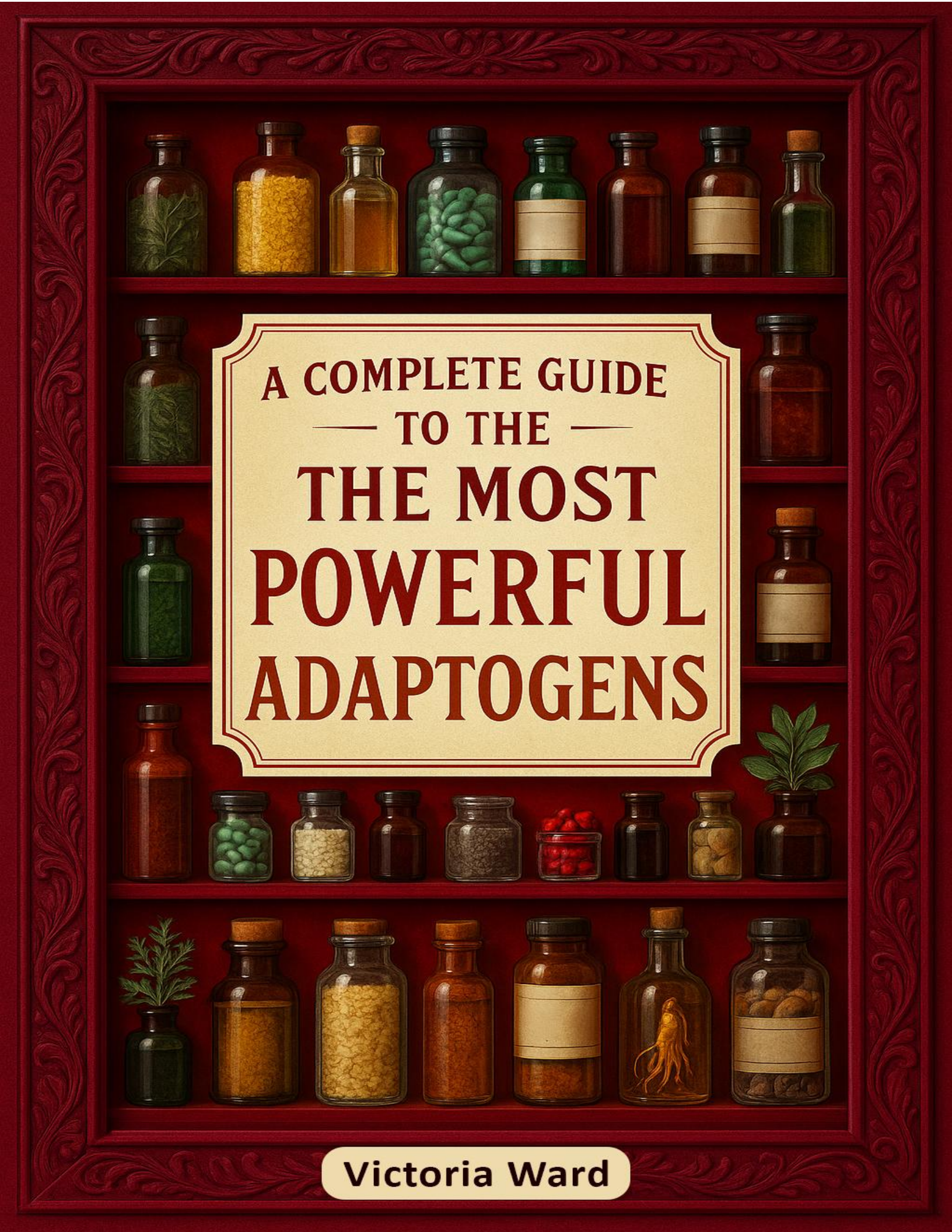
A COMPLETE GUIDE
TO THE
THE MOST
POWERFUL
ADAPTOGENS
Victoria Ward

A Complete Guide to the Most Powerful Adaptogens

Victoria Ward

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Introduction

Welcome to the wonderful world of herbal adaptogens. If you are looking for natural remedies to help navigate life's ups and downs, then this guide will provide valuable information on which herbs to choose.

If you are struggling with low energy, fatigued or feel run down and succumb to recurrent infections, adaptogens may just give you the extra boost you need.

Adaptogens can provide support at every stage of life, students may find they increase their capacity to study effectively and the elderly can boost their cognitive functioning, reducing the risk of dementia.

If you are keen on sport or exercise, supplementing with adaptogens may allow you to push yourself a little further without depleting your system. These remedies are for everyone and very easy to use.

Learn about the wealth of tradition that supports their usage and the modern research confirming what our wise ancestors already knew.

The last chapter contains several easy recipes to get you started on your adaptogen journey.

What Are Adaptogens?

All living organisms experience stress on a regular basis, meeting life's challenges and overcoming them is key to survival for plants, animals and humans alike.

The causes of daily stress include environmental factors such as fluctuating temperatures, drought and floods, the threat from predators, injury and microbial threats from viruses, bacteria and fungus.

The ‘fight-or-flight’ response is an acute stress response triggered by real or perceived threats and danger, the sympathetic nervous system becomes activated resulting in the familiar pounding heart, faster breathing, sweaty palms and tense muscles. Animals in the wild rely on this response to survive as we humans once did, they live on their instincts and need to react swiftly.

In these more civilised times, the threats humans perceive which trigger stress responses are more likely to be due to work and family pressures rather than dangerous predators. The response is still the same and can become an unregulated overreaction leading to chronic anxiety, depletion and exhaustion.

The Stress Response and Homeostasis

Homeostasis describes a state of physiological balance within the body, this is a self-regulating process enabling stability of biological systems in response to ever-changing external factors. Regulation of body temperature is one example of homeostasis in action, this can be challenged by external temperature, hormones, metabolic rate and disease. Feedback systems from the hypothalamus in the brain travel throughout the nervous system resulting in adjustments to regulate metabolic processes and breathing. Other examples of homeostasis maintenance include regulation of blood sugar, blood pressure and skin function.

Stress responses can be triggered by insufficient homeostatic control and result in inflammatory reactions, this inflammation can become unregulated if not resolved and can lead to the development of many chronic health conditions.

The hypothalamic-pituitary-adrenal axis or HPA axis, is a communication system between the hypothalamus, pituitary gland and the adrenal glands. This network manages homeostasis by operating a feedback loop to react to stress and regulate the body's response accordingly.

