweet, hot, dry
Western Classification: Adaptogen (?), anti-inflammatory, aphrodisiac, circulatory tonic, osteoprotective
Is used in TCM as a kidney yang tonic for impotence, lack of libido, low back pain and male and female infertility. Several human studies (Cai, et al, 1998; Liao, et al, 1995) seem to indicate that it has adaptogenic activity. In animal studies, Epimedium flavonoids and the herb extract prevented corticosteroid-induced HPA axis dysfunction (An, et al, 2015; Huang, et al, 2006).
Dose: tincture (1:5): 0.5-1 ml BID/TID
tea: ½ - 1 tsp. powdered, dried leaf, 8 oz. hot water, steep 30 minutes, take 4 oz. 2-3x/day
extract granules (5:1): 0.5 g., 1-2 times per day mixed in water.

Guduchi stem (Tinospora cordifolia) – Bitter, warm, dry
Western Classification: Adaptogen (?), alterative, anti-inflammatory, antioxidant, hepatoprotective, diuretic, immune amphoteric.
Guduchi is another of the Ayurvedic rasayana remedies. It is traditionally used to treat impotence, gout, edema, arthritis, and general weakness. Human and animal studies have shown it increases uric acid excretion, is a powerful anti-inflammatory for arthralgias, acts as an immunomodulator (useful for cancer patients undergoing chemotherapy), hepatoprotective agent (hepatitis B or C), and it reduces elevated blood sugar levels. In a small RCT participants were given either a placebo or a Guduchi extract (either 150 mg or 300 mg), those taking the Guduchi (300 mg) had improved physical performance and both doses of the herb decreased systolic blood pressure and heart rate while the participants were experiencing physical stress (Salve, et al, 2015). Animal studies suggest the herb has antistress (adaptogenic) effects, it protected against cisplatin-induced intestinal hypermotility and it helped normalize macrophage activity (Rege, et al, 1999). In an animal study, Guduchi juice failed to elicit any stress-reduction activity, but a Guduchi ghrita (Guduchi cooked in ghee) did show some activity (Savriker, et al, 2010). Based on the herb's chemistry (Isoquinoline alkaloids) I question whether it is an adaptogen, it is definitely an alterative. In addition, Guduchi was used in India to treat COVID and a small number of cases of hepatotoxicity occurred (Kulkarini, et al, 2022).
Dose: tincture (1:5): 1.5-2 ml TID
tea: 1 tsp. Dried herb, 8 oz. water, decoct 10-15 minutes, steep 1/2 hour. Take 4 oz. up to three times per day

Jiaogulan herb (Gynostemma pentaphyllum) – Sweet, slightly bitter, neutral
Western Classification: Calming adaptogen (?), anti-inflammatory, antioxidant, anxiolytic, expectorant, hypocholesterolemic, hypoglycemic, hepatoprotective, immune amphoteric, nervine.
This member of the Curcubitaceae family has a long history of use in Southern China and 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. I use Jiaogulan for stress-induced hypertension, angina or headaches. It is being used clinically for treating congestive heart failure, liver disease, anxiety, diabetes (Huyen, et al, 2013 & 2012), elevated blood lipids, and to re-regulate the immune system and inhibit cancer. In human clinical trials, a proprietary Gynostemma extract was effective in reducing body fat, BMI and weight (Park, et al, 2014) and a Gymnema leaf extract improved exercise performance in untrained healthy males, while improving mitochondrial respiration and decreasing leptin and glucose levels (Nayyar, et al, 2023) and in a RDBPC trial a Jioagulan extract containing gypenoside L significantly reduced exercise-induced fatigue, while improving serum endothelial nitric oxide synthase (eNOS) levels and exercise performance in healthy participants compared to controls (Ahn, et al, 2023). In an animal study it also had anxiolytic effects (Choi, et al, 2013).
Dose: tincture (1:5): 1.5-2 ml TID
tea: 1 tsp. dried herb, 8 oz. hot water, steep 1/2 hour. Take 4 oz. up to three times per day
capsules (standardized to gypenosides): 1-2 TID

Licorice rhizome (Glycyrrhiza glabra, G. uralensis) – Sweet, slightly bitter, warm, moist
Western Classification: Adaptogen (?), antihistamine, anti-inflammatory, 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, Rheumatoid Arthritis) as well as immune deficiency conditions (cancer, HIV, CFIDS). If it is an adaptogen, it is an atypical one. Most, if not all, adaptogens, lower cortisol levels if elevated. Licorice enhances adrenal function, increases cortisol levels (which makes it unique among adaptogens) and can be used with Red Ginseng and Cordyceps for adrenal exhaustion or Addison's disease. It is also useful for treating allergies, gastric ulcers, PCOS (with Saw Palmetto and White Peony), and spasmodic coughs. Excess doses of Licorice can have a pseudohyperaldosterogenic effect (increased retention of sodium and excretion of potassium). Women are more sensitive to this effect than men and people with hypertension should avoid using this herb on a continual basis.

