



RITUAL WELLNESS

ADAPTOGENS



Herbs for Longevity and Everyday Wellness



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I dedicate this book to my beloved husband and children who have shown me the path of unconditional love, and to the spirit of nature to whom I bow with the deepest and humblest love. May this book be an inspiration to reunite humans with nature and protect the well-being of our sacred home, Gaia.





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INTRODUCTION

PHYTOMEDICINE

ANCIENT MEDICINE FOR MODERN TIMES

Wellness is a cosmology, an all-encompassing landscape that embodies the emotional, intellectual, physical, and spiritual worlds of existence. A true state of wellness is not merely dependent on the condition or mind-set a person currently inhabits. Our level of wellness is finely interwoven with the intimate relationship we have with our community, our environment, and ourselves. The multifaceted universe of health and healing is cyclical, a living organism in constant metamorphosis.

Healing echoes the logic of quantum physics, suggesting that we exist in a relative, process-oriented ecosystem in which there is no “objectivity” to the world we’re experiencing. The components essential to healing disease cannot be resolved simply by measuring the illness in itself; rather, this healing ecosystem is active, with its own unique interactions and relationships. It is through this process that the healer balances the equation of physical, mental, and social well-being.

In Eastern healing traditions, human beings are perceived as microcosms of the universe, composed of the same forces controlling the cosmos. In Daoism, for example, humans are imagined as part of the unbroken whole, called Dao—a singular relational continuum expressing itself within and without. This thinking predates the separation of the mind from the body. It was the Western mind that created the idea that human beings are independent living systems, unbound by basic natural needs. We escaped from our dependency and attachment to the natural world, pursuing egotistic principles of invulnerability, invincibility, and immortality. The long-term survival of our species is threatened by the unrestrained lust for short-term gain, deceitful beliefs about accomplishment, and false assumptions about our civilization’s autonomy from nature. Modern-day human beings have contaminated their own nests, a clear sign of disease and future troubles, especially considering the consequences of our actions on the wider animal kingdom.

Today, many of us seek to reclaim the sense of connectedness that existed universally in ancient cultures, when human fate was wholly entwined with nature. In the ecological understanding of these

cosmologies, all things were inextricably bound together. The world was seen as a symbiotic entity in which all living organisms interacted with and supported one another, from the innermost cellular level to the outermost cosmological level.

The call for plant medicine in today's culture is a symbol of humanity returning to its source. A profound rebirth is in process, and the role of the plant kingdom is increasing in significance. An essential bridge is being rebuilt between humans and nature, allowing us to access the realm of our origin and the land of the luminous. Plant medicines aren't just here to provide us nourishment, shelter, and protection from pathologies—they're here for a much larger purpose, and that is to bring us back to the original consciousness that prevailed on earth for millennia. Herbalism is the medicine of belonging, a gateway through which we keep alive a very sacred aspect to our source.



• CHAPTER ONE •
ADAPTOGENS



Plants are nature’s alchemists—masters at combining the curative powers of water, soil, and sunlight into the precious substances that we now call medicine.

HISTORY OF ADAPTOGENS

The term *adaptogen*, or *resistogen*, was officially coined by Nikolai Lazarev in 1957 to refer to substances that increase a state of “nonspecific resistance” against multiple stressors. Dr. Nikolai Lazarev, a pioneering

Soviet researcher and scientist in the fields of toxicology and preventive medicine, began researching plants from around the world in hopes of developing new ways to improve and protect human health. As early as the mid-1940s, the concept (but not yet the terminology) of the plant-based adaptogen was introduced to describe the ways certain plant extracts could “nonspecifically enhance the general resistance” of the body against multiple stressors, assisting the body in adapting to changes in the environment.

Lazarev grew up in Russia during and following the revolution. During this period, Soviet leaders were aggressively transforming Russia into an industrial society. The struggle of Russia and the rest of the world to keep up with the demands of industrialization often resulted in dangerous working conditions. After Lazarev completed medical school, he began researching and identifying the damaging effects of new industrial chemicals on humans. Lazarev and his scientific team identified more than 400 previously unknown chemical compounds in the new factories, and they studied the effects of these toxic industrial by-products on the population. In the early 1930s, Lazarev discovered that even minimal exposure to these chemical compounds could cause negative “alarm reactions” in humans, and that, if exposure is ongoing, the body constantly struggles to adapt by altering its biological responses. This adaptive reaction tends to gradually disturb homeostasis, which can damage our DNA, accelerate the aging process, and cause illness.

Lazarev began studying pharmacological substances and products that could potentially increase the body’s resistance. He also dove deeper into the research on adaptation. Shortly thereafter, during the course of his research, he was employed by the Soviet Union as a pharmacologist. Within a few years, he became known as one of the Soviet Union’s leading experts on pharmacology and toxicology.

Lazarev was contracted to work on several military projects that required him to find substances to help soldiers overcome fatigue and improve their performance. These projects also included helping elite Russian athletes boost their performance before competitions. His research resulted in the discovery of many effective stimulants that improved the productivity and performance of soldiers during wartime. Yet, Lazarev also found that, while pharmaceutically derived drugs like amphetamine and other stimulants showed success in the short term, harmful side effects could occur when they were used for prolonged periods.

Over a thirty-year period, Lazarev developed a concept of how living organisms adapt to various physical and mental challenges. During his pioneering quest, he linked the revolutionary concepts of Hans Selye to discoveries made by Russian scientists concerning the use of adaptogenic plants with fewer side effects as remedies against stressors.

Dr. Lazarev observed a common denominator in adaptogenic plants: They appeared to have the unique ability to “correct” the imbalances that cause fluctuations in homeostasis without producing unwanted side effects. He concluded that adaptogens could create what he termed a “state of enhanced general resistance” (or SEGR) within an organism. This is defined as a state of increased resistance to a wide range of damaging factors. These natural substances have the ability to chemically alter our stress responses while minimizing the harmful effects of stress on our bodies.

In 1968, Dr. Israel Brekhman refined Lazarev’s work by expanding his definition of adaptogens. He created these three adaptogenic plant qualifications:

- 1. Adaptogens are nontoxic.** Adaptogenic herbs should be safe and nontoxic, showing no significant side effects or contraindications.
- 2. Adaptogens produce a nonspecific response in the body.** Adaptogens have a generalizing action to improve resistance to all kinds of stress—physical, psychological, environmental, and so on.
- 3. Adaptogens have a normalizing impact on the body.** The balancing capacity within adaptogens has a bidirectional effect. This means that the plants’ medicinal constituents will perform as needed in order to help return the stressed physiological conditions to a normalized state.

This last qualification was unique. It led to the study and belief that adaptogens’ bidirectional effects contain a particular intelligence, meaning they align that which is needed in the body. For example, someone who is exhausted might experience ashwagandha root as energizing, whereas someone who is on adrenal overdrive might experience a calming effect from it. Although adaptogens produce a nonspecific response, they produce chemical changes within several bodily systems, including (but not exclusive to) the neuroendocrine system, the sympathoadrenal system,

and the immune system.

The essence of adaptogens is that they combat the negative effects of stress by improving our resistance, which also improves our overall well-being. Essentially, adaptogens help us live with a greater mental, emotional, and physical endurance, increasing our vitality while eliminating the repercussions of stressors and strengthening our regenerative capacities.

Further Studies

Lazarev also studied three additional phases of adaptogens' protective actions when the body is under stress:

1. Activation of the organism's systems
2. Protection from stress-induced damage
3. Regeneration and repair

OK, SO WHAT ARE ADAPTOGENS?

Adaptogens are remarkable botanical treasures that help the body restore balance and adapt to stress. They work by increasing the body's resistance to multiple stressors, including physical, emotional, chemical, and environmental. They also shield against acute and chronic stress. Their normalizing effects on the body, particularly regarding the endocrine and immune systems, are what make them unique, though each and every adaptogen operates differently for each individual person. By working nonspecifically, they alter base operations within the organism, regaining homeostasis (a state of equilibrium) through their regenerative properties and helping to harmonize the body, mind, and spirit.

Adaptogens Have Existed for Millennia

Although the concept has only existed since the late 1940s, these wonderful plants have been revered for centuries. Nearly every culture in the world has used rejuvenating and restorative plants with properties similar to those of modern-day adaptogens. In Daoism, for example, many of the herbs that achieve the same results as adaptogens are referred to as "tonic herbs." In Chinese herbal medicine, they're called "qi tonics." In

Ayurveda, a system of medicine developed in India, they're known as "rasayanas." And in Western herbal medicine, some of the herbs that fall under "nutritive tonics" and "trophorestoratives" essentially parallel adaptogenic herbs. In rain-forest herbalism, herbs similar to adaptogens tend to be called "para-toda," meaning "heal-all."

Modern clinical research has slowly proven that much of the lore around these herbs is indeed true. As far as scientific and clinical studies are concerned, adaptogenic herbs have received the most attention. The wide range of healing benefits that they offer covers almost every area of the body. The history and current scientific studies of these herbs will help illuminate why they've been revered for thousands of years.

