Adaptogens for Health and Vitality

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History

• Adaptogen is a fairly modern term. In the 1950’s, Russian scientists under grants from the military, became interested in substances which could improve general health and performance under stress. The idea was to find ways to enhance the productivity and performance of soldiers, athletes and workers without using dangerous stimulants.

History

• In their systematic search for a cheaper and more abundant alternative to Panax ginseng (Korean Ginseng) they discovered that a native Russian shrub, Eleutherococcus senticosus was an almost ideal herbal adaptogen. The term “adaptogen” was first coined by Lazarev and was elaborated by Brekhman. According to Brekhman, an adaptogen is a substance which can influence a non-specific increase in the resistance of an organism to noxious influences.
Criteria for Adaptogenic Classification
The general pharmacological properties of adaptogenic substances should ideally provide the following properties:
• It is non-toxic and relatively free from side-effects when used in normal, therapeutic doses
• It is non-specific; i.e. it can increase resistance to a wide range of physical, chemical and biological stressors throughout the entire body.
• It may have a normalizing action irrespective of whether the pathological state is hypo- or hyperfunctional.

How do adaptogens work physiologically?
• Several theories have been proposed to explain the effects adaptogens have on the body. One early theory proposed by Dardymov and Kirkorian states that adaptogens function primarily because of their antioxidant properties and free radical scavenging effects. However, this activity alone does not fully explain the beneficial effects of adaptogens.

How do adaptogens work? The HPA and SAS theory
• Researchers theorize that adaptogens work primarily by affecting the Hypothalamic/Pituitary/Adrenal (HPA) axis and the Sympathoadrenal System (SAS). The beneficial effects of multi-dose administration of adaptogens are mainly associated with the HPA axis, a part of the stress-system that is believed to play a primary role in the reactions of the body to repeated, chronic stress.
How do adaptogens work? The HPA and SAS theory

- In contrast, the single dose application of adaptogens is important in situations that require a rapid response to tension or to a stressful situation. In this case, the effects of the adaptogens are associated with the SAS, the part of the stress-system that provides a rapid response mechanism mainly to control the acute reaction of the organism to a stressor.
- The use of these herbs typically generates no side effects, unlike traditional stimulants that possess addiction, tolerance and abuse potential, produce a negative effect on sleep structure, and cause rebound hypersomnolence or 'come down' effects.

How do adaptogens work? The Hormesis theory

- Recently the concept of hormesis has been adopted by the fields of biology and medicine to portray the beneficial adaptive response of cells and organisms to moderate stress. In other words, moderate stress can actually promote health, well-being and mental and physical performance. During times of moderate stress, the body engages defence molecules. These molecules not only deal with the immediate threat, but also increase resistance to other threats. They can even repair existing damage.

How do adaptogens work? The Hormesis theory

- Examples of these molecular defence agents include heat shock proteins (HSPs), sirtuin1 (SIRT1), growth factors and cell kinases. HSPs are produced when cells are exposed to high temperatures, toxins or inflammation. Their job is to protect other proteins from damage by binding to them and shielding them from attack.
How do adaptogens work? The Hormesis theory con’t.

- Another “bodyguard”, sirtuin1 (or SIRT1), senses cellular stress and activates multiple genes that code for protective proteins such as antioxidants and cell membrane stabilizers. So it is proposed that certain phytochemicals can cause hormetic responses and may act as environmental signals to shift into survival mode.
- This sequence of events may tie into the physiological effects of engaging the HPA and the SAS systems.

Confident Adaptogens

- Ashwaganda
- Astragalus
- Eleuthero
- Gotu Kola
- Korean Ginseng
- Rhodiola
- Schisandra
- Shatavari

Ashwaganda (root) –

- **Actions:** Mild sedative, whole system tonic, adaptogen, anti-inflammatory, immune modulator, antianemic, antitumor (high doses needed)
- **Indications:** stress, exhaustion, anemia, anorexia, failure to thrive in children, insomnia, ADHD, support cancer patients esp. while undergoing chemotherapy; cachexia, CFS, impotence associated with anxiety or exhaustion, convalescence, inflammatory conditions (i.e. RA, MS, SLE, ankylosing spondylitis), improve stamina and well being.
**Astragalus (root)** -

- **Actions:** Immune stimulant, adaptogenic, diuretic, hypotensive, tonic, cardiotonic, antiarrhythmic, hepatoprotective. Traditionally used to tonify the Qi, blood and spleen.
- **Indications:** chronic immune problems, peptic ulcers, support cancer patients especially through chemo, spontaneous sweating, chronic fatigue syndrome, congestive heart failure, low cardiac output, general weakness, tonify the spleen.

**Eleuthero (root)** –

**Actions:** Immune modulator, adaptogenic, tonic, mild stimulant, anabolic
- **Indications:** chronic immune problems; stress and effects of prolonged stress i.e. Irritability, insomnia, mild depression; assist recovery from acute or chronic diseases, trauma, surgery; CFS, debility, convalescence, low vitality (physical and mental), improve well-being; adjuvant treatment for cancer, chemo or radiotherapy patients; low sperm count; improve learning; performance and stamina. Traditionally used for spleen-invigorating, kidney-tonifying and stagnant Qi and blood conditions. Particularly used for elderly patients.