Dose: tincture (1:5): .5-1 ml TID
tea: 1/2 tsp. dried root to 8 oz. water, decoct 10–15 minutes, let steep 10–15 minutes, take 4 oz. BID
extract granules (5:1): 0.5 g. 1-2 times per day mixed in water.

Maca tuber (Lepidium meyenii) – Sweet, warm, moist

Western Classification: Mild nourishing adaptogen (?), restorative tonic, reproductive tonic.

There are many claims made for this herb and research shows that some of them are true. Human studies show that high doses of the root (hypocotyl) can modestly improve male libido (Gonzales, et al, 2002), sperm quality (Gonzales, et al, 2001) and erectile function (Shin, et al, 2023; Zenico, et al, 2009). In women, it relieved sexual dysfunction caused by SSRI use and menopause (Dording, et al, 2008) and reduced menopausal symptoms (Meissner, et al, 2006). In this last study the authors state that a proprietary Maca product improved function of the hypothalamic-pituitary-ovarian (HPO) axis. If this is true (further confirmatory research is needed) it would suggest Maca is not just a reproductive and restorative tonic but a mild, nourishing adaptogen as well.

Dose: tincture (1:4 or 1:5): 4-6 mL TID
Capsules/tablets: 1500-3000 mg of Maca extract per day
Powder: 3-5 g. TID

Manshurian Aralia root/bark (Aralia elata var. mandshurica)– Pungent, bitter, warm, moist

Western Classification: Adaptogen (?), anti-inflammatory, expectorant, hypoglycemic agent.

This small, shrubby tree is native to Siberia, Manchuria (China), Korea and Japan. It is included in the Russian Pharmacopeia as an adaptogenic tonic. Traditionally the decoction of the stem or root bark has been used to treat coughs, arthritis, diabetes, gastric ulcers, weakness and stomach cancer. In TCM, the bark is used to stimulate appetite, memory and vitality. The Russian research on this plant began in 1951. A proprietary extract of aralosides is sold in Russia for treating fatigue, to protect against stress-induced gastric ulcers, depression, chronic fatigue and radiation sickness. My reasons for considering this herb a possible adaptogen are that most of the Russian research is of poor quality, the research focuses on an isolated araloside extract rather than the whole herb and in both rats and pigs it has been shown to cause hepatotoxicity.

Dose: tincture (1:5): 1.5-2 mL BID
standardized extract: 150 mg. TID

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

Western Classification: Mild nourishing adaptogen (?), demulcent, immune potentiator, respiratory tonic.

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 it with Schisandra), IBS, and asthma. It is a useful remedy for deficient, sensitive patients who need tonics, but get easily over stimulated by stronger adaptogens.

Dose: tincture (1:5): 2-4 ml TID/QID
tea: 1-2 tsp. Dried root, 12 oz. water, decoct slowly for 20-30 minutes, steep 1 hour, take 4 oz QID
Extract granules (5:1): 1.5 g. 1-3 times per day mixed in water.

Reishi fungus (Ganoderma lucidum, G. lingzhi) – Bitter, warm, neutral

Western Classification: Mild calming adaptogen (?), anti-inflammatory, antioxidant, cardiotonic, hypercholesterolemic, immune amphoteric, nervine.

Known in TCM as Ling Zhi, the mushroom of immortality. It is an important immune amphoteric useful for treating hypo-immune (HIV, cancer, CFIDS), hyper-immune (allergies, allergic asthma) and autoimmune disorders (Lupus, MS, ankylosing spondylitis, etc.). It acts as a calming nervine, mildly lowers blood pressure, relieves angina pain, and protects the liver against chemical or viral damage. It is an important part of most Fu Zheng formulas, used in China to enhance the effects of chemotherapy, reduce side effects and promote immune competence in cancer patients. In clinical studies Ganoderma has been effective for treating asthma, hyperlipidemia, leucopenia, anxiety and angina. It can also be used to prevent or treat altitude sickness, combined with Ginger, Rhodiola, and Cordyceps. In TCM, Ling Zhi is also used for disturbed shen conditions such as irritability, bad dreams, restlessness and insomnia.

Dose: tincture (1:5): 4-5 ml four to six times per day
tea: 1-2 oz. dried cut/sifted mushroom to 32 oz. water, slowly decoct for 2 hours until reduced by one-half (16 oz.). Take up to three-four cups per day.
capsules (powdered extract-standardized to 12% beta glucans and 6% triterpenes): 1-3 capsules BID
extract granules (5:1): 1-3 g per day mixed in water.