The endocrinologist Hans Selye founded the ‘stress theory’ in 1936, he was the first to describe how stress unfolds physiologically and leads to disease in humans. He identified three distinct stages of reaction to a stressor from an initial alarm response through to exhaustion and burnout. He discovered through anatomical examination how chronic stress can cause disease and damage organs [7].

He named these three phases of stress response ‘General Adaptation Syndrome’ [1]

1. Alarm phase (fight or flight)
2. Resistance/adaptation phase
3. Exhaustion phase

The initial alarm reaction to a stressor leads to resistance and adaptation, if this becomes prolonged the resistance diminishes and exhaustion results. In physical terms the adrenal cortex enlarges, the thymus decreases in size as does lymphatic tissue. Ulcers can develop in the stomach and duodenum.

When the body can no longer resist the impact of chronic stress, organs become impaired and systems sustain damage, energy is low, immune function impaired, inflammation becomes unregulated and chronic illness can result.

Plants have developed their own chemical responses as a defence against stressors, these are called phytochemicals and humans can harness their benefits to support our own functioning and regulate our stress response. Adaptogens offer us a natural remedy to rebalance our systems when faced with modern life challenges.

Definitions of Adaptogens

Although plants have been used as medicine since the dawn of mankind, the term adaptogen is relatively new. It has been given to a class of herbal medicines that help the human body adapt to stress and reduce the negative impact of chronic stress on the body.

The term adaptogen was first coined in 1947 by Russian scientist and toxicologist Dr Nikolai Lazarev to describe substances that increase the “State of nonspecific resistance” in stress [2].

Israel Brekham, a Russian physician and scientist worked alongside his mentor Dr Lazarev and together they researched these amazing plants. They worked under the instruction of Soviet leaders looking to increase productivity and gain advantage over other nations. They realised these plants had managed to survive in often harsh environments and must be resilient and contain powerful chemical compounds. Funded by the Soviet Union, Brekham and Lazarev conducted more than 3,000 clinical trials on adaptogens. Brekham offered a further definition for adaptogens-

“Adaptogens must be safe and normalise body functions irrespective of the nature of stressors” [2].

The European Medicines Agency (EMA) describe adaptogens -

“Adaptogenic substances are stated to have the capacity to normalise body functions and strengthen systems compromised by stress. They are reported to have a protective effect on health against a wide variety of environmental assaults and emotional conditions.” [8]

Collated evidence from clinical trials led to further definition of adaptogens as-

> “Herbal preparations that increase attention and endurance in fatigue and reduced stress-induced impairments and disorders related to the neuro-endocrine and immune systems.”

How Adaptogens Work

Adaptogenic substances are derived from different plant parts including roots, leaves and seeds. Many species of fungi are now included in the adaptogenic inventory and are an increasingly popular supplement with an impressive array of health benefits. Herbal adaptogens are found growing worldwide and offer different pharmacological profiles across the many plant species that are in this category.

Adaptogens contain phytochemicals, some of which are similar in structure to our hormones allowing them to interact effectively with our physiological processes. These herbs can prolong the resistance phase of the stress response, helping to prevent the exhaustion stage by a stimulating and strengthening action. One way adaptogens contribute towards reducing stress and maintaining homeostasis is by normalising chronically elevated levels of the stress hormone cortisol [3]. This is achieved by interacting with the HPA axis [6].

Adaptogens can reduce the flight-or-flight response thus preventing an over-reaction by the sympathoadrenal system. They can improve mood by exerting influence over the neurotransmitters and also modulate the immune system through their antioxidant action, reducing the inflammatory damage caused by free-radical species.

A variety of phytochemicals are responsible for adaptogenic activity in certain plants, examples include *withanolides* in Ashwagandha (*Withania somnifera)* which are steroidal lactones with an anti-inflammatory action.

Saponins are immune-enhancing phytochemicals that aid with stress reduction, examples include *ginsenosides* found in *Panax Ginseng.*

Lignans, which are compounds found in Schisandra (*Schisandra chinensis)* are structurally similar to catecholamines found in nerve cells. Catecholamines are chemicals used to signal other cells in response to stress.

Tetracyclic triterpenoids are anti-inflammatory compounds found in many plants that function in a similar way to corticosteroid drugs.

The above are just several examples of how adaptogens have similar mechanisms of action to many commonly used medications but without the many side-effects that often accompany them.

Classes of Adaptogens

The herbal category of adaptogens contains around 70 varieties of plants and fungi, but not all adaptogens are equal, some are much more powerful in action and can be classified as primary adaptogens [5].

Primary adaptogens have large amounts of scientific research behind them and are characterised by general resistance and non-specific action in the body alongside maintenance or restoration of homeostasis.

These adaptogens promote anabolic recovery and strengthen the functioning of each system. Primary adaptogens regulate energy by providing a steady supply. The best example of a primary adaptogen is *Panax ginseng;* other herbs falling into this category include Roseroot (*Rhodiola rosea)*, Ashwagandha (*Withania somnifera)* and *Schisandra chinensis.*

Secondary adaptogens cannot directly influence the HPA axis but do affect the immune, nervous and endocrine systems. They can enhance anabolism and contain phytochemicals such as fatty acids, sterols and phenols. Examples of secondary adaptogens are Water Hyssop (*Bacopa monnieri)*, Shatavari (*Asparagus racemosus)* and Liquorice (*Glycyrrhiza glabra)*.

The final class of adaptogens are not true adaptogens, but adaptogen companions that can have beneficial effects to the HPA axis by providing a supportive function to primary and secondary adaptogens. They cannot be formally called adaptogens but act in synergy with true adaptogens improving the overall result. Ginkgo (*Ginkgo biloba)* and Rosemary (*Rosmarinus officinalis*) are examples of adaptogen companions.

Historic Use of Adaptogens

Research into the benefits of adaptogens to human health began during World War II, Russian scientists began by exploring the benefits of *Schisandra chinensis* [4]. The desire for superiority in mental and physical functioning drove the quest to source novel agents that would provide good results.

Although the classification and researching of adaptogens is relatively new, their usage has been apparent for millennia across the world, forming a crucial part of ethnobotany.

Traditional Medical Systems

Plants we now classify as adaptogens, particularly the primary adaptogens, have been highly regarded in traditional medical systems for millennia. As the term adaptogen did not exist until the middle of the 20th century they were known by other names. Depending on the medical system documenting herbs, they may be known in old herbal texts as restoratives, qi-tonics, rasayanas or rejuvenating herbs.