ADAPTOGENIC ANATOMY

Organs Involved in the Stress Response

Adaptogens use their balancing powers to catalyze changes in the body, particularly in the neuroendocrine and immune systems. The endocrine system and the nervous system are so closely related that they are often lumped into a single system: the neuroendocrine system. This system deals with chemical communication in the body via hormones, which work in conjunction with the nervous system. The goal of the nervous system is to bring homeostasis to all internal responses, which helps keep the body healthy and protected. Within the endocrine system is the famed HPA axis, a complex set of interactions between the hypothalamus, pituitary, and adrenal glands.

The hypothalamus (H) is the command center of the brain, often called our "god center." This area of the brain communicates with the rest of the body through the autonomic nervous system and through influxes of hormones. H oversees and assesses everything going on in the body, then informs its "personal assistant," the pituitary (P) gland, what to do. The personal assistant informs the "general managers" (the target organs), which then enlist the "workers" (particular biochemical processes) in the relevant tissues or organs of the body. The enlisted or activated tissues include the visceral organs—heart, lungs, intestines, kidneys, liver, and pancreas—as well as many lesser-known parts of the body such as the gallbladder, spleen, blood vessels, and skeletal muscles.

Sympathoadrenal System

The connection between the hypothalamus, the adrenal medulla, and the sympathetic nervous system is referred to as the sympathoadrenal system (SAS).

Stress Hormones

This section describes the different hormones secreted within the endocrine system and how they are triggered by the stress response.

Cortisol, one of the better-known stress hormones and the primary hormone released from the adrenal glands, is often called the “stress hormone.” When cortisol is secreted, it causes a breakdown of muscle protein, leading to the release of amino acids into the bloodstream. Amino acids are processed by the liver to synthesize glucose. This process raises blood sugar levels in the brain, which gives us energy. At the same time, the other tissues in the body decrease their use of glucose. Cortisol also leads to the release of fatty acids for use by the muscles. The processes directing and replenishing energy prepare the body to manage stress and ensure that the brain receives adequate energy sources. Another important purpose of cortisol in the body is the regulation of blood pressure and cardiovascular functions. It also assists the immune system in responding to infection and inflammation. Cortisol levels are at their highest in the morning. The oversecretion of cortisol suppresses the immune system and can cause a number of symptoms, such as severe anxiety, hypertension, inflammation, depression, chronic fatigue, PMS in women, infertility, sex hormone imbalance, insulin resistance, weight gain, insomnia, and polycystic ovary syndrome.

Other hormones:

- Adrenocorticotrophic hormone (ACTH; corticotropin)
- Catecholamines
- Adrenaline
- Noradrenaline
- Thyroid-stimulating hormone
- Dehydroepiandrosterone

- Corticotropin-releasing hormone
- Aldosterone

When the natural stress response goes haywire

The body's stress-response system is usually self-limiting. Once a perceived threat has passed, hormone levels return to normal. As adrenaline and cortisol levels drop, your heart rate and blood pressure return to baseline levels, and other systems resume their regular activities. But when stressors are always present and you constantly feel under attack, that fight-or-flight reaction stays turned on.

The Results of Unmanaged Stress

Overadaptation to stress and disruption of the HPA axis's flow are at the core of many health issues. For example, when the HPA axis is strong, your body is usually able to handle even high levels of stress. A strong HPA axis is also helpful for pregnant women, women who have just given birth, and women in menopause.

Over time, the repeated activation of stress hormones, aka the fight-or-flight response, can take a serious toll on the body. Research suggests that chronic stress contributes to high blood pressure, promotes the formation of artery-clogging deposits, and causes brain changes that may contribute to anxiety, depression, and addiction. Preliminary research suggests that chronic stress may also contribute to obesity, both directly (causing people to eat more) and indirectly (decreasing sleep and exercise).

Chronic stress and the oversecretion of cortisol and other stress hormones can disrupt almost all of the body's processes. Overexposure to cortisol can cause numerous health problems. One well-known problem is adrenal fatigue. Adrenals produce and control the release of cortisol. When the adrenals chronically secrete cortisol and other stress hormones, your adrenals stop producing cortisol, leading to adrenal fatigue. *Adrenal fatigue* is a term often used by health professionals to describe the phenomenon of the adrenal glands running on empty and the resulting mental and physical state of those experiencing it. During stressful periods, our glands release high levels of cortisol, which is the most important

hormone we have to help the body manage stress. Think of cortisol as our own built-in alarm system, alerting us when the body is in danger. It also works with certain parts of the brain to control mood, motivation, and fear. If too much cortisol is secreted, many bodily processes begin to underperform, potentially resulting in illness.

Symptoms of Adrenal Fatigue:

- Feeling tired for no reason
- Trouble getting out of bed, even when you've had a decent night's sleep
- Unable to handle stress; everything becomes a trigger
- Recurring brain fog; lack of creativity and focus
- Low immune function; difficulty recovering from an illness
- Autoimmune issues
- Decreased sex drive
- Mood swings, depression, severe ups and downs
- A feeling of being constantly overwhelmed and anxious
- Intensely craving sweets, carbs, or salty snacks
- Overuse of stimulants like caffeine, sugar, or tobacco
- Inexplicable weight gain

Forms of Stress

Stressors can come from many different angles. Stress is not experienced in any uniform way and can manifest at any time. It often comes and goes, and many different types of stressors can easily affect us without our noticing. Modern-day culture is experiencing unusually high volumes of stress from the environment—perhaps the highest volumes in recorded history. Toxins in our water, air, food, and atmosphere are contributing significantly to higher levels of stress in our bodies and minds. It's important to remember that a healthy lifestyle, coupled with adaptogenic herbs and a positive mind-set, can help us lead fulfilling, balanced lives.

Biological Stressors Exposure to bacteria, mold, viruses, and parasites.

Chemical Stressors Chemicals, toxins, pesticides, herbicides, fungicides, insecticides, heavy metals, household and industrial chemicals, fumes, dust, smoke, tobacco, and synthetic drugs.

Consumable Stressors Toxic substances like drugs, alcohol, and tobacco; refined and highly processed foods; mineral-depleted foods (grown in poor soil); genetically modified foods; foods grown in toxic environments with pesticides, herbicides, or other chemicals; coping with nutritional deficiencies; and free radicals from eating toxic foods.

Environmental Stressors Pollutants and toxins within the atmosphere, water, and soil, such as chloride, fluoride, lead, mercury, and pesticides. Exposure to extreme cold or heat, noise, ultraviolet sunlight, altitude, allergens, xenoestrogens (foreign substances that imitate the effects of estrogen), electromagnetic influences (wifi, radio waves, electric high-voltage lines), and radiation.

Psychological Stressors Emotional and mental stressors such as depression, moodiness, anger, fear, anxiety, loss of desire, worry, grief, shock, trauma, mental illness, major life changes, and overwhelming responsibilities. Psychological stress often goes hand-in-hand with physical stress.

Physical Stressors Intense physical activity, healing from accidents, recovery from strenuous exercise, and physical pain resulting from any of the previously mentioned stressors.

Spiritual Stressors This form of stress is often brought on by a lack of meaning or greater purpose in our lives. When our soul is not at ease, we're experiencing spiritual stress.

Chemistry

Thanks to the wondrous realm of chemistry, many creative uses for plants and herbs have been discovered. Adaptogenic plants have a great deal in common with one another, which is what makes them such a special category. At the same time, each plant can be used to target a specific

ailment. The following are some of the most common chemical compounds found in adaptogenic plants. This discussion will help us better understand why these plants are so beneficial to our bodies and minds.

Triterpenoid Saponins

[Triterpenoid saponins are triterpenes, which](#) belong to a class of chemical compounds known as saponins. Triterpenoid saponins are abundant in nature and can be found in a variety of foods, herbs, and spices.

Triterpenoid saponins have been shown to improve health by promoting antibacterial activity, antiviral activity, and cytotoxic and antitumor activity. For example, the *Panax ginseng* family, collectively called ginsenosides, is known to have high counts of triterpenoid saponins.

Polyphenols

Polyphenols form a group of more than five hundred phytochemicals. Phytochemicals are naturally occurring micronutrients in plants. These compounds give a plant its color and can help protect it from a variety of threats. Polyphenols are a complex group of plant-based chemicals available in many common foods and supplements. Polyphenols typically act as antioxidants. They can help prevent cellular damage from free radicals that occur from pollution, exposure to toxic metals, and other environmental stressors. It is also thought that polyphenols are anti-inflammatory. Many popular polyphenols have been studied for their health benefits and are often touted for their cancer-preventing compounds. Examples include quercetin, curcumin, resveratrol, catechin, and lignan. Polyphenols are grouped into four main categories: phenolic acids, flavonoids, stilbenes, and lignans.

Terpenes

[Terpenes are found in all](#) plants and play many important roles. Terpenes contain aromatic compounds that often serve as self-defense mechanisms for plants. Many plants developed terpenes to ward off herbivores that might eat them, for example, or to attract helpful predators and pollinators. Other natural functions of terpenes include acting as flavors, scents, or growth regulators. Plants with distinctive terpenes possess many compounds with applications in the pharmaceutical and agricultural industries. For example, artemisinin, from *Artemisia annua*, is effective

against malaria, including strains that have developed resistance to quinine derivatives. Also, pyrethrins from *Tanacetum cinerariifolium* are ingredients in many biodegradable insecticides, which are now used in large-scale organic farming.

The triterpenes include saponins. [Within the saponins](#) is a particular class of compound called triterpenoids, which plants use to help protect themselves.

According to an ethnopharmacological journal published by [the US National Library of Medicine](#), “Triterpenes, which comprise a broad chemical group of active principles, are implicated in the mechanisms of action and pharmacological effects of many medicinal plants used in folk medicine against diseases in which the immune system is implicated. They have been described as anti-inflammatory, antiviral, antimicrobial, and antitumoral agents, as well as being immunomodulating compounds. Several of them are implicated in the resolution of immune diseases, although their effects have not always been clearly correlated.”

More on Triterpenoid Saponins

Some triterpenoid saponins have been identified as having adaptogenic properties. During early studies of adaptogens (and before the term was officially coined), the scientist Israel Brekhman discovered that the active compounds in most of the adaptogenic plants were triterpenoid saponins. He also found that triterpenoid saponins had almost no toxicities and little addictive potential. Other benefits of triterpenoid saponins include anti-inflammatory properties, hepatoprotective properties, and immune system modulating effects. Some can also mimic the activities of the adrenocorticotrophic hormone (ACTH) and can have a strengthening effect on the adrenal gland. This is what makes them so useful in relieving stress and stress-related problems.

The US National Library of Medicine has conducted a significant amount of research on plants that contain high levels of triterpenoids, as triterpenoids have demonstrated chemoprotective, anti-inflammatory, and cancer-fighting properties. Since 2014, there have been numerous studies demonstrating the cancer-fighting properties of triterpenoid saponins. They are believed to inhibit cancer formation and progression by modulating multiple signaling targets related to cellular proliferation, including apoptosis, autophagy, metastasis, and others.

Well-known adaptogens with high numbers of triterpenoid saponins include American ginseng, Asian ginseng, astragalus, dang shen, eleuthero (Siberian ginseng), holy basil, gynostemma (jiaogulan), licorice, and reishi.

Other plants not categorized as adaptogenic but that still have high numbers of triterpenoid saponins include *Boswellia serrata* (Indian frankincense), bupleurum, horse chestnut, calendula, chaga, espinheira santa, Indian jujube, fenugreek (particularly when paired with shatavari, for women), ginger, turmeric, and rosemary.

POLYSACCHARIDES

When it comes to nutrition, polysaccharides, sometimes also called “glycans,” play a huge role in the body. Some, like starch or glycogen, help store the energy we gain from consuming food. There are two types of polysaccharides that assist the body in storing energy: starch and glycogen. Starches serve as a form of short-term energy storage. Short-term energy sources include rice, potatoes, and corn. Glycogen, on the other hand, is more like a long-term storage option. Glycogen is mainly produced in the liver and muscles, but it can also be made during a process called glycogenesis, which occurs in the brain and stomach.

Polysaccharides are critical when it comes to proper nutrition because they comprise the complex carbohydrates that, for many people, serve as the body’s primary energy provider. Ingesting good sources of polysaccharides that promote long-term energy storage can help us overcome fatigue. Polysaccharides also prevent the excessive secretion of stress hormones, support healthy blood pressure and blood sugar, encourage positive moods, soothe irritation, support the immune system, promote cardiovascular health, and can even increase sex drive.

Herbs that are rich in polysaccharides are natural immunostimulants. They support a healthy immune system by increasing the immune responses in the body. According to herbalist David Winston, polysaccharides reportedly stimulate the following immune system components: cytokines (interferon, interleukin), tumor necrosis factor, natural killer cells, B and T lymphocytes, tumor-infiltrating lymphocytes, lymphokine-activated killer cells, macrophages (immune cells), granulopoiesis (the production of granulocytes in bone marrow), and

thrombopoiesis (the production of platelets in bone marrow).

In traditional Chinese medicine, polysaccharide-rich herbs like astragalus are often used in “qi tonics” to increase qi (vital energy). Many polysaccharide-rich herbs naturally feel and taste more like foods. Traditionally, these herbs were often kept in the pantry, as they were used daily in nutrient-rich medicinal foods like broths, soups, and congee.

Polysaccharide-rich adaptogens include American ginseng, Asian ginseng, astragalus, cordyceps, eleuthero (Siberian ginseng), licorice, lycium, prince seng, reishi, rhaponticum, and shatavari.

THE MICRO + THE MACRO PHARMACOLOGY VS. PHYTOTHERAPY

Pharmacology is the study of therapeutic agents and their effects. Such agents are usually called “drugs,” even if they’re derived from plants. This can cause confusion when discussing herbal-based medicines, as herbs and drugs are generally thought of differently. Extensive research in the field of pharmacology has led to the isolation of active constituents in many plants. These constituents have been used in conjunction with pharmaceutical preparations and synthetic drugs.

Isolated compounds have significant drawbacks. Everything in nature is affected by compounds and chemical reactions, but the extent of this still isn’t well understood. The study and application of isolated constituents within the scientific community have opened up extensive branches of research within phytomedicine, yet, due to technological challenges and many unanswered questions, there is still much progress to be made. The idea of an “active constituent” isolated from its normal environment is a modern concept within the long history of medicine. Even constituents that don’t appear active under a microscope still contribute to an herb’s overall biological activity, whether it’s by supporting active constituents or altering their responses, reducing the herb’s toxicity upon ingestion, or preventing side effects after consumption. The study of active constituents unfortunately doesn’t always provide insight into the effects of consuming the whole of a given plant. But due to the study of active constituents, a whole new world of possibility has opened up regarding the healing properties of herbs. There is still a profound distinction between the isolation of active constituents and indigenous botany. Indigenous botany

(and whole plants or herbs) can usually offer many more healing benefits than the isolated active constituents that scientists find under microscopes or through animal-based studies.

Traditional systems of medicine like traditional Chinese medicine and Ayurveda (a healing system developed in India) consider the whole picture when studying and prescribing plants, much like gardeners do.

Researchers and practitioners of modern medicine can sometimes seem more like mechanics—they tend to target one specific part or component and ignore the rest. This relates to the dynamic between holistic health-care practitioners and conventional scientific doctors. Holistic practitioners consider the whole herb, for example, whereas scientists study individual constituents. Scientists and doctors believe in the isolation of the active principles within a plant; holistic doctors, on the other hand, believe in both the active principles and the underlying supportive reactions that contribute to the herb's capacity to heal.

DISEASE AND THE POWER OF ADAPTABILITY

Health can be described as the ability of an organism to respond to a variety of challenges in ways that ensure equilibrium. The rise of disease is the failure to adapt to challenge, which creates a disruption in the overall internal balance of an organism. The origin of disease happens the moment the body is unable to cope, whether it's due to the impact of toxic stressors or living a stressful life. Disease begins to form its own balance within the organism after it establishes a pattern of disharmony within the given system. The manifestation of instability is the repetition of an unstable process, which can create disharmony in an organism and result in disease. When defenses are weak and resources are exhausted, multiple factors conspire to permit illness.

Our bodies are incredible at adapting to basically anything. In modern Western culture, so many of us continue to live our lives on autopilot without noticing the subterranean landscapes within ourselves. Our bodies and minds are wired to alert us when there are ruptures in the flow of our day-to-day lives. This ability is so finely developed that the progress of a disease in the body can often be identified and addressed well before further illness or death can occur. For example, paying attention to the

excesses or deficiencies within our emotional, mental, or physical realities is a good way to make sure the equilibrium in our bodies is maintained. It does not require profound knowledge or healing skills to learn the signals and subtleties that let us know when our bodies need something. When you're thirsty, you drink water. When you're hungry, you eat. In the same way, the body alerts us when it requires something to restore its balance. The *Huangdi Neijing*, a medical classic written in the second century BCE, states, "Maintaining order rather than correcting disorder is the ultimate principle of wisdom. To cure disease after it has appeared is like digging a well when one already feels thirsty, or forging weapons after the war has already begun."



“Within each thing is contained all things. In the seed is the tree; in the tree is the forest. Therefore, intelligence is contained implicitly in the many worlds of nature, not only in our human-centered world. Another way of saying this is that consciousness exists in all forms of life. It is the very basis of creation, the power of evolution. Life, creation, and evolution are the stages in the unfoldment of consciousness. There is nothing in existence that is unfeeling, nothing that is profane or unspiritual, nothing without a unique value in the cosmos. Life is relational, interdependent, interconnective, a system of mutual nourishment and care, not only physically, but also psychologically and spiritually.”

— Vasant Lad, from *The Yoga of Herbs*

PLANT INTELLIGENCE

The inherent intelligence within plants and nature has been explored for many centuries by countless philosophers, scientists, and indigenous people from around the world. This list includes Goethe, George Washington Carver, Luther Burbank, Masanobu Fukuoka, Jagadish Chandra Bose, and Nobel Prize winner Barbara McClintock, not to mention many ancient systems of medicine like Ayurveda, Daoist and traditional Chinese medicine, and rain-forest tribal medicine. It is of no surprise that these ancient systems of medicine all fundamentally recognize that plants are highly complex beings with ecosystems within themselves, just like humans. In fact, there isn't a single system of traditional medicine, with the exception of Western medicine, that doesn't acknowledge the intelligence inherent in the plant kingdom.

[The phenomenal work of Stephen Harrod Buhner](#), author of *Plant Intelligence and the Imaginal Realm*, and Peter Tompkins, cowriter of *The Secret Life of Plants*, has, through extensive scientific research, shed light on the intelligence of plants and the extent of their capacities to feel emotions, experience pain, and interact with their environments.

Plant Intelligence within Adaptogenic Chemistry

It's no wonder herbs are now enjoying incredible popularity in today's world. We're in a deeply transformative time in history, and herbs with adaptogenic properties are being identified and developed to protect our bodies by helping them adapt to the constant changes and stressors present on the planet.

Each adaptogen attunes the body to a particular energy or set of energetic pathways, generating a nonspecific homeostatic response within the body and mind. As we explored earlier in this chapter, because of their normalizing effects and bidirectionality within the body, we can observe that they have an intelligence of their own in determining what the body needs. Because they work so closely with the hypothalamus and pituitary glands, each adaptogen is ultimately experienced differently by each person, as each person has a different internal recipe for balance.

[Adaptogens target multiple locations in](#) the body, yet they primarily work with the neuroendocrine system, which includes the hypothalamus, pituitary, and adrenal glands, as well as the sympathoadrenal system (SAS). They also directly align with and balance our organs, which shape our individual perceptions of the world and control basic survival processes like intuition, pain response, sexual function, blood pressure, circadian rhythm, stress response, and many more.

The Subtle Functions of the HPA Axis

The powerful nutritional benefits and abilities of adaptogens are much more profound than science has so far been able to recognize, and their uses in treating mind, body, and soul date back thousands of years. It's only recently that we've learned about their normalizing effects on oxidative stress, their abilities to enhance metabolic function, and the protection boosts they can offer to the immune system. Historically, they were revered for their deep spiritual attributes.

Most adaptogenic herbs have strong regulatory effects on the endocrine and other hormonal systems, which are likely related for their spiritual and emotional activating properties. Hormones are known as the “molecules of consciousness”—powerful biopeptides that control our awareness of reality, mood, perception, sleep-wake cycles, and bonding. It can be said that hormones are the gateway in which we experience our self and life, as I believe they are one of the major links between the physical, emotional, and spiritual worlds.

The hypothalamus, our control center, is about the size of an almond and is located just behind the optic glands. With access to both the nervous and endocrine systems, the hypothalamus plays a key role in activating the pineal gland. It is also closely associated with the limbic system, known as the center of our emotions, feelings, and intuitions. Many ancient cultures have recognized this gland as the “god center”—the seat of our consciousness or spirit. When activated, it secretes neurohormones that communicate with the pituitary gland, signaling the release or inhibition of key pituitary hormones, which in turn activates the pineal gland. Within mystical literature and many ancient or sacred texts, the pineal gland is often referred to as the “third eye,” “the crown chakra,” or “the seat of consciousness.” Ongoing activation and regulation of the pineal gland cause the brain to secrete consciousness-expanding biochemicals. Many ancient spiritual traditions hold that this is the key to opening the third eye.

Melatonin and the Pineal Gland

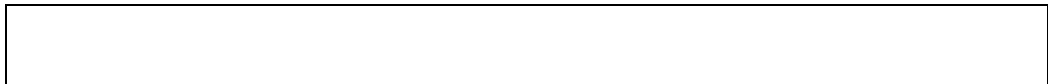
Melatonin in the pineal gland affects our moods, feelings, immune system functions, circadian rhythms, and the quality of our sleep. Melatonin is known as an antiaging and antistress agent because it suppresses cortisol while also acting as a powerful antioxidant. Studies are now being conducted to learn more about melatonin’s potential to protect our bodies from oxidative damage caused by different stressors. The production of melatonin by the pineal gland is activated by darkness and inhibited by light. Once released, melatonin circulates through the brain via the cerebrospinal fluid (CSF) and enters nearby blood vessels for distribution to the rest of the body. When melatonin levels are disrupted, people tend to experience bad moods, exhaustion, depression, mood swings, or seasonal affective disorder.

HPA Axis and Ancient Cultures

Ancient cultures extensively studied the mysterious functions of the glands forming the hypothalamic-pituitary-adrenal axis (HPA axis) and how they collaborate to trigger meditative states and the perceived access to deeper realities. In Daoism, for example, the center of the brain has been referred to as the “Crystal Palace,” the “Upper Tan Tien,” the “original cavity of the spirit,” and the “ancestral cavity.” This part of the brain is said to be

the place where the original “spirit principle” dwells. Sufism also locates the principle of spirit (Ruh) in the head-center. In Radha Soami’s teachings, which integrate Sufi, Tantric, and Vedantic ideas, the Ajna, or “brow center,” is considered the seat of the soul (Jiva) or spirit (Ruh). The Brahma Kumari movement likewise teaches that this center is the seat of the soul. The movement advises practitioners to meditate exclusively on it in order to attain liberation.

I believe these herbs work directly with our consciousness and our perceptions of life. They essentially work with the organs that form our perception, providing essential nutrition that ultimately tunes the mind and body to a higher frequency. You might ask yourself, what is this “higher frequency”? Or, what is the point of achieving this so-called “higher consciousness”? This higher frequency is what mystics and ancient civilizations have come to see as the highest goal of everyday life. It’s been interpreted as a form of enlightenment, a freedom from suffering, and a freedom from the possibility of illness. Many people believe that these herbs are once again becoming popular within modern times to catalyze a shift and to act as tools to nourish and protect us during these times of constant change.



• CHAPTER TWO •
HERBS OF
LONGEVITY



Adaptogens are botanical treasures revered for millennia for their longevity chemistry. These botanical agents provide the perfect antidote for the life-robbing deficiencies created by the demands of modern life. These medicines are highly unique in that they offer safe, effective, health-promoting benefits to just about everyone, regardless of age or health status.

There are roughly nine adaptogens that can be considered “official” adaptogenic plants. These are the herbs, or primary adaptogens, that have been researched most extensively since the term adaptogens was coined. A number of other herbs possess significant adaptogenic chemistry, but they are not backed by sufficient research to qualify as official adaptogens. Known as secondary adaptogens, they do not meet all the qualifications established by Dr. Israel Brekhman. Numerous other medicinal plants also have adaptogenic chemistry that is astoundingly similar to that of the official adaptogens, but they need to be researched further.

PRIMARY ADAPTOGENS

Primary adaptogens are those herbs supported by the most scientific research. They also meet all adaptogenic qualifications.

Ashwagandha *Withania somnifera*

Cordyceps *Cordyceps sinensis*

Eleuthero *Eleutherococcus senticosus*

Ginseng *Panax ginseng*, *Panax quinquefolius*

Holy basil *Ocimum tenuiflorum*, *Ocimum sanctum*

Licorice *Glycyrrhiza glabra*

Rhodiola *Rhodiola rosea*

Schisandra *Schisandra chinensis*

Shilajit *Asphaltum bitumen*



SECONDARY ADAPTOGENS

Many of the secondary adaptogens listed in this section show promising adaptogenic chemistry, yet there simply isn't sufficient research to classify them as primary or "official" adaptogens. In the future, after additional trials and research, these medicines may eventually qualify as primary adaptogens. For an herb to qualify as an adaptogen, it must satisfy the three parameters established by the father of adaptogens, Dr. Israel Brekhman. As mentioned in the previous chapter, the parameters are as follows:

1. The herb is nontoxic in normal therapeutic doses.
2. The herb produces a state of resistance in the body to physical, chemical, biological, emotional, or environmental stress.
3. The herb has a normalizing effect (amphoteric) on the body, helping to restore normal physiologic function that has been altered by chronic stress.

The secondary adaptogens listed below have the following characteristics: They may have a normalizing effect on the neuroendocrine, nervous, or immune system. They may support the HPA axis. While they might have chemistries parallel to those of primary adaptogens, they do not meet all of the qualifications and require more

research. It is certain that this list contains plants rich in phenolic compounds, terpenes, polysaccharides, triterpenes, fatty acids, and much more.

Additionally, this list includes many popular “rasayanas,” or recognized Ayurvedic plant medicines, along with other botanical treasures from around the world that show profound restorative, rejuvenative, and nutritive qualities. These herbs are also known to be safe and efficient. This book should serve as a good introduction to primary adaptogens, secondary adaptogens, and herbs with potential adaptogenic chemistry. The profile of each herb in this chapter provides a wealth of folk wisdom and scientifically proven information, and integrates leading research from many present-day authorities on adaptogens, such as David Winston and Donald Yance. I’ve included some of the more popular ones used in today’s world, yet there are many more that share adaptogenic-like chemistry that I encourage you to research on your own.



Amla *Emblica officinalis*

Astragalus *Astragalus membranaceus*

Dang shen *Codonopsis pilosula*, *C. tangshen*

Guduchi *Tinospora cordifolia*

He shou wu *Polygonum multiflorum*

Holy basil *Ocimum sanctum*

Jiaogulan *Gynostemma pentaphyllum*

Licorice *Glycyrrhiza glabra*

Lycium *Lycium chinense*

Maca *Lepidium meyenii*

Mucuna *Mucuna pruriens*

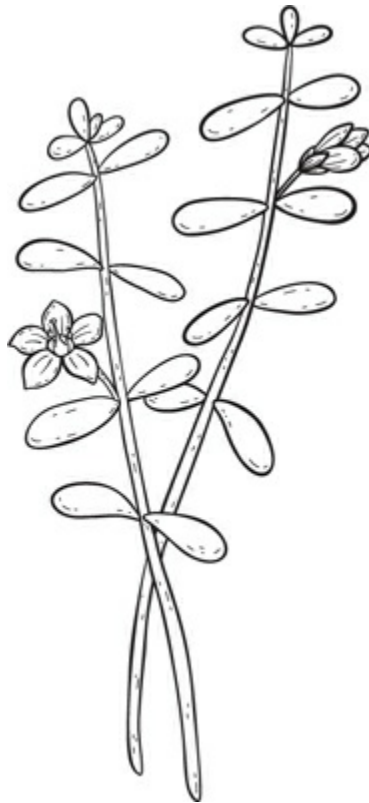
Prince seng *Pseudostellaria heterophylla*

Reishi *Ganoderma lucidum*

Rhaponticum *Rhaponticum carthamoides*

Shatavari *Asparagus racemosus*

The following herbs, which are not reviewed in this book, also qualify as secondary adaptogens. They greatly enhance and synergize the effects of primary adaptogens.



Bacopa *Bacopa monnieri*

Chaga *Inonotus obliquus*

Devil's club *Oplopanax horridus*

Epimedium *Epimedium grandiflorum*

Eurycoma root *Eurycoma longifolia*

Lion's mane *Hericium erinaceus*
Maitake *Grifola frondosa*
Morinda *Morinda officinalis*
Muira puama *Ptychopetalum olacoides*, *P. uncinatum*
Notoginseng *Panax notoginseng*
Oat seed *Avena sativa*
Poria mushroom *Poria cocos*
Rehmannia *Rhemannia glutinosa*
Sea buckthorn *Hippophae rhamnoides*
Tribulus *Tribulus terrestris*
Turkey tail *Trametes versicolor*
Wild yam *Dioscorea mexicana*

A GUIDE TO PRIMARY + SECONDARY ADAPTOGENS

Amalaki (Amla/Indian Gooseberry)

Botanical Name *Phyllanthus emblica* (*Emblica officinalis*)

Family Euphorbiaceae

Energetics Sweet, sour, astringent, pungent, bitter, cooling

Parts Used Fruit, leaves

Properties Adaptogen (mild), anti-inflammatory, antioxidant, antiviral, aperient (mild laxative), diuretic, and lowers cholesterol

Constituents Polyphenols, including ellagic acid, phyllembin, quercetin, and emblicol. It also contains significant amounts of vitamin C, condensed tannins, and flavanols.



History/Folklore

Amalaki, also known as amla, is one of the most nutrient-dense, rejuvenative, and restorative tonics within the Ayurvedic pharmacopeia. It is one of the richest sources of vitamin C, flavonoids, vitamins E and B complex, and carotenoids. It is used primarily as a blood, bone, liver, lung, and heart tonic. It helps rebuild and maintain new tissues and increases red blood cell count. According to Ayurvedic doctor Dr. Vasant Lad, amalaki cleanses the mouth; strengthens the teeth, bones, nails, and hair; boosts appetite; and regulates blood sugar.

Scientific Studies

Chemoprotective and Cancer-Fighting Properties Amla possesses many properties vital in the treatment and prevention of cancer, including chemopreventive, radiomodulatory, chemomodulatory, free-radical scavenging, antioxidant, anti-inflammatory, antimutagenic, and immunomodulatory effects. Several studies have shown that the extract of *P. emblica* had an inhibiting effect against chemically induced cancer, demonstrating potent cancer-preventive effects.

Antibacterial + Antiviral Properties A popular Ayurvedic mixture called Triphala, which includes amla and two other popular herbs, haritaki and bibhitaki, inhibited *Salmonella typhi*. A cell study of amla showed that amla had antibacterial effects against all 186 bacterial strains featured in the study.

Cardioprotective Properties Amla protects the heart by lowering fat levels in the blood and preventing narrowing of the arteries. Compounds such as quercetin and gallic acid in amla reduce toxicity in the heart and protect the heart from damage.

Anti-inflammatory and Antioxidant Properties The large amount of vitamin C present within amla accounts for 45 to 75 percent of its antioxidant activity. In animal-based studies, amla fruit extract significantly decreased both acute and chronic inflammation.

Reduction of DNA Damage Amla has been shown to help reduce DNA damage caused by toxicity from cadmium, lead, aluminum, nickel, cesium chloride, arsenic, chromium, 3,4-benzo[a]pyrene (a compound found in tar, tobacco, and grilled meats), benzo[a]pyrene, and cyclophosphamide (an immunosuppressive drug).

Skin Protection Studies show that amla protects the skin against oxidative stress caused by free radicals, UV rays, and toxic metals.

Increased HDL and Reduced LDL Cholesterol The high levels of vitamin C and fiber in amla are thought to be responsible for its cholesterol-lowering effects. HDL cholesterol (HDL-C) is considered to be the good form of cholesterol, and LDL cholesterol (LDL) is considered to be the bad form of cholesterol.

Ashwagandha (“The Smell of a Horse”)

Botanical Name *Withania somnifera*

Family Solanaceae

Energetics Bitter, astringent, sweet, warming

Part Used Root (less commonly leaf and fruit)

Properties Tonic, anti-inflammatory, antioxidant, immune amphoteric, antitumor, nervine, antispasmodic, mild astringent, and diuretic



History/Folklore

Ashwagandha is one of the rasayana herbs in Ayurvedic medicine, meaning that it's an herb that purportedly promotes youth and longevity and alleviates suffering. It is thought to be especially rejuvenative for men, supposedly strengthening bone marrow, muscles, and semen. It is also thought to imbue the user with heightened intellectual capabilities, longevity, and youthful vitality. Additionally, the herb is considered beneficial to the elderly, providing energy and relieving pain, inflammation, and anxiety.

Scientific Studies

Brain function In a study conducted on 50 people, 600 mg per day of ashwagandha root extract improved long- and short-term memory in people with mild cognitive impairments. On a psychological note, ashwagandha has been successfully used to treat those suffering from obsessive-compulsive disorder, hyperactivity, and attention deficit disorder.

Boosted Fertility in Men In a clinical trial of 150 men, ashwagandha increased levels of testosterone and luteinizing hormone while reducing levels of follicle-stimulating hormone (FSH) and prolactin. It also improved sperm count, sex drive and sexual performance, and relieved erectile dysfunction.

Weight Management + Muscle Growth Ashwagandha root extract has been shown to reduce food cravings and reactive eating. This was

confirmed in a study on 52 people, where each person was given 600 mg per day of ashwagandha root after completing resistance weight training. The body fat percentages of participants decreased, while muscle strength increased.

Antidiabetic Effects In a 12-person trial, ashwagandha decreased blood sugar levels, achieving results similar to those of diabetes medications. It also reduced blood sugar levels in several animal studies. In some of these studies, HbA1C and insulin levels were improved as well.

Heart Health A research paper found that ashwagandha can be beneficial for the heart. It can reduce blood pressure and cholesterol levels and prevent hardening of the arteries. Ashwagandha reduced systolic blood pressure in two studies involving a total of 130 people.

Antiviral, Antimicrobial, and Antifungal Properties Ashwagandha has shown promising results in increasing immune cell function. Numerous studies conducted have shown ashwagandha resistant to many types of bacteria, fungi, and viruses.

Pain Relief Ashwagandha is a potent pain reliever. In one study, 10 g of ashwagandha was shown to have effectively reduced pain, joint tenderness, and swelling in participants.

Sleep + Neuroprotective Properties Due to ashwagandha's noted ability to combat the effects of oxidative stress, it has been used to assist those diagnosed with sleep disorders or sleep problems. Some animal- and human-based studies have shown that the herb can promote nerve growth.

Longevity Chemistry Leaf- and root-based extracts of ashwagandha have shown promising longevity-boosting results. The glycowithanolides compounds have shown the strongest antioxidant activity.

Cancer-Fighting Properties Ashwagandha may potentially be a powerful and relatively safe cancer treatment. In a clinical trial involving 100 cancer patients, the herb reduced fatigue and improved the overall quality of life of participants.

Safety Considerations Because ashwagandha is an immunostimulant, people with autoimmune diseases should consult a doctor before using it. The same goes for those suffering from rheumatoid arthritis, multiple sclerosis, or lupus. Regarding such conditions, improper use of ashwagandha may result in a worsening of current symptoms. Some users have had success (or no side effects) with small doses, but it's always best to consult a doctor before using.

Ashwagandha may counteract the effectiveness of immunosuppressive therapy. It may also cause drowsiness and should not be used in conjunction with other sedative-type medications. Ashwagandha may increase thyroid hormone production and should not be used simultaneously with thyroid hormone drugs.

Astragalus

Botanical Name *Astragalus membranaceus*

Family Fabaceae

Energetics Sweet, warming

Part Used Root

Properties Adaptogen (mild), antibacterial, antiviral, antioxidant, antiperspirant, heart tonic, hepatoprotective, and immune tonic

Constituents Astragalus contains immunostimulating polysaccharides, astragalans I–III, glucuronic acid, astragalosides I–VII, saponins, flavones, and isoflavones.



History/Folklore

Astragalus root is a staple of traditional Chinese medicine, where it is also known as Huang Qi. Its Chinese name translates to “yellow leader” as a nod to its yellow roots. Due to its impressive healing abilities, it’s the leader of tonic herbs. This precious adaptogenic herb holds a very important place within traditional Chinese medicine. Astragalus is often affectionately called the “young person’s ginseng” and is indicated for “insufficient qi” (lack of vital energy), feelings of weakness, fatigue, apathy, poor appetite, and vulnerability to infection and “spleen deficiency” (associated with cellular immune dysfunction). Traditionally, astragalus has been used as an antiviral; its immunosupportive properties make it a top choice as a preventive ally for colds and upper respiratory infections, as well as viral conditions such as shingles, where it stimulates the immune system.

Scientific Studies

Various Astragalus and its constituents are known to have antioxidant, anti-inflammatory, and antiviral activities. Anticancer properties have been observed in vitro, with some astragalus compounds proving effective against stomach cancer, colon cancer, liver cancer, and ovarian cancer. According to herbal/clinical consultant David Winston, astragalus is a spleen qi tonic that can be used to help treat a lack of appetite, organ prolapse, fatigue, and wasting-thirst syndrome (usually caused by diabetes or tuberculosis). Astragalus strengthens the lung qi and wei qi (protective energy that helps prevent illnesses).

Kidney + Liver Health Regular use of astragalus root has been shown to help prevent kidney and liver damage caused by medications and viruses.

Antioxidants The herb has come to be recognized for its medical potential as an antioxidant and for its immunomodulatory activity. In fact, the effectiveness of astragalus to boost the immune system has only been well documented by the scientific community during the last several years.

DNA Protection + Alternative Cancer Treatment Astragalus has been extensively researched since the early 1980s. Results have shown that it increases the number of killer T cells, leukocytes, and interferon in the

blood, all of which help to inhibit foreign substances and disease. Astragalus has also been shown to boost the effectiveness of chemotherapy and radiotherapy treatments in cancer patients.

New Research Recent research has suggested that astragalus root is also able to activate a key enzyme called telomerase. Telomerase promotes the production of telomeres, which are attached to the ends of our DNA chromosomes to help keep them together during the replication process. As telomere degradation is related to eventual cell death and the onset of chronic illness, it is vital that telomeres are protected. Doing so also prevents premature aging and promotes robust health and longevity. Although there are a number of active chemical components at work in astragalus, researchers believe that its key constituents are polysaccharides and saponins (phytochemicals that are responsible for many of the health benefits).

Immune System Health + Interferon Support Scientists have found that 8 g of astragalus given orally to 14 healthy volunteers for a period of two months led to significantly increased interferon-inducing abilities in blood cells (as compared to controls). Two months after therapy was discontinued, the interferon-inducing abilities remained significantly higher in those given astragalus compared to the controls.

Heart Health In a recent study of patients with congestive heart failure (CHF), an intravenous injection of astragalus resulted in a total heart function rate increase of 74.2 percent.

Safety Considerations Although astragalus is generally safe, it may interact with certain drugs. Because its botanical constituents have demonstrated antioxidant and estrogenic activity, it may interfere with some chemotherapy drugs and/or hormone-sensitive cancers.

Cordyceps (Chinese caterpillar fungus, Dong chong xia cao)

Botanical Name *Cordyceps sinensis*

Family Clavicipitaceae

Energetics Sweet, warm, moist, mildly acrid

Part Used Mushroom

Properties Adaptogen, antiasthmatic, antileukemic, antioxidant, hepatoprotective, hypocholesteremic (lowers elevated cholesterol levels), immune system amphoteric, nephroprotective, and sedative

Constituents The cordyceps mushroom contains immunostimulating polysaccharides (galactomannins, cordycepic acid), amino acids, fatty acids, polyamines, and ecdysterones.



History/Folklore

Cordyceps is a fungus that has been used for thousands of years. The two main types used today are *Cordyceps sinensis* and *Cordyceps militaris*. Cordyceps fungus is gathered in the wild in the foothills of the Himalaya mountains in Tibet and Bhutan. In the wild, the cordyceps fungus is quite rare and often overharvested because of its popularity. Due to environmental issues and the extremely high cost of this wild fungus, only products featuring cultivated *C. sinensis* or *C. mycelia* should be used.

Because of its rarity, cordyceps was reserved for use only by the emperor and royal family in ancient China. The mushroom was often used in tonic soups and eaten as a delicacy to restore vigor, prevent illness, and promote longevity. In folk medicine, it was often cooked with food to help people recovering from tuberculosis, pneumonia, or other debilitating diseases. In Tibetan medicine, cordyceps is used for people with kidney and heart problems and to enhance male virility.

Scientific Studies

Kidney Deficiencies Today, cordyceps is used to treat deficient yin and yang of the kidneys caused by excessive physical exertion or chronic disease. In Chinese medicine, the kidneys store the jing (life essence) and control not only fluid metabolism, but also sexual functions, bone health, and hearing. This herb is used to treat infertility in both men (to treat impotence) and women. Other cordyceps treatments target such conditions as frequent urination, night sweats, dizziness, ringing in the ears, and fatigue.

Cancer-Fighting Properties Scientists isolated six compounds from the antitumor fraction of *Cordyceps taii* mycelia powder. The compounds have cytotoxic activities against cancer cells and are most likely the main antitumor compounds of *C. taii*.

Brain Protector Cordyceps alleviates short-term memory impairment. It has shown therapeutic effects by inhibiting cerebral ischemia–induced cell death in the brain (occurring when there isn't enough blood flowing to the brain).

Protection from Radiation Cordyceps may offer protection against radiation-induced bone marrow and intestinal harm.

Side Effects Although it has not demonstrated toxicity, excessive amounts of cordyceps have been shown to depress immune system function and to cause edema, anxiety, and headaches. Be aware that wild cordyceps grows on caterpillars; therefore, there can be contaminant organisms present in this fungus. These days, most cordyceps and mycelia found on the market are cultivated on grains, which can be a safer and more environmentally friendly option.

Dang Shen

Botanical Names *Codonopsis pilosula*, *C. tangshen*

Family Campanulaceae

Energetics Sweet, moist, warm

Part Used Root

Properties Adaptogen, antiulcerogenic (protects against ulcers), gastroprotective, hypoglycemic agent, immune tonic

History/Folklore

Dang shen is an herb that has been used in traditional Chinese medicine for thousands of years. It exhibits similar therapeutic effects to ginseng, yet is much more readily available, sustainable, and affordable. *C. pilosula*. has been used for the treatment of digestive dysfunction, including indigestion and loose stools. The medicine is used primarily as a daily longevity tonic and for immune strengthening. It has slight variations in use among different countries within Asia. In Korea, it's used for coughs, palpitations, and anorexia; in Japan, for debility and oral weakness; in Hong Kong, for spleen deficiency and lung conditions including pneumonia, wheezing, and dry cough. In modern Chinese medicine, dang shen is used as a stomach/spleen supertonic, to improve digestion, and as a blood builder.

Scientific Studies

Protection against Ulcers Modern Chinese pharmacological studies have revealed the effects of *C. pilosula*. in protecting against peptic ulceration and promoting its healing, as well as regulation of bowel movements.

Red Blood Cells + Bone Marrow Studies indicate that this root supports red blood cell production, nourishes the bone marrow, and improves hemoglobin content.

Chemoprotective Properties In China, studies have demonstrated dang shen to be an effective remedy for the damaging effects of chemotherapy and radiation therapy. Adaptogenic tonic herbs are used in cancer treatment as potentiators, and to prevent side-effect damage from other medication and radiation therapy. This therapy is called Fu Zheng, which uses herbal formulas to prevent and relieve such problems, also enhancing the effectiveness of chemotherapy.

Safety Considerations It is not recommended that dang shen be taken during acute viral or bacterial illnesses, such as severe lung infections,

bronchitis, and pneumonia. People with excessive iron levels should avoid use of this herb.

Eleuthero (Siberian Ginseng)

Botanical Name *Eleutherococcus senticosus*

Family Araliaceae

Energetics Sweet, slightly bitter, slightly warm

Parts Used Root, stem, bark

Properties Adaptogen, anticholesterolemic, antioxidant, immune tonic

Constituents The active constituents are a group of compounds known as eleutherosides A–G.



History/Folklore

Eleuthero is commonly used as a spleen and qi tonic in Chinese medicine. In traditional Chinese medicine, the spleen has a very different function than in Western medicine. It separates the “pure” from the “impure.” Spleen qi is the ability to extract nutrients from food and drink.

In the West, eleuthero is frequently called “Siberian ginseng,” which may be the result of marketing attempts to associate this plant with other well-known Asian ginsengs and to encourage comparison with their adaptogenic benefits. However, eleuthero is not a member of the ginseng plant family, which includes the popular Asian and American ginsengs. It also does not contain the compounds known as ginsenosides. However, eleuthero contains unique compounds called eleutherosides, which have distinct adaptogenic benefits, including resistance against viruses,

anticancer effects, protection against brain impairments, and heart protection.

Scientific Studies

Immune System Booster Eleuthero also boosts the immune system by promoting natural detoxification processes in the liver. Eleuthero extract has been proven to help the liver process harmful toxins. It also has antioxidant benefits that can help preserve cellular health. In periods of oxidative stress, cells can be damaged by oxygen radicals. Several compounds in eleuthero were found to bind to and neutralize oxygen radical molecules, preventing cellular damage.

Anti-inflammatory Properties The pain-relieving drug naproxen sodium (brand name Aleve) works by inhibiting COX-2, an enzyme involved in activating inflammatory pathways. Eleuthero decreases the expression of COX-2, which can help to reduce and prevent inflammation. It also reduces excess inflammatory responses associated with allergic rhinitis.

Cancer-Fighting Properties Eleuthero shows promise in improving cancer outcomes by slowing the progression of cancer and boosting the immune system, which is severely taxed by fighting cancer. It has significantly reduced the growth of liver cancer cells and lung cancer cells. In addition to helping fight cancerous cells that have already formed, eleuthero helps protect cells from mutation, which is the underlying cause of cancer.

Antiviral Properties Eleuthero extracts have demonstrated strong antiviral activity. In a study conducted on cell cultures, eleuthero root extract inhibited the productive replication of human rhinovirus (HRV), respiratory syncytial virus, and influenza.

Endurance Athletes can benefit from using eleuthero because it increases endurance and stamina, enhances mitochondrial activity, speeds recovery, and prevents immune depletion from excessive training.

Side Effects In rare cases, eleuthero can cause overstimulation in sensitive people, or those feeling fragile. In the past, eleuthero frequently was adulterated with *Periploca sepium*. Ingestion of *P. sepium* has been implicated in several reports of toxicity originally believed to be caused by eleuthero. *Periploca sepium* contains cardiac glycosides that can interact with cardiac medications such as digoxin (Lanoxin).

Ginseng (Asian and American)

Botanical Names *Panax ginseng*, *Panax quinquefolius*

Known as Sang, Sen, Ren Shen

Family Araliaceae

Energetics Asian ginseng (*Panax ginseng*): Warming, stimulating.

American ginseng (*Panax quinquefolius*): Sweet, bitter, slightly cool, moist

Part Used Root

Properties Adaptogen, antioxidant, bitter tonic, mild central nervous system stimulant, mild demulcent (soothes mucous membranes), hypoglycemic agent, and immune amphoteric

Constituents A range of triterpenoid saponins known as ginsenosides or panaxosides, panaxanes



History/Folklore

Ginseng, meaning “man-root,” is a slow-growing root herb that has been used medicinally for more than 3,000 years by practitioners of traditional

Chinese medicine. Traditional herbalists also consider it to be a “general tonic,” a substance that helps protect the body against disease. Traditional medicine throughout Asia has greatly respected ginseng for thousands of years. It has been employed ceremonially and used as a general tonic for the recovery of “jing” (vital energy) as well as for alleviation of fatigue, and much more.

The *Panax* species have extensive use by native peoples around the world. The Cherokee people, for example, used *P. quinquefolius* and called it “yuwi usdi” (little man); they considered it a master plant and used it as a general tonic. Other native people within the North American continent used ginseng root or leaf as a spiritual and ceremonial medicine for protection, to gain affection, and to enhance the power of other herbs in difficult-to-treat cases.

Several species are commonly referred to as “ginseng.” The two most commonly used ginsengs are Asian or Korean ginseng (*Panax ginseng*) and American ginseng (*Panax quinquefolius*). The *Panax* species are often considered the “true” ginsengs. Siberian ginseng (*Eleutherococcus*), sometimes referred to as “eleuthero,” is not in the same genus, but it comes from the same family.

Scientific Research

Ginsenosides The main active components of ginseng are glycosidal saponins (glycosylated steroids), also known as ginsenosides. Many ginsenosides function as antioxidants that protect the outer membranes of cells, particularly nerve and immune cells.

Immunomodulation *Panax ginseng* has been examined for its immunomodulatory properties in animal and in vitro studies. In in vitro studies, ginseng activated macrophages to produce reactive nitrogen intermediates (thus becoming tumoricidal).

Natural Killer Cells Preclinical studies of ginseng have indicated a number of immunologically relevant biological activities, including the activation of macrophages, increases in natural killer (NK) cell activity and lymphocyte proliferation, increased graft-versus-host reactivity, and antioxidant activity.

Chemoprotective Properties + Reduction in DNA Damage According to research conducted by the Alternative Medicine Review, “The mechanisms whereby Asian ginseng is thought to have a potential role as a cancer preventive and treatment agent include the mitigation of DNA damage, anti-inflammatory carcinogenesis, antioxidant chemoprevention, apoptosis induction, inhibition of cancer cell proliferation, and immunomodulation.”

Heart Health Ginseng shows promise in protecting heart health. There is evidence that it can help control hypertension and protect against heart failure. Asian ginseng, in particular, may be useful in treating heart disease and in maintaining healthy cholesterol levels.

Neurodegenerative Diseases Evidence is accumulating that Asian ginseng may have neuroprotective properties, including maintaining homeostasis, as well as anti-inflammatory, antioxidant, antiapoptotic, and immunostimulatory properties.

Mental + Sexual Health Asian ginseng has proven helpful in treating erectile dysfunction, low sperm production, male fertility problems, and sexual performance problems. Ginseng can also be beneficial to those suffering from emotional imbalances or depression. According to clinical herbalist David Winston, Asian ginseng can be used “for disturbed shen (emotional problems), conditions such as deficient insomnia, poor memory, and depression and to delay the progression of Alzheimer’s disease symptoms.”

Adrenal Fatigue Asian ginseng is considered the most stimulating of the adaptogens. Therefore, it’s an excellent tonic for lethargy, exhaustion, or qi deficiency (lack of vital energy). Adrenal fatigue (symptoms include dark circles under the eyes, fatigue, and allergies) responds well to ginseng.

Safety Considerations The ginsengs are generally considered to have a relatively low level of adverse reactions. Possible contraindications include hypertension treated by warfarin, for which certain drug

interactions have been reported. Some reports of adverse reactions to ginseng have been attributed to adulterated or contaminated preparations.

Guduchi (Indian Tinospora)

Botanical Name *Tinospora cordifolia*

Family Araliaceae

Energetics Bitter, warm, dry

Parts Used Stem, root

Properties Adaptogen, anti-inflammatory, antioxidant, choleric, diuretic, febrifuge, hepatoprotective, immunomodulator

Constituents The active constituents are diterpene compounds, including tinosporone, tinosporic acid, cordifolisides A–E, and syringen.



History/Folklore

Guduchi is considered a rasayana in traditional Ayurvedic medicine. In ancient medical texts, it was commonly used as a remedy for snakebite and scorpion sting and was also applied topically as a poultice to heal wounds and fractures. It has been employed as an aphrodisiac and to treat people with liver problems, diabetes, and kidney problems. Although modern science doesn't support some of the traditional folk uses of guduchi, the scientific community has identified many other medicinal qualities in the plant.

Guduchi is known as a free-radical scavenger, as it binds and helps cleanse heavy metals, alleviating symptoms of liver toxicity. It promotes liver regeneration and therefore is used to treat jaundice and aid in the

treatment of liver fibrosis. Medical studies have shown that this herb enhances phagocytic activity, meaning that it relinquishes foreign pathogens in the body. Today it's used as a supportive therapy for patients with hepatitis B and C. The fresh juice has also been used to alleviate kidney problems, such as gout, gouty arthritis, urethral discharge, and burning urination.

Scientific Studies

Various The National Library of Medicine declares that *Tinospora cordifolia* extracts are extensively used in various herbal and pharmaceutical preparations for the treatment of different ailments for its antispasmodic, antimicrobial, antiosteoporotic, anti-inflammatory, antiarthritic, antiallergic, and antidiabetic properties.

Liver Protection + Hepatitis Recovery Animal and human studies have shown that guduchi can protect against chemicals that damage the liver such as carbon tetrachloride and that it helps stimulate regeneration of liver cells (hepatocytes) and the hepatic Kupffer (immune) cells.

Rheumatoid Arthritis Because of its amphoteric properties, guduchi has been studied to reduce excessive immune response as well as enhance a weakened immune system.

Safety Considerations Large doses of guduchi may cause constipation.

He Shou Wu (Fo-Ti / The Root of Longevity)

Botanical Name *Polygonum multiflorum*

Family Polygonaceae

Energetics Sweet, bitter, slightly warm

Part Used Cured root

Properties Antioxidant, astringent, cholagogue, cholesterol lowering, hepatoprotective, laxative, and neuroprotective

Constituents He shou wu contains anthraquinones, which give it laxative and tumor-inhibiting properties. It also contains lecithin and antioxidant

polyphenols.



History/Folklore

He shou wu, also known as fo-ti, is an important rejuvenative herb in traditional Chinese medicine. It strengthens the blood, muscles, tendons, ligaments, and bones. It also strengthens the kidneys, liver, and nervous system. Some consider it a hair restorative.

He shou wu has long been revered as a vital longevity tonic within the Chinese and Daoist pharmacopeia. It has been highly sought after since it was first recorded as one of the best-prepared vitality tonics by Daoist monks. Not only was it prized for its longevity chemistry, it was also regarded as an important “shen” (aka spirit tonic). The antiaging qualities of fo-ti are supported both by extensive writings within ancient Chinese medicine and by successful scientific studies.

The leaves, root tubers, and rhizomes of fo-ti have been used as vitality agents within many formulas. These formulas offer a number of pharmacological benefits, including antiaging, immunologic, neuroprotective, anticancer, and anti-inflammatory properties.

Scientific Research

Various Scientific research shows that he shou wu is antiaging; it improves the immune system, lowers bad cholesterol, reverses hardening of the arteries, improves bowel movement, regulates epinephrine and norepinephrine, regulates blood sugar, and is liver protective and antioxidative.

Antioxidants As with many adaptogens, the antioxidant nature of he shou

wu is one of its signature qualities. The anthraquinones and polysaccharides found in this herb protect the liver by reducing inflammation, preventing fat oxidation, and increasing antioxidant effects.

Neuroprotective Properties In human and animal trials, he shou wu extract supplementation could improve learning and memory ability and reduce brain pathology changes. A glucoside (TSG) has been proven to slow down age-related memory loss and help with Alzheimer's disease due to its protection of dopaminergic neurons.

Cancer-Fighting Properties There are many animal-based studies showing how he shou wu ethanol extracts significantly reduced tumor volume, caused tumor cell death, and assisted in the recovery from different cancers.

Hair Growth Fo-ti has traditionally been used throughout East Asia to treat patients suffering from baldness and hair loss. A glucoside found in *P. multiflorum* can significantly increase the number of dermal papilla cells, which play a key role in hair growth and hair fiber length.

Side Effects He shou wu in large doses might induce hepatotoxicity (liver toxicity). The hepatotoxicity of the water extract is higher than that of the alcohol-based extracts. Long-term use in high doses can cause toxicity to the kidneys and lungs.

Holy Basil (Tulsi / The Incomparable One)

Botanical Name *Ocimum sanctum* (synonym *O. tenuiflorum*)

Family Lamiaceae

Energetics Pungent, sweet, warm

Part Used Herb

Properties Adaptogen, antibacterial, antidepressant, antioxidant, antiviral, carminative, diuretic, expectorant, galactagogue (promotes the flow of mother's milk), and immunomodulator

Constituents Essential oils such as eugenol, carvacol, linalool, caryophylline, and methyleugenol, as well as triterpenes such as ursolic

acid and flavonoids



History/Folklore

Tulsi has been a treasured medicine within Ayurvedic medicine for hundreds (if not thousands) of years. The lore associated with this plant is rich in story and sacred energy, as this plant is said to be the embodiment of Vishnu, a Hindu god. Tulsi is a calming herb that produces relaxation effects. There are at least three types. The green-leafed variety sri, or rama tulsi, is the most common. The second type (Krishna tulsi) bears dark-green, almost purple leaves; this variety has a stronger taste and smell. The third type (vana tulsi, *O. gratissimum*) is a green-leafed forest variety that often grows in the wild. Tulsi is one of the few adaptogens that can easily be grown, and its harvest is usually abundant year after year.

Scientific Studies

Calming + Antidepressant Properties Tulsi has also been successfully used to relieve mental fog, cloudy thinking, poor memory, attention deficit disorder (ADD), attention deficit hyperactivity disorder (ADHD), anxiety, and mild depression and aid in recovery from head trauma. It has proven particularly effective when used in combination with other cerebral stimulants, such as ginkgo, bacopa, and rosemary. Studies have shown how the combination of botanical nootropics (supplements that may help improve cognitive function) has helped those with mental blockages, moodiness, and persistent depression.

Anti-inflammatory and Pain-Reducing Properties Animal- and human-

based studies showed an alcoholic leaf extract of tulsi had significant anti-inflammatory activity, helping reduce signs of pain and being an effective analgesic.

Cognition Booster Animal-based studies of tulsi extract showed how it can improve memory and attention. Animal studies also showed how tulsi water extracts also protected against drug- and aging-induced memory problems, indicating that tulsi may be beneficial in the treatment of cognitive disorders such as Alzheimer's disease and dementia.

Heart + Gut Protection Tulsi leaf essential oil has successfully been shown to lower cholesterol and protect the heart via its antioxidant effects. In other animal-based studies, tulsi extract protected against heart disease and prevented stomach ulcers and gut inflammation.

Cancer and Radiation Protection Two flavonoids in tulsi, orientin and vicenin, have been shown to be among the main compounds known to protect blood cells from radiation-induced DNA damage. A study of tulsi's anticancer activity found effectiveness against skin cancer, lung cancer, breast cancer, and preventive effects against liver cancer, stomach cancer, and oral cancer. Tulsi extract has been shown to protect liver cells from DNA damage and to increase antioxidant levels in response to cancer-causing chemicals and drug exposure.

Safety Considerations There have been contradictory animal studies showing that holy basil might be toxic to embryos. Until conclusive information exists, avoid using it during pregnancy. Holy basil also is reported to have antifertility properties.

Jiaogulan

Botanical Name *Gynostemma pentaphyllum*

Family Cucurbitaceae

Energetics Sweet, slightly bitter, neutral

Part Used Herb

Properties Adaptogen, antioxidant, expectorant, hepatoprotective,

cholesterol-lowering, hypotensive, immune tonic, and nervine

Constituents Jiaogulan contains triterpenoid saponins known as gypenosides. Eighty-two gypenosides have been isolated in jiaogulan. Four are identical to ginsenosides found in Asian ginseng.



History/Folklore

This is one of the few adaptogens that is a bit “weedy” and that can be grown abundantly and with ease. It’s a pleasure to have in the garden, and its rich, sweet flavor can be used to sweeten iced tea.

In traditional Chinese medicine, *Gynostemma* is an herb of extreme versatility and has been extensively researched in China. *Gynostemma* has been in use for roughly 500 years, with most of the information about its history and uses originating in China. The book *Herbs for Famine*, published around 1500 CE, describes the herb as “a vegetable suitable as a food or a dietary supplement during famine, rather than as a medicinal herb.” The renowned herbalist Li Shizhen, of the 16th century, described *Gynostemma* as a possible treatment for chronic fatigue, infection, pain of the pharynx, heat, tumors, hepatitis, diabetes, and trauma. According to the most recent edition of *Chinese Herbal Medicine: Materia Medica*, the plant can be prescribed for inflammation, heat clearing, detoxification, antitussive purposes, heart palpitations, fatigue syndrome, chronic bronchitis, and as an expectorant for cough relief.

Scientific Studies

Brain Health Studies show *Gynostemma* to protect brain cells from damage caused by low oxygen and low blood sugar. Being a powerful

vasodilator, this herb has been shown to improve blood flow throughout the body, including the brain, and reduce the possibility of stroke.

Antihistamine Properties The wheezing and shortness of breath in asthma are caused by the constant narrowing of blood vessels in the lungs. *Gynostemma* extract promotes proper blood vessel dilation and shows promise in the prevention and treatment of asthma symptoms. Allergic inflammation in the lungs is another key cause of asthma symptoms prevented by *Gynostemma* extract.

Cancer-Fighting Properties In vitro and in vivo evidence suggests that *Gynostemma* may complement the popular medicine *Panax ginseng*, as it also contains a high ginsenoside content and exhibits similar biological activities. Ginsenosides have been studied to be effective anticancer and antitumoral agents, assisting in slowing down the progression of cancer and tumoral growth.

Cellular Protection *Gynostemma* has been shown to increase enzyme activity and protect against oxidative cell damage. *Gynostemma* extract also increases and protects beneficial immune cells and antioxidant activity.

Cardiovascular Health Compounds in *Gynostemma* extract can help maintain healthy blood flow and prevent excessive arterial narrowing. *Gynostemma* extract improves cellular energy levels and may help the body recover from exercise.

Weight Management *Gynostemma* extract assists with fat burning and makes muscle cells more sensitive to insulin. It can reduce the production of the protein that promotes obesity (PTP1B). Compounds in *Gynostemma* improve blood flow during exercise and thus may increase exercise capacity.

Side Effects Avoid consuming *Jiaogulan* with drugs that suppress the immune system, as it could potentially make them less effective by acting as an immunostimulant. *Jiaogulan* can increase blood flow, so it should be used cautiously with blood-thinning medications.

Licorice

Botanical Names *Glycyrrhiza glabra*, *G. uralensis*

Family Fabaceae

Energetics Sweet, slightly bitter, warm, moist

Part Used Root

Properties Adaptogen, antiviral, antidiuretic, antihistamine, anti-inflammatory, antioxidant, antitumor, demulcent, expectorant, hepatoprotective, and immunomodulator

Constituents Licorice contains sweet-tasting triterpenoid saponins, collectively known as glycyrrhizin. It also contains isoflavones (such as genistein), demulcent