Russian Devil's Club (Oplopanax elatus) – Warm, dry, pungent
Western Classification: Adaptogen (?), analgesic, antibacterial, antifungal, anti-inflammatory, antioxidant, hypoglycemic
This prickly member of the Araliaceae family is native to Russia, North and South Korea and northern China. It is used in TCM and Korean medicine to treat diabetes, arthritis, damp coughs, depression and topically to heal wounds and treat fungal infections. The twigs have also been used in Korea as a restorative tonic for wasting diseases and cachexia. Modern research on this plant began in the early 1950s in the Soviet Union and in 1955 it was officially approved for use as a tonic remedy and for treating mild cases of diabetes. Sadly, most of this old Soviet research is seriously flawed. In addition, this herb is usually combined with many other herbs in proprietary formulas, so clear indications for its benefits and uses, especially as an adaptogen, are lacking.
Dose: tincture (1:5): 1.5-2 mL TID
capsules: 25 mg of extract BID

White Bryony root (Bryonia alba) – Bitter, cold, dry
Western Classification: Adaptogen (?), anti-inflammatory, analgesic, antibacterial, antioxidant, cardiotonic, immune amphoteric.

Usually thought of as a highly toxic plant, Bryonia root is reported to be both an adaptogen and non-toxic if gathered in the spring or autumn. The summer gathered roots have a very different chemistry and are, as commonly thought, quite toxic. A Bryonia extract (known as Loshtak) 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 capacity (Pannosian, et al, 1987). I question whether it is actually an adaptogen due to the very limited research that has been conducted, the very low dose of the product and the short duration of recommended usage.
Dose: Loshtak (standardized tablets): 1 tablet per day for 25-30 days

Other herbs claimed to be adaptogens in the literature (with comments)

Cross Vine leaf (Bignonia capreolata) – this common vine grows throughout the southeastern United States. The late Tommie Bass, "the famed herbalist of Shinbone Ridge" and people he trained use this plant as an adaptogenic tonic for promoting strength, energy and to "purify the blood". The plant's chemistry suggests it may be more of an alterative than an adaptogen.

Elecampane root (Inula helenium) – has long been used as a respiratory remedy (antibacterial and expectorant), antiamoebic and liver tonic. Two animal studies done in Russia found that the root has anti-stressor effects preventing stress-induced metabolic damage and adrenal exhaustion (Zelengkaya, et al, 2005;Nesterova, et al, 2003).

Hoppea root (Hoppea dichotoma) – an Ayurvedic plant traditionally used as a nerve tonic. It has been reported in the literature to have adaptogenic properties.

Mimosa stem bark (Albizzia julibrissin) – Japanese researchers have suggested Albizzia has adaptogenic effects. There is no data to support this statement, but the bark of this small, shrubby tree are superb mood-elevators and I use it with Hawthorn and Rose petals to treat "broken hearts".

Pippali Long Pepper (Piper longum) – is related to Black Pepper and is used in Ayurveda as a rasayana. It is useful to enhance absorption of other herbs as well as being an expectorant and carminative. In one study it was said to be an adaptogen but there is no data to support this claim.

Policias root (Policias fruticosum) – this small tree, known as Dinh Lang, grows in Vietnam, where the local people have long used it to protect against the effects of overwork, extreme temperatures and illness. It is also used as a sexual tonic and animal studies confirm it enhances sexual activity in aged mice (Yen, 1990). Other animal studies suggest that it enhances learning ability (Yen, 1990) and extended lifespan (Yen & Knoll, 1992).

Sea Buckthorn leaf (Hippophae rhamnoides) – has been said to be an adaptogen because several animal studies found that the leaf of this plant modulates the effects of stress caused by cold, hypoxia and restraint. The leaf, which also has antioxidant, cytoprotective and antibacterial activity, also promoted post-stress recovery (Saggu & Kumar, 2008; 2007).

Shankhpushpi herb (Convulvulus pluricaulis, Evolvulus alsinoides, Clitoria ternatea, Canscora decussata) – these herbs are all known as Shankhpuspi and are used in Ayurvedic medicine as a "brain tonic" for enhancing memory, relieving anxiety, depression and preventing seizures. They have also been used to treat bronchitis, asthma and sexual neurasthenia. In animal research the herb improved memory and learning (Nahata, et al, 2010) and had immunomodulatory effects and "antistress" activity (Sethiya, et al, 2009). While these plants have nootropic effects, there is minimal evidence for them being adaptogens.

Trichopus seed (Trichopus zeylanicus subsp. travancoricus) – is a rare plant 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 reduce fatigue and stress, increase adrenal corticosterone levels, it inhibits ulcers, acts as a hepatoprotective agent, reduced blood sugar, exhibited anti-inflammatory activity, and is an aphrodisiac (Singh, et al, 2001). In 1995 a pharmaceutical product made from this shrub "Jeevni" was introduced and in a unique agreement the pharmaceutical company split the profits with the Kani people (Chellappan Biju, et al, 2019).

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