**Gotu Kola (herb)** –

- **Actions:** Adaptogenic, antifibrotic, nerve tonic, vulnerary, vasodilator, cerebral circulatory enhancer. Strengthens blood vessels and connective tissues.
- **Indications:** to promote healing in general; skin disorders: to improve wound healing, cellulitis, leg ulcers, canker sores, scleroderma, keloids and hypertrophic scars; circulatory disorders: venous insufficiency of lower limbs, varicose veins, hemorrhoids; rheumatic conditions; to improve mental function; as an adaptogen to assist in times of stress; **Topical** - for skin conditions listed above.
Korean Ginseng  AKA Panax (root) –

**Actions:**  Tonic*, stimulant, Immune modulator (Cl in acute), adaptogenic, thymoleptic (raises mood), ↑’s rbc’s oxygen-carrying capacity

**Indications:** to improve mental and physical performance and stamina; to improve well-being; fatigue and debility; as a tonic in convalescence and for the elderly; depleted immunity, male infertility and impotence; menopause; organ prolapse; excessive sweating; withdrawal from opiates; prevention of cancer and as an adjunct in patients undergoing radiation therapy; cardiovascular conditions, congestive heart failure; low HDL cholesterol; cold hands and feet.


Rhodiola (root) –

- **Actions:**  Adaptogen, tonic, antitumor, hepatoprotective, hepatotrophorestorative.
- **Indications:** Fatigue, mental and/or physical exhaustion. To improve mental performance, concentration and memory, especially when under stress or emotional tension. Enhances physical performance and endurance. May assist sexual function in men. Adjuvant treatment of cancer.


Schisandra (fruit)-

- **Actions:**  Hepatoprotective, choleretic, adaptogen, antitussive, antioxidant, nervine
- **Indications:** to improve the detoxifying capacity of the liver; acute and chronic liver diseases, in conjunction with other herbs; chemical liver damage; to improve mental, physical and sensory performance; nervous system disorders, stress, mood enhancement; depression.
Shatavari (root) –

- **Actions**: Tonic, galactagogue, aphrodisiac, adaptogenic, antispasmodic, antidiarrheal, diuretic
- **Indications**: Promoting estrogen production and balance, menopausal symptoms, promoting conception; for sexual debility and infertility in both sexes’ insufficient lactation; as a tonic for general debility, fatigue, infections; for promoting appetite in children.

POSSIBLE ADAPTOGENS:

- Bacopa
- Holy Basil
- Ganoderma (aka Reishi)
- Licorice
- Many others!

Bacopa (herb)–

- **Actions**: Brain tonic, memory & learning enhancer. Nerve tonic, sedative, anxiolytic. Possibly adaptogenic and anticonvulsant.
- **Indications**: Tonic for improving memory, concentration and learning, particularly where stress is also present; nervous deficit due to injury, stroke and Alzheimer’s, nervous breakdown, nervous exhaustion, behavioral disorders, anxiety, may be of value in epilepsy and insanity.
**Holy Basil** (herb) –

- **Actions:** Immune stimulant, anti-inflammatory, antiseptic, antitussive, anticatarrhal, expectorant, hepatoprotective, diaphoretic, adaptogenic
- **Indications:** immune disorders, U.T. infections, respiratory tract, fevers, worms/parasites, nausea/vomiting, inflammation, diabetes and Parkinson’s, prevents liver damage.

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**Licorice** (root) –


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**Licorice** (root) – con’t

- **Indications:** adrenal fatigue, adrenal exhaustion; Addison’s disease; aid withdrawal from corticosteroid drugs, hyperkalemia (from low aldosterone) associated with NIDDM; bronchial congestion, spasitic coughs, pertussis, bronchitis and allergies; soothes irritated mucous membrane, esophagitis, GERD, sore throat; laryngitis, gastritis, mouth, esophageal, gastric and duodenal ulcers, urinary tract inflammation; prevention of dental caries; may improve immune response in HIV/AIDS patients; postural hypertension; polycystic ovarian disease; vasovagal syncope, hypoglycemia, 

- **Topical** - herpetic lesions and shingles

- **Cautions:** Watch potassium levels, blood pressure & thyroid function in long-term and/or excessive use.
Reishi fungus (*Ganoderma lucidum*) –
Mushroom body.

- At least seven other species exist such as White Reishi and Black Reishi, but all are inferior to the most active, which is the Red Reishi (*Ganoderma lucidum*). It is often adulterated with these inferior species. *G. lucidum* is very bitter due to higher terpene content over other species. Also has significant polysaccharide content.
- **Actions:** immune amphoteric, cardiotonic, antihistamine, antihepatotoxin, hypotensive, antiallergic, radiation protective, adaptogen, nervine

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Reishi fungus (*Ganoderma lucidum*) –

- **Indications:** autoimmune conditions, allergies, HIV, adjunct in cancer treatments, may minimize leucopenia; reduce side effects of radiation, hypertension, chronic stress, liver toxicity, post-viral syndromes, convalescence, as a tonic for the elderly.
- In Chinese medicine, it is considered a calming adaptogen and is used for disturbed ‘Shen’, (translated as the vibrance of consciousness or mind.) therefore the Chinese also use it for anxiety, but best to combine with other antianxiety herbs (Bacopa, California Poppy).
- It is an immune modulating herb and appears to protect the body from viral attack.

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**Q & A’s**

- Please feel free to contact me if you have questions not answered in this session.

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