The theme that unites all of these systems is ‘life vital energy’, and its importance to health is shared across all cultures. The concept of nurturing vital energy is fundamental and universally understood to promote health and longevity.

The two most widely understood Traditional Medical Systems or TMS are Ayurvedic medicine and Traditional Chinese medicine (TCM). Vital energy in Ayurvedic medicine is ‘prana’ and in TCM is ‘qi’. Both systems, amongst many others around the world, use key plants to regulate and nurture vital energy.

Ayurvedic Medicine

This ancient medical system originates in South Asia, as mentioned earlier the vital life force is called ‘prana’, and the rejuvenating herbs used to influence prana are called ‘rasayana’ remedies.

These herbs include the adaptogens Ashwagandha and Roseroot.

Traditional Chinese Medicine

According to Traditional Chinese Medicine (TCM), Qi is the vital life force and the energies of yin and yang balance qi, promoting and maintaining homeostasis. The 4000-year-old text ‘The Divine Husbandman’s Classic of the Materia Medica’ includes the earliest existing monograph for Panax ginseng which is said to tonify the primal qi of all organs and is considered a superior tonic in TCM.

Panax is now one of the most well-known and highly regarded primary adaptogens across the world [4].

What are the Health Benefits of Adaptogens?

Stress Reduction

As already discussed in previous chapters, adaptogens have a significant effect on the stress response by regulating the HPA axis and reducing symptoms of sympathoadrenal activation such as increased heart rate, blood pressure and faster breathing.

In one randomised controlled trial Ashwagandha showed significant ability to decrease serum cortisol levels in stressed adults over 60 days and reduce stress levels as recorded on a 'Perceived stress scale (PSS)' [9].

Water Hyssop, a secondary adaptogen, lowered cortisol levels as did Siberian Ginseng. Holy Basil and Roseroot performed well at reducing PSS [9].

Mood Improving

The increasingly prevalent mood disorders of depression and anxiety can be difficult to treat with many sufferers seeking alternative natural sources of relief from conventional medications and therapies. Adaptogens and adaptogen companions can offer significant relief, particularly in combination.

St John's Wort is one of the most highly studied and regarded herbs for the treatment of depression acting in a similar way as standard SSRI antidepressants. It can prevent reuptake of serotonin in the brain, leading to higher circulating levels of this feel-good neurotransmitter. One review suggested that Rose root, Panax ginseng and Ashwagandha all warranted further study as potential depression treatments [10].

Ashwagandha is one of the adaptogens of choice to treat anxiety due to its calming action. One randomised controlled trial found that supplementation with Ashwagandha for an eight-week period reduced anxiety, leading to overall improved quality of life in participants[11].

Of the adaptogen companions, aside from the well-known St John's Wort, Rosemary is an excellent anti-depressant herb, Lavender would be indicated for reducing both anxiety and depression.

Musculoskeletal Support/Sports Performance

Athletes and non-athletes are increasingly looking for natural ways to boost strength and endurance, adaptogen use is on the rise in such groups seeking safe remedies.

Adaptogens can improve attention, stamina, strength and energy where physical exertion leads to fatigue or restore damage caused by the stress on the body.

Several adaptogens have been identified as beneficial to athletes and those engaging in sport, Ashwagandha, Astragalus, Cordyceps, Ginseng, Holy Basil, Rhodiola, Schisandra and Turmeric are amongst the most effective.

One randomised controlled trial reviewed top Indian cyclists supplementing with Ashwagandha capsules for eight weeks and recorded significant improvements in performance. This adaptogen increases endurance capacity of athletes by improving oxygen consumption and promoting muscle growth [12]. The action of Ashwagandha to enhance gains in muscular mass makes it highly beneficial for resistance training.

Astragalus has also performed well in trials demonstrating enhanced performance, reduced fatigue, generally increasing exercise performance. It has shown an ability to reduce the build-up of lactic acid and ammonia in the bloodstream [12]

The mushroom Cordyceps was trialled on marathon runners showing results of reduced heart rates, improved endurance and enhanced aerobic performance.

The powerful adaptogen Panax Ginseng performed well during a trial on highly trained athletes.

Cognitive Functioning

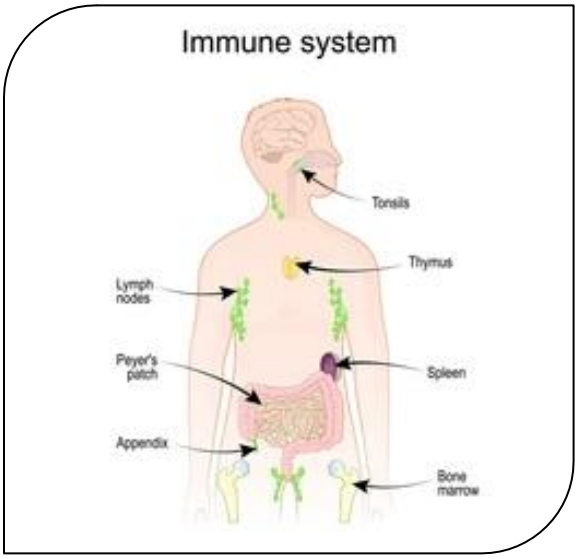
Studies show adaptogens can have positive actions on memory and cognitive function, they demonstrate neuroprotective activity that may be helpful in disorders such as Parkinsons and Alzhiemers [13]

Many adaptogens have ‘nootropic’ effects which is a term describing substances that specifically enhance cognitive function. In recent years many of the medicinal mushrooms have become very popular as nootropic supplements.

Ashwagandha has particularly stood out in several trials assessing the cognitive enhancing power of adaptogens [13].

Immune System Support

Adaptogens have unique powers to help people recover, particularly in times of stress. They generally contribute towards reductions in inflammation through their high antioxidant content and help modulate the immune system.



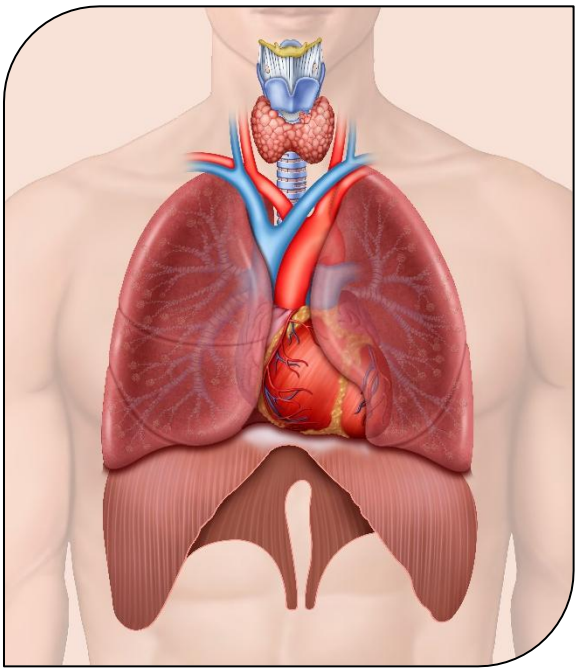
Medicinal mushrooms have received plenty of attention in recent years in the west for their immune enhancing properties.

In TCM they have a long history of use for all kinds of infections, but for over thirty years they have been approved as a cancer treatment in China and Japan, both as a stand-alone treatment or as an adjuvant to radiation and chemotherapy [14].

There are over 100 types of medicinal mushrooms so the future potential for harnessing their powers for immune health is very exciting and there are numerous studies emerging to support their benefits.

Respiratory and Cardiovascular Health

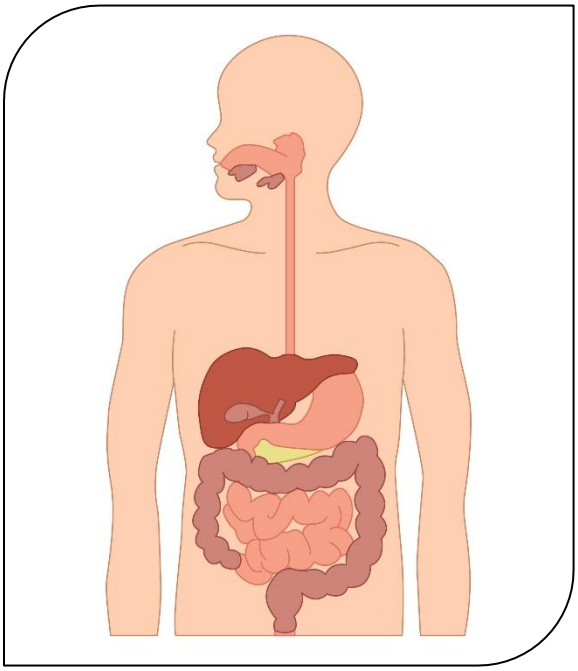
Arguably all adaptogens will benefit respiratory and cardiovascular systems through antioxidant and anti-inflammatory action. Their general ability to regulate the HPA axis and calm the nervous system reducing stress will have a knock-on effect of reducing high blood pressure, bolstering the immune system reducing the risk of long-term diseases.



Some adaptogens have particular affinity with certain systems, in the case of the cardiovascular system Shisandra and Roseroot. Roseroot has been researched for benefits to cardiovascular health and has demonstrated significant pharmacological effect on cardiac disease [15].

Liquorice is a highly regarded herb for ailments of the respiratory system as it is demulcent in action, this means it can moisten and soothe irritated respiratory passages and relieve coughs. It is also an expectorant heb which means it can help with removing excess phlegm and mucous from the lungs and

Digestive Health and Nutritional Support



Many adaptogens are high in nutritional value, as so many are roots, they are by nature sweet and nourishing to the system. Vitamin and mineral levels tend to be very high in this class of herbs which supports their nourishing and strengthening abilities.

Traditionally many adaptogens, particularly mushrooms, have been consumed as part of everyday diets and if you follow some of the recipes provided in the final chapter, you will see how easy it is to gain the benefits of adaptogens this way.

Liquorice particularly lends its action to supporting the digestive system, it reduces inflammation and heals ulceration in the digestive tract.

Turmeric is a superb herb for gut health and is considered a prebiotic which nourishes the microbiota.

Detoxification Support

If you are looking to detoxify your system, adaptogens can support this process by enhancing liver function. Schisandra is a prime example of an adaptogen that acts on the liver. Holy Basil, Liquorice and Turmeric are also key herbs to consider for supporting any detoxification regime.

Hormonal Health Support

As balance is key to all adaptogenic activity, it won't come as any surprise that adaptogens offer great benefits to the reproductive system and can help maintain normal hormonal functioning.

Both sexes can gain support from adaptogens, traditionally many of the primary adaptogens such as Panax ginseng, have been associated with sexual energy, believed to reduce impotence and boost sexual drive.

Adaptogens can provide hormonal support for women, helping them negotiate the changes they encounter throughout the reproductive years and beyond.

Ashwagandha excels at reducing the anxiety that may accompany hormonal changes and imbalances. Many of the nervines can offer support for mood changes that stem from hormonal shifts throughout a woman's life.

Brain fog and fatigue are commonly experienced in the perimenopausal and menopausal transitions, many of the adaptogens are nootropic in action and will bring greater clarity and energy.

Shatavari is highly regarded as a woman's herb having particular affinity for the female reproductive system. It can have an amphoteric action on oestrogen, the steroidal saponins can reduce excess oestrogen by binding to oestrogen receptors in the brain, but can also stimulate oestrogen when its supply has reduced post- menopause [16]

Herbal Adaptogens

Primary Adaptogens

Ashwagandha- *Withania somnifera*

Ashwagandha belongs to the *Solanaceae* family and is known commonly as 'Winter Cherry'. It is grown as an annual plant and the bitter tasting root is used as medicine. Ashwagandha has warming and drying energetic properties. This adaptogen is native to India, Pakistan, Sri Lanka and some parts of Africa.

This class of adaptogens are the 'power' adaptogens supported by a substantial number of modern studies. These are highly regarded remedies in their native cultures with a long history of healing behind them.

Actions: Adaptogen, anti-inflammatory antioxidant, immune amphoteric, nervine, antispasmodic, astringent and diuretic

Phytochemistry:
Steroidal lactones- withanolides
Alkaloids- somniferiene, withanine and

Ashwagandha is a classic rasayana remedy in Ayurvedic medicine, believed to prolong life, give vigour and sexual prowess. It is thought to give strength and stamina and is associated with a 'stallion-like' power.

What is particularly interesting and valuable about Ashwagandha is that it is considered a calming adaptogen due to its effect on endocrine function.

Unlike many others in its class, Ashwagandha is less stimulating; it is a nervine herb used to treat anxiety and insomnia caused by stress. It can be used for fatigue and especially nervous exhaustion.

Ashwagandha is very rich in iron and used for menstruating women and during perimenopause where its nervine action is valuable.

Dosage:

- Liquids- Tincture (1:5) 30-40 drops 3 x daily.
- Decoction 1⁄2 tsp dried root deccoted in 8 oz water for 10 mins.
- Steep ½ hour then use 4oz 3 x daily.
- Powders- 400-500 gm capsules, 1 twice daily

Warnings and Contraindications: Not suitable for those with a known sensitivity to solanaceae plants. Avoid if you have excess iron or hyperthyroidism. Can interact with barbiturates.

Asian Ginseng- *Panax ginseng*

This well-known member of the *Ericaceae* family is also known as Chinese and Korean Ginseng.

It is native to China, South and North Korea but is also widely cultivated in those countries.

Panax ginseng is considered the 'king of tonics' and the Chinese name 'ren shen' translates as 'man root'. This is the prime tonic remedy for restoring vitality, it has a stimulating action and is particularly indicated for weak, deficient and exhausted people.

This powerful adaptogen regulates the HPA axis and works on the adrenal glands. It influences the circulation and nervous system. It is known as an 'amphoteric' for the immune system which means it can either stimulate or down-regulate immune response as required.

Actions:
Adaptogen, antioxidant, central nervous system stimulant, anti-inflammatory and immune modulator (amphoteric)

Phytochemistry: Triterpenoid saponins- ginsenosides

The part of the plant used is the root which is sweet tasting and warming and moistening in energetic terms. Two main varieties of ginseng are available, white and red.

Dosage:

- Liquids- tincture (1:5)- 20-40 drops max 6 x daily.
- Decoction 1-2 tsp ground root decocted for ½ hour, steep for 1 hour. 2 cups daily max.
- Powders- 400-500mg capsules 2 x daily

Warnings and Contraindications: Not recommended for anxious people or those who have trouble sleeping. Avoid use with hypertension.
Possible interaction with warfarin and MAOI antidepressants.

Astragalus- *Astragalus membranaceus*

This Chinese native is known as 'Huang qi' and is a member of the Fabiaceae family.

Astragalus root has a sweet taste and is warm and moist

Actions: Adaptogen, antibacterial, antioxidant, immune tonic

Phytochemistry: Polysaccharides- astragalans, astragalosides

In TCM Astragalus is considered as a spleen qi tonic. It is indicated for lack of appetite, fatigue and wasting.

Astragalus is highly valued as an immune tonic as it enhances immune functions and can help prevent respiratory infections such as colds, influenza and chest infections.

Dosage:

- Liquid- tincture (1:5) 40-80 drops 3x daily.
- Decoction 2 tsp dried root in 12 oz water
- Decoct for ½ hour then steep for further ½ hour. 3 cups daily.

Warnings and Contraindications: Avoid if acutely ill and Astragalus may interfere with chemotherapy (can reduce side-effects). Caution is advised if taking immunosuppressants.

Holy Basil - *Ocimum sanctum*

Commonly known as 'Tulsi' this adaptogen belongs to the *Lamiaceae* family and is found growing throughout India, Sri Lanka, Pakistan, Bangladesh, Myanmar, China, Thailand and Malaysia.

The herb is used and is pungent and sweet in taste and warming energetically.

Holy Basil is a very sacred herb in Hinduism, considered a rasayana remedy that promotes longevity and is used daily in Ayurvedic practice to balance chakras.

Actions: Adaptogen, antibacterial, antidepressant, antioxidant, antiviral, carminative, diuretic and immunomodulating.

Phytochemistry: Essential Oils- eugenol, carvacol, linalool
Triterpenes- ursolic acid, flavonol

This adaptogen is useful for treating stress as it helps regulate corticosterone levels. Having powerful antioxidant actions makes Holy Basil effective against free-radical damage and inflammation.

It has value in the treatment of allergies, including hayfever, can help regulate blood pressure, is used for asthma and to enhance cognitive function. It benefits cerebral circulation and can assist the memory. Holy Basil is frequently used for symptoms of depression.

Dosage:

- Liquid- Tincture (1:2) 40- 60 drops 3 x daily.
- Infusion/tea use 1 tsp of herb and infuse in 8 oz hot water for 5-10 mins.

Warnings and Contraindications: Be aware that Holy Basil may speed elimination of other medications.

Roseroot-
Rhodiola rosea

Rose Root is a member of the *Crassulaceae* family and originates in Canada, Scandinavia and Siberia. It prefers dry conditions and has been located in the mountain ranges including the Alps, Pyrenees and Carpathian Mountains.

The root is used and is sweet and spicy in taste, with a cooling and drying energetic action.

Roseroot has a tradition of usage by Tibetans for lung issues, lowering fevers, improving blood circulation and increasing energy. Traditionally a poultice has been made from the leaves.

Chinese emperors valued this adaptogen and sent gatherers into Siberia to source it for them. The Siberians relied on Roseroot as a winter remedy in the colder months.

Roseroot is a cooling adaptogen and far less likely to cause overstimulation to those more sensitive to other adaptogens. Often this herb is used as a nervous system tonic, it can reduce fatigue, improve memory and depression. Roseroot has value as an immune tonic also.

Actions: Adaptogen, antidepressant, antioxidant, antiviral, immune system stimulant, central nervous system stimulant, cardio and neuroprotective.

Phytochemistry: Rosavins, salidrosides, Flavonoids

Dosage:

- Liquids- Tincture (1:4) 40-60 drops 3 x daily.
- Decoction 1-2 tsp of dried root decocted in 8-10 oz of water for 15 mins. Steep for 45 mins. 1-3 cups daily
- Capsules- 2-4 standardised capsules daily.

Warnings and Contraindications: Avoid use in bipolar disorder, manic or paranoid mental states.

Schisandra-
Schisandra chinensis

Schisandra is grown throughout China and belongs to the *Magnoliaceae* family. The fruits and seeds of this plant are used medicinally and have a complex sour, sweet, salt, bitter and pungent taste. Energetically Schisandra is warm and dry.

Schisandra is known in China as the 'five flavours fruit' which refers to the complex flavour of the berries. The five flavours affect the five yin organs which are the liver, kidneys, heart, lungs and spleen.

Modern usage sees Schisandra used to control excess fluid including diarrhoea, excessive urination and other discharges. It can be useful for night sweats in menopausal women and for excess sweating in general.

Its anti-inflammatory action is indicated for asthma, coughs and wheezing.

Actions: Adaptogen, antioxidant, anti-inflammatory, immune tonic, astringent, hepatoprotective, nervine and expectorant.

Phytochemistry: Lignans- schisandrin, gomisans and schisandrol
Essential oils and vitamin C

Schisandra can be calming, easing palpitations, aiding sleep and anxiety.Schisandra is classed as hepatoprotective herb, this means it can benefit the liver, helping to regenerate liver cells and repair damage.

Dosage:

- Liquids- Tincture (1:5) 40-80 drops four times daily.
- Decoction 1-2 tsp dried berries in 8-10 oz water, decocted for 10 mins then steeped 30 mins.
- Capsules- 1-2 400-500mg capsules 2-3 times daily

Warnings and Contraindications: Avoid during acute infection.

Siberian Ginseng- *Eleutherococcus senticosus*

This adaptogen is from the *Araliaceae* family and is found growing in Siberia, China, Korea and Japan.The root and stem bark of this plant are used medicinally, and the taste is sweet and the energy warming.

Siberian ginseng is renowned for strengthening qi but is considered milder than Asian ginseng and suitable for young and elderly people. This adaptogen can safely be taken for long periods of time without the risk of overstimulation.

This herb may be particularly indicated for cardiovascular support, helping to lower cholesterol levels and high blood pressure. Siberian ginseng is a valuable immune tonic.

Used by athletes to promote strength and endurance, this adaptogen is also used for cognitive enhancement in the elderly.

Its mildly energising and nourishing properties can benefit chronic fatigue sufferers, and it can help improve poor sleep.

Actions: Adaptogen, anticholesterolemic, antioxidant, immune tonic.

Phytochemistry: Eleutherosides

Dosage:

- Liquids- Tincture (1:4) 60-100 drops 4 times daily.
- Decoction 1-2 tsp powdered root in 12-16 oz of water decocted for 30 mins then steeped for 1 hour. Take up to 3 cups.

Warnings and Contraindications: Do not take Siberian Ginseng with Digoxin

Secondary Adaptogens

The secondary adaptogens are not as well-researched as the primary adaptogens but do influence the HPA axis, sometimes in a more indirect way, acting on the nervous, endocrine and immune systems. You will notice they are a highly nutritive group of plants which offer significant nourishment to support the action of the primary adaptogens.

They are sweet tasting and energetically they are warming and moistening.

Caterpillar Fungus- *Cordyceps sinensis*

This adaptogen is a fungus from the *Clavicipitaceae* family which has really grown in popularity as a nootropic over recent years.
These mushrooms are gathered from the wild where they are found growing at the foothills of the Himalayan mountains in Tibet and Bhutan.

Due to the rarity of this mushroom, it was once reserved for emperors and royalty in ancient China. It has a long history of culinary use and was used in tonic soups to help recover from illness and opium addiction.

Cordyceps is used for healthy sexual functioning and to treat infertility in both sexes.

It has indications for the respiratory system, to treat dry coughs and infections like tuberculosis.

Athletes have attributed Cordyceps with increasing their success during competitions, studies have confirmed that it can enhance aerobic capacity and cellular energy storage.

Cordyceps acts upon the immune system, reducing inflammation and

Actions: Adaptogen, antiasthmatic, antioxidant, hepatoprotective, hypocholesterolemic, immune system amphoteric, sedative.

Phytochemistry: Immunostimulating polysaccharides- galactomannans, cordycepic acid
Amino acids, fatty acids, polyamines and ecdysterones.

having a normalising, amphoteric action either stimulating response or calming effect on those suffering allergic reactions.

Dosage:

- Liquids- Tincture (1:4) 20- 40 drops, 3 times daily.
- Decoction ½ tsp powder or crushed mushroom to 10 oz of water and decoct for 15 mins. Steep for one hour and take 2 cups daily.

Warnings and Contraindications: Large doses may suppress immune responses and cause water retention, anxiety and headaches.

Be careful of your source when buying this mushroom, wild Cordyceps grow on caterpillars and there are concerns about contaminants such as mould and bacteria remaining on the product. The cultivated forms may be safer.

Caution is advised with immunosuppressant medication. Capsules- 1-2 400-500mg capsules 2-3 times daily.

Lion's Mane Mushroom- *Hericium erinaceus*

Lion's Mane is another power mushroom found in abundance throughout East Asia. This member of the *Hericiacea* family is found growing in the trunks of dead hardwood trees where it dangles with its mane-like spines hanging down.

An edible mushroom that tastes mild and sweet with a tender texture.

This mushroom is fairly neutral energetically, neither warming nor cooling.

Lions' Mane has traditional uses in TCM and was reported to have been drunk by Buddhist monks as a tea to enhance brain function and improve focus during meditation sessions.

Lion's Mane is a nootropic adaptogen with cognitive enhancing effects, also may benefit anxiety and depression.

Its use is associated with reduced cancer risk, lower blood sugar and lowered inflammatory markers.

Actions: Adaptogen, antioxidant, antidiabetic, antilipidemic, antihypertensive, immunomodulator, hepatoprotective, neuroprotective.

Phytochemistry: Hericenones, erinacine terpenoids, beta-polysaccharides, phenolic acids, lectins, proteins, fatty acids, sterols. Multiple vitamins and minerals.

Dosage:

- Liquids- Tincture 20-40 drops 2-3 times daily.
- Capsules- 500 mg twice daily

Warnings and Contraindications: Do not exceed the daily recommended dosage.

Liquorice – *Glycyrrhiza glabra*

A member of the pea family Fabaceae, Liquorice is a well-known herb and foodstuff native to southern Europe, Asia and China.

The taste of the root is very sweet, and its energetic properties are moistening and warming.

Liquorice is an important medicinal herb; its value was recognised centuries ago in ancient China and the Middle East.

Actions: Adaptogen, antiviral, antidiuretic, antihistamine, anti-inflammatory, antioxidant, demulcent, expectorant, hepatoprotective, immunomodulatory.

Phytochemistry: Terpenoid saponins- glycyrrhizin, Isoflavones- genistein, Polysaccharides, Flavonoids.

In ancient Greece its demulcent properties were highly regarded for the treatment of dry coughs.

It has since been used for many disorders including digestive problems, liver issues and allergies.

Liquorice can act upon the HPA axis and particularly the adrenal glands for those with adrenal fatigue. It will benefit the immune system for those run down with stress.

Dosage:

- Liquids- Tincture (1:5) 10-20 drops three times daily.
- Decoction ½ tsp dried root in 8 oz water decocted for 10-15 mins steep for a further 15 mins. Take 4 oz twice daily.
- Tablets- 200-300 mg tablets, two three times daily

Warnings and Contraindications: Avoid use with hypertension. Caution is advised with steroid medications, diuretics, digoxin and MAOI antidepressants.

Nettle Seed-
Urtica dioica

Nettle is a common plant in the Urticaceae family found growing all over Europe, Asia and Africa. The seed is considered adaptogenic in action and perhaps the only native British adaptogen.

Nettle seeds are highly nutritive and are a great addition to the diet with their nutty taste.

Consuming them will benefit the skin and hair condition, historically they were fed to horses to improve their condition.

They work on the adrenal glands and are effective for exhaustion and burn out.

Nettle seeds have an affinity with kidneys and are used for any conditions associated with impaired kidney function, they can help remove uric acid and creatine and control any inflammation and infection in the kidneys.

Actions: Adaptogen, anti-inflammatory, anti-allergy, nutritive, diuretic.

Phytochemistry: Vitamins and minerals- vitamin A, vitamin C, iron, silicon, calcium and magnesium.

Dosage:

- Liquids- tincture (1:3) 100 drops 3 times daily.
- Nettle seed infusion tea- infuse 1 tsp seeds in boiling water for 5 minutes.
- Do not exceed 20g daily.

Warnings and Contraindications: Do not exceed stated doses as nettle seeds can be very stimulating and may cause insomnia in high doses. Caution in pregnancy is advised.

Shatavari-
Asparagus racemosus

Shatavari is in the Liliaceae family and is a tropical plant found in India, Southeast Asia, Malaysia, Africa and Australia.

The root of the plant is used and is sweet and bitter tasting and warm and moistening in energetic action.

A powerful rasayana herb in Ayurvedic medicine, Shatavari has a tradition of use as a sexual tonic for fertility and as an aphrodisiac.

Actions: Adaptogen, antibacterial, antispasmodic, aphrodisiac, demulcent, diuretic, immune tonic, gastroprotective

Phytochemistry: Steroidal glycosides- diosgenin, shatavarins, sarsasapogenin, Polysaccharides

In modern day medicine, Shatavari is still used as an important reproductive tonic, it can benefit hormonal imbalance and is often used during menopause.

It can be used to treat fatigue and poor appetite.

Dosage:

- Liquids- tincture (1:5) 40-80 drops three times daily.
- Decoction - 2 tsp dried root to 8 oz of water, decoct 15 mins, steep for 40 mins. Drink two cups daily.
- Capsules- take up to 20 grams daily
-

Warnings and Contraindications: Caution is advised in those prone to diarrhoea and bloating.

Turmeric-
Curcuma longa

Turmeric belongs to the ginger family, Zingiberaceae, and the rhizome looks very similar to ginger rhizome. This plant is native to the Indian subcontinent and SouthEast Asia.

Widely used as a cooking spice and medicinal herb. The root has a bitter taste and is warming.

Turmeric has gained huge popularity in recent years as a supplement and rightly so, its considerable antioxidant properties are attributed to the key constituent curcumin having many benefits to the body and skin.

Traditionally turmeric has been used in both TCM and Ayurvedic medicine for digestive issues and as a topical treatment for pain and inflammation.

Many recent studies have confirmed its amazing anti-inflammatory action that can benefit every system. It supports the liver in detoxification and can lower blood sugar and cholesterol. Turmeric promotes musculoskeletal function and is thought to be a valuable herb in cancer prevention and treatment.

Curcumin is not readily bioavailable and taking with piperine (a constituent of black pepper) greatly enhances uptake.

Actions: Antioxidant, hepatoprotective, Anti-inflammatory, anticarcinogenic, antimicrobial, cardiotonic, gastroprotective.

Phytochemistry: Flavonoid- curcumin
Volatile Oils- turmerone, atlantone, zingiberone

Look for supplements that contain both.

Dosage:

- Liquids- tincture 15-30 drops daily.
- Tea/infusion- 1 tsp leaves to one cup of hot water, 3 times daily
- Capsules- 1-2 capsules twice daily

Warnings and Contraindications: Caution with blood-thinning medications.

Water Hyssop-
Bacopa monnieri

The herb is used from this water-loving plant found in tropical wetlands native to India and Sri Lanka.

Actions: Adaptogen, nootropic, nervine, anticonvulsive, antispasmodic, antioxidant

Phytochemistry: Triterpenoid saponins- bacosides

This herb is another key plant in Ayurvedic medicine that has a long history of use as a rayasana remedy. It can act upon the thyroid gland and reduce seizures.

It is a cognitive enhancer which can improve memory and focus, valued for anxiety relief and to slow progressive Alzhiemers.

Dosage:

- Liquids- tincture (1:2) 30-50 drops 4 times daily.
- Tea 1 tsp dried herb in 8 oz hot water steeped for 40 minutes, tae 4 oz three times daily.

Warnings and Contraindications: None known.

Adaptogen Companions

This class of herbs are nervines which have an affinity with the nervous system, they have either calming or uplifting properties or in some cases both. Often, they benefit cerebral circulation and have an effect on the HPA axis thus complementing the action of the adaptogens.

Ginkgo-
Ginkgo biloba

This prehistoric tree is the only known survivor of its genus Ginkgoale which first appeared over 290 million years ago. This living fossil is native to East Asia and the leaves are sweet to bitter in taste.

The leaf of Ginkgo or Maidenhair Tree resembles the structure of the lobes of the brain and its primary application is to increase cerebral circulation.

Gingko is valued as a respiratory herb, particularly for treating asthma but is very highly regarded as a nootropic that protects brain cells from damage due to its promoting efficient blood flow to the brain. It is a memory enhancing herb and is indicated for dementia, chronic fatigue, headache and depression.

Any circulatory disorders such as Raynaud's, thrombosis and varicose veins may benefit from Ginkgo's actions

Actions: Circulatory stimulant, peripheral vasodilator, nutritive.

Phytochemistry Terpenes, tannins, lignans, flavonoids and platelet activating ginkgolide B.

Dosage:

- Liquids- tincture 15-30 drops daily.
- Tea/infusion- 1 tsp leaves to one cup of hot water, 3 times daily
- Capsules- 1-2 capsules twice daily

Warnings and Contraindications: Caution with blood-thinning medications.

Lavender-
Lavandula officinalis

This prehistoric tree is the only known survivor of its genus Ginkgoale which first appeared over 290 million years ago. This living fossil is native to East Asia and the leaves are sweet to bitter in taste.

Lavender has been a key herbal remedy for centuries and is used widely across cultures and continents.

Actions: Anti-depressant, antispasmodic, antiseptic, carminative, sedative, antimicrobial.

Phytochemistry Flavonoids, coumarins, triterpenes, volatile oil.

It has been in the 'British Pharmacopoeia' for more than 200 years as an effective herbal remedy for headaches and muscle spasms.

Lavender is a prime nervine remedy indicated for headaches, stress, anxiety, sleep problems and depression. It is also used for neuralgia and toothache.

There are many other uses of this wonderful plant including skincare, perfumery, insect repellent and flavouring.

Dosage:

- Liquids- tincture 2-4 ml daily. Tea/infusion 1 tsp dried lavender per cup of hot water, maximum dose 2 grams three times daily.
- Capsules- 2 x 500 mg daily

Warnings and Contraindications: None known.

Rosemary-
Rosmarinus officinalis

Rosemary belongs to the mint family Lamiaceae and is a Mediterranean shrub which thrives in harsh conditions.

The taste is pungent and slightly bitter, and the energetic action is warming and drying.

Actions: Carminative, antispasmodic, antidepressant, rubefacient, antimicrobial, antioxidant, circulatory stimulant

Phytochemistry Rosmarinic acid, camphor, caffeic acid, ursolic acid, betulinic acid, carnosic acid.

Rosemary has long been associated with memory, hence the saying ‘rosemary for remembrance’, this is due to its action to stimulate cerebral circulation, also making it an excellent scalp treatment for hair growth.

This is often an herb used for depression and fatigue, it is uplifting and an excellent choice for brain fog and cloudy thinking. Rosemary is an excellent headache remedy and can relieve joint pain too.

Dosage:

- Liquids- tincture 30- 60 drops three times daily, tea- 1 tsp per cup steeped for 15 minutes three times daily

Warnings and Contraindications: Caution advised against high amounts in pregnancy.

St John's Wort-
Hypericum officinalis

This European native herb from the Hypericeae family grows freely in open land. Its usage dates back to the ancient Greeks with documented use for a variety of internal and external conditions.

Actions: Antidepressant, anxiolytic, anti-inflammatory, hepatoprotective, antiviral, external analgesic.

Phytochemistry Flavonoids, hypericins, essential oils.

The taste is mildly bitter, and the energetic actions of St John's Wort are warming and drying.

St John's Wort is often the herb of choice for nerve irritation and pain.

Both internally and externally it is used to relieve neuritis and neuralgia.

This herb is perhaps more well-researched than any other for its antidepressant action; this has seen it

recommended as a viable alternative treatment to standard antidepressants.

St John's Wort is considered of value in the treatment of menopausal symptoms, to reduce anxiety and elevate low mood.

Dosage:

- Liquids- tincture 2-4 ml daily.
- Tea- 1 tsp dried herb per cup boiling water infused for 15 mins three times daily

Warnings and Contraindications: Do not combine St John's Wort with other antidepressant medications. Can increase sensitivity to sunlight.

How to use Adaptogens-Step-by-Step Recipes

Now you have learnt about the amazing health benefits of adaptogens you may be keen to incorporate them into your daily routines to enhance your life. There are many simple ways to consume them and experiment with the different forms available.

The main forms available include:

- Fresh herbs and roots
- Dried herbs and roots
- Powdered herbs and roots
- Tinctures
- Glycerites

Some of the adaptogens you may be able to easily grow yourself as culinary herbs such as Holy Basil, Nettle and the adaptogen companions Rosemary and Lavender. Other, more exotic adaptogens you can source from health shops or online stores. Always look for reputable suppliers selling quality plant material.

‘Let food be thy medicine and medicine be thy food’ *Hippocrates*

Health and well-being are rooted in kitchen pharmacy, consider every meal you prepare an opportunity to pack in those phytochemicals and optimise your nutrition intake.

Roots and mushrooms can easily be added to soups, ginseng and astragalus work well with chicken soup making it an extra nourishing food for debility.

Smoothies are an excellent carrier for adaptogenic powders and one of the easiest ways to take these wonder herbs.

Adaptogen Smoothie

Ingredients:

- 1 Medium Banana
- 300 ml of milk of your choice
- 6 large strawberries
- 2 tsp Schisandra powder
- 1-2 tsp honey to taste

Method:

Slice the banana and chop strawberries. Blend together with the milk, honey and Schisandra until smooth.

(You can use any adaptogen powder for this recipe)

Dandelion and Turmeric Latte

Ingredients:

- One cup of milk of your choice e.g. cow's milk, almond, soya
- One tsp of dried, roasted dandelion root
- ½ tsp of turmeric powder
- ½ tsp cinnamon powder
- Honey to taste

Method:

Add all the ingredients to a small pan and gently bring to the boil, simmer 5-10 mins then strain. Whisk until frothy. To enhance this recipe, you can add ½ tsp of any other powdered adaptogen you can source such as Ginseng or Astragalus.

Holy Basil and Lavender Flower Tea

Ingredients:

- 1-2 tsp of fresh or dried Holy Basil Leaves
- ½ tsp dress or dried lavender flowers
- Two cups of hot water
- Honey to taste

Method:

Simply heat water and herbs together, infuse for 5 mins adding honey if desired. Strain into a cup and enjoy.
Use Holy Basil as you would Sweet Basil in pasta dishes, add chopped Rosemary too for further health benefits.

Nettle Seed Salad Sprinkles

Ingredients:

- tbsp dried nettle seeds
- Pinch of salt and pepper
- 1 tsp dried Rosemary chopped finely

Method:

Combine all ingredients together in a small bowl and sprinkle over prepared salad.

Ginseng and Chicken Soup

Ingredients:

- 2 tbsp veg oil
- 2 cups chopped onion
- 2 tbsp peeled, chopped ginger
- 6 garlic cloves minced
- 1-2 chopped red or green chillies
- 1 pound of skinless chicken breast chopped into 1-inch pieces
- 3 cups coconut milk
- 14 ½ oz chicken stock
- 2 cups shredded kale
- 2 sliced ginseng roots
- 1 tbsp soya sauce
- One pack instant noodles
- 4 sliced mushrooms

Method:

1. Fry the onions, ginger, garlic and chillies in the vegetable oil until soft.
2. Add the chicken breast and fry until golden.
3. Add the mushrooms and ginseng roots and fry a further 2-3 mins.
4. Pour the stock in and bring to the boil.
5. Simmer for 20 mins.
6. Add the noodles, coconut milk and soya sauce and simmer for a further 10 mins.
7. Season if necessary.

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