



NUTRITION
FOR WELLNESS

SUPPORTING HORMONAL HEALTH

Your Introductory
Handbook to Adaptogens

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Introduction & Historical Perspective

Tracing the Roots of Adaptogens

The word “adaptogen” is derived from the Greek word “adapto”, meaning “to adjust”.

Adaptogens include a group of traditional plants and herbs that help us to be more resilient to stress and improve our ability to handle stress demands without getting overwhelmed or fatigued.

By definition, adaptogens must be non-toxic and must yield support for homeostasis via the HPA-axis glands (the hypothalamus, pituitary, & adrenals).

Adaptogens help to optimize mitochondrial and thyroid activity and support immune function, focus, energy, and the ability to take on stressful activity, while limiting fatigue and exhaustion. These herbs provide influence on supporting the mind and memory while improving cognitive function and reducing anxiety.

History: The term ‘adaptogen’ was first proposed in 1940, by a Soviet scientist in describing specific herbs with the following definition: plant-originated adaptogens that can non-specifically enhance the human body. Since then the concept of adaptogens has been further expanded and defined. In 1998, the U.S. Food and Drug Administration (FDA) defined an adaptogen as “a new kind of metabolic regulator that has been proven to help in environmental adaptation and to prevent external harms.”

introduction & history



Key Terminology

A Glossary for Understanding Adaptogens

herb | botanical

Has several meanings depending of perspective

- Commercial plants used for culinary purposes
- Horticultural: "herbaceous," which describes the appearance of the plant
- Taxonomic: above ground parts or the aerial parts
- Herbal medicine: plants used in various forms or preparations, valued for their therapeutic benefits
- Herbs do not heal in and of themselves. They support self-organization when disease/dysfunction is present.

adaptogen | herbal preparation

A nontoxic substance, and especially a plant extract, that is held to increase the body's ability to resist the damaging effects of stress and promote or restore normal physiological functioning; plant compounds which increase 'the state of nonspecific resistance' in stress.

hypothalamic-pituitary-adrenal [HPA] Axis

The HPA axis, made up of three key glands—the hypothalamus, pituitary, and adrenals—regulates your body's fight-or-flight response. When stress levels are high, this system can become overactive, leading to issues like slowed metabolism, chronic fatigue, weakened immunity, and mood imbalances.

key terminology

Harnessing the Power of Nature

Herbal Delivery Systems

TEAS



- may be used as hot or cold beverage, skin wash, soak or bath, hair rinse, mouth wash, sitz bath, etc.
- **DECOCTION:** A tea made from boiling plant material (i.e. bark, rhizomes, roots, or other woody parts) in water.
- **INFUSION:** A tea made by pouring boiling water over flowers, leaves, and other plants

TINCTURES AND EXTRACTS



- A tincture is dried plant material soaked in a solvent (usually a 1:5 plant to solvent ratio)
- A 'specific tincture' is made with fresh herbs vs. dried herbs
- A 'fluid extract' is made at 1:1 strength (long shelf life, convenient for dispensing)

TABLETS AND CAPSULES



- Binders and coating agents are used to keep the tablets together and from chipping
- Poultice
- Fomentation

TOPICAL



- Essential oils
- Herbal infused oils
- Creams and salves



What Makes an Adaptogen Criteria and Characteristics

non-specific |
assistance

must be non-specific and assist the human body in resisting a wide range of adverse conditions, such as physical, chemical or biological stress (e.g. environmental pollution, climate change, radiation, infectious diseases, and interpersonal disharmony)

homeostatic |
maintenance

must maintain homeostasis in humans (i.e. substances can offset or resist physical disorders caused by external stress)

normal functions |
non-interference

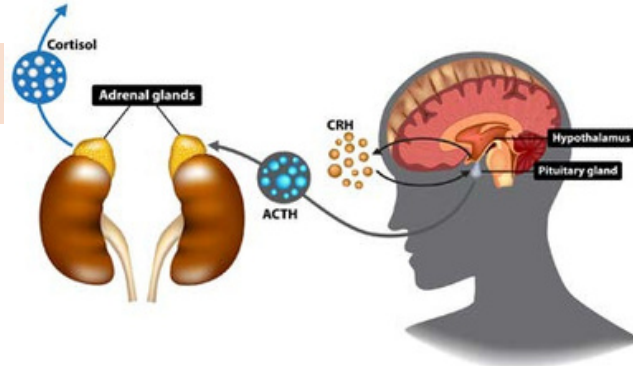
must not harm the normal functions of the human body

criteria

Unraveling Adaptogen Mechanism

How Do they Achieve Balance?

how do they work...



The hypothalamic-pituitary-adrenal (HPA) axis

Adaptogens work at a molecular level by regulating a stable balance in the hypothalamic, pituitary, and adrenal glands (also known as the HPA axis; which are all involved in stress response). They are the material basis of the bodily response to the external environment and can act on the immune and stress response systems by activating the adjustment of different responses to cope with different forms of stress. Finally, adaptogens can improve the stress response system to respond to high levels of external signals in the normal or abnormal states.

functions of adaptogens

Adaptogens can affect different tissues and organs (from cells to organs including the liver, kidney, heart and gastrointestinal tract), and adjust each of these parts to attain homeostasis, specifically



- Adrenal fatigue
- Anti-tumor
- Arthritis (osteoarthritis, rheumatoid arthritis, etc.)
- Endocrine system
- Immunity (remodel immune mechanism and non-specifically enhance the resistance of the human body)
- Multi-drug resistance (inhibit development)
- Promote marrow production (increase the amount of blood cells and reduce infection)
- Sleep
- Stress hormone level reduction during immune dysfunction
- Time difference syndrome



Considerations & Diversity

Exploring Various Adaptogen Types

primary

- Adaptogenic characters supported by abundant scientific research
- Adverse, or toxic, effects after prolonged use
- Function mainly by affecting the hypothalamic-pituitary-adrenal (HPA axis)
- Promote anabolic energy
- Can produce positive stress response and the associated hormone expression
- Strengthen the functioning of neuroendocrine system and enhance cellular energy transfer

secondary

- Meet most of the qualifications of primary adaptogens; have yet to be studied extensively
- Do not influence the HPA axis directly; however, they can affect the immune, nervous, and endocrine systems
- Typically exert influence on the immune, nervous and endocrine systems
- Can enhance anabolism
- Include fatty acids, sterols and phenols

companions

- May not satisfy all of the traditional standards but can have beneficial effects to support the functions of adaptogens
- Although they have similar functions as the other kinds of adaptogens, these plants cannot formally be called adaptogens
- Can act synergistically with primary and secondary adaptogens, thereby improving adaptogenic effects

various adaptogen types

A Closer Look Common Adaptogenic Herbs

Who should not use adaptogens?

Pregnant and breast-feeding women should avoid the use of or be very cautious with the use of adaptogens as they may affect hormones. Women should work with their provider or dietitian before using adaptogenic herbs.

Common adaptogenic herbs

Currently, there are about 70 herbal plants cited in literature with adaptogenic properties. Two of the most popular adaptogens are ashwagandha root and tulsi.

Ashwagandha

Withania somnifera



- **Common Names:** Often called "Indian Winter Cherry," "Indian Ginseng," and revered as the "royal herb" in Eastern medicine.
- **Origin of the Name:** "Ashwagandha" literally means "smell of the horse," symbolizing its distinctive scent and the strength and vitality it is believed to impart.
- **Key Attributes:** The most widely used and researched adaptogen, known for its adaptogenic, antioxidant, and immune-boosting properties.
- **Benefits:** Promotes calmness, supports better sleep, enhances cognitive function, and helps reduce stress and feelings of anxiousness.
- **Usage:** Available in powder form, perfect for adding to teas, smoothies, or baked goods. It's also found as an essential oil and in capsule supplements.
- **Caution for individuals with an autoimmune disease,** Ashwagandha may aggravate symptoms in some. Work with a knowledgeable healthcare professional.

common adaptogenic herbs

Cordyceps

Ophiocordyceps sinensis



- **What It Is:** Cordyceps is a unique fungus that naturally grows on caterpillars found in the high-altitude regions of China.
- **Supplement Source:** Most cordyceps supplements are lab-grown since wild cordyceps are rare and costly.
- **Key Benefits:** Known for enhancing exercise performance, offering anti-aging & immune enhancing properties, supporting potential anti-tumor activity, helping manage Type 2 Diabetes, and reducing inflammation.
- **Choosing a Quality Product:** Opt for supplements with USP or NSF certification to ensure high quality and purity.



Eleuthero

Siberian ginseng *

- **Scientific Name:** Eleutherococcus senticosus (also known as Siberian Ginseng)
- **Primary Benefits:**
- **Adaptogen:** Well-known for reducing fatigue and enhancing the body's resilience to stress.
- **Improves Endurance:** May boost physical performance and stamina, supporting overall energy levels.
- **Cardiovascular Health:** Promotes cardiovascular wellness by supporting healthy blood flow and heart function.
- **Immune Support:** Enhances immune system activity, helping the body fight off infections and recover more quickly.
- **Cognitive Function:** May improve mental clarity, focus, and reduce mental fatigue.

Licorice root

Glycyrrhiza glabra



- Scientific Name: *Glycyrrhiza glabra*
- Key Health Benefits:
- Digestive Health: Helps soothe gastrointestinal issues like acid reflux, heartburn, and gastritis due to its anti-inflammatory and mucosal-protective properties.
- Anti-inflammatory and Immune Support: Contains glycyrrhizin, which has potent anti-inflammatory effects and may help boost immune response.
- Respiratory Health: Historically used to alleviate coughs and sore throats by acting as an expectorant and soothing irritated airways.
- Adaptogenic Properties: Supports adrenal health and may help the body cope with stress by reducing cortisol breakdown.
- Anti-ulcer Activity: This may aid in the healing of stomach ulcers by promoting mucus production and reducing irritation.
- Powdered Form: Often incorporated into spice rubs for meat and poultry, adding a unique sweet and aromatic flavor profile.

Maca

Lepidium meyenii or *Lepidium meyenii* *



Scientific Name: *Lepidium meyenii* (commonly known as Maca)

Primary Benefits for Women's Health:

- Hormonal Balance: May help support hormonal regulation, particularly during perimenopause and menopause, reducing symptoms like hot flashes, night sweats, and mood swings.
- Libido and Sexual Health: Known to enhance libido and improve sexual function, particularly in postmenopausal women.
- Energy and Vitality: A natural energy booster, helping reduce fatigue and increase stamina and overall vitality.
- Mood and Mental Health: May help alleviate symptoms of anxiety and depression; promote a better mood and improved emotional well-being.
- Bone Health: Contains nutrients like calcium and magnesium that support bone density, which can be beneficial for women at risk of osteoporosis.
- Cognitive Function: Potentially improves mental clarity, focus, and memory, particularly during times of hormonal changes.

Panax ginseng

Asian ginseng



Scientific Name: Panax ginseng (also known as Asian Ginseng, Korean Ginseng, or Chinese Ginseng)

- **Primary Benefits for Women's Health:**
- **Energy and Fatigue Reduction:** Known for its anti-fatigue properties, it may help boost energy levels and combat tiredness, which is particularly useful for women experiencing chronic fatigue or low energy.
- **Cognitive Function:** Supports memory focus, with potential benefits for reducing brain fog and enhancing overall mental performance.
- **Hormonal Balance:** It may help alleviate symptoms associated with menopausal conditions, such as hot flashes, mood swings, and sleep disturbances, contributing to better overall hormonal health.
- **Immune System Support:** Enhances immune function and helps the body's immune system fight off infection.
- **Stress and Mood Regulation:** Acts as an adaptogen, helping the body adapt to stress, reduce anxiety, and support better mood.
- **Anti-Aging Properties:** Rich in antioxidants, which may help protect against oxidative stress, contributing to healthier skin and overall vitality.

Ways to Incorporate Ginseng:

- **Ginseng Tea:** A simple and effective way to enjoy the adaptogenic benefits of ginseng in a daily diet.
- **Ginseng Powder:** This can be added to smoothies, soups, or baked goods to enhance nutrient intake and support energy levels.

Rhodiola

Rhodiola rosea or Rhodiola crenulata *

Scientific Name: Rhodiola rosea or Rhodiola crenulata

Primary Benefits for Women's Health:

- **Stress Reduction:** Known for its adaptogenic properties, Rhodiola helps reduce stress by lowering cortisol levels, and supporting a balanced stress response.
- **Improves Fatigue:** Effective in combating physical and mental fatigue, making it beneficial for individuals experiencing chronic tiredness, burnout, or low energy.
- **Boost Mental Performance:** May enhance cognitive function, improving focus, memory, and concentration, particularly during stressful periods or mental fatigue.
- **Mood Support:** Shown to have antidepressant effects, helping reduce symptoms of mild depression and anxiety, improving overall mood and emotional well-being.
- **Physical Endurance and Exercise Performance:** Enhances stamina and physical endurance, supportive for improving exercise performance and recovery.
- **Hormonal Health:** May support hormonal balance by reducing stress-induced disruptions, which can benefit women dealing with hormonal imbalances or perimenopausal symptoms.



common adaptogenic herbs

Schisandra (Five-flavor berry) |

Schisandra chinensis *



Scientific Name: Schisandra chinensis (commonly known as Five-flavor berry)

- Primary Benefits for Women's Health:
- Energy and Vitality: Acts as an adaptogen, helping to reduce fatigue, increase physical endurance, and support individuals dealing with chronic tiredness or low energy.
- Stress Reduction and Mental Health: May enhance mood and reduce symptoms of anxiety and depression, supporting overall mental well-being and emotional balance.
- Cognitive Function: Supports focus and memory, particularly during periods of high stress or mental fatigue.
- Liver Health and Detoxification: Contains antioxidants that support liver function and aid in detoxification, promoting hormonal balance.
- Hormonal Balance: May help regulate hormonal fluctuations, particularly during perimenopause and menopause, easing symptoms like mood swings, hot flashes, and sleep disturbances.
- Digestive and Respiratory Health: Supports healthy digestion and may help soothe respiratory issues like coughs or mild asthma due to its anti-inflammatory and its adaptogenic properties.
- Cardiovascular Support: Promotes cardiovascular wellness by improving blood circulation and potentially helping to regulate blood pressure.

common adaptogenic herbs

Other common adaptogens



- Medicinal Mushrooms (e.g., Chaga, Reishi, King Oyster):
- Immune System Support: Medicinal mushrooms, particularly Reishi, are known to enhance immune function by promoting white blood cell activity, helping the body fight infections, balance inflammation, and improve overall immune resilience.
- Pine Pollen:
- Hormonal Support: Rich in phytoestrogens, Pine Pollen can support hormonal balance, particularly during perimenopause and menopause, potentially reducing symptoms like hot flashes, mood swings, and fatigue.



Tulsi (Holy basil) | *Ocimum tenuiflorum*



common adaptogenic herbs

Scientific Name: *Ocimum tenuiflorum* (commonly known as Tulsi or Holy Basil)

Primary Benefits for Women's Health:

- **Stress Reduction and Adaptogenic Properties:** Acts as a powerful adaptogen, helping the body manage stress, reduce anxiety, and promote emotional resilience.
- **Hormonal Balance:** May help regulate cortisol levels, supporting hormonal balance and reducing symptoms related to stress-induced hormonal fluctuations, particularly in perimenopausal and menopausal women.
- **Immune Support:** Boosts immune function with its antimicrobial and anti-inflammatory properties, helping protect against infections and reduce inflammation.
- **Respiratory Health:** Traditionally used to ease respiratory issues such as asthma, coughs, and colds, promoting clearer airways and better lung function.
- **Digestive Health:** Aids in digestion by reducing symptoms of indigestion, bloating, and gas, supporting overall gut health.
- **Anti-inflammatory and Antioxidant Effects:** Contains compounds like eugenol and rosmarinic acid, which help reduce inflammation and protect against oxidative stress, potentially reduces the risk of chronic conditions like arthritis and heart disease.
- **Blood Sugar Regulation:** May help stabilize blood sugar levels, making it beneficial for women with insulin resistance or Type 2 diabetes.

Ways to Incorporate Tulsi:

- **Culinary Uses:** Easily added to Thai and Indian dishes for flavor and health benefits.
- **Herbal Teas:** Can be enjoyed as a hot or cold tea to promote relaxation and support overall wellness.

Important Note:

Before starting any adaptogen, consult with your physician or a knowledgeable healthcare provider. This is especially important if you have pre-existing health conditions or are currently taking medications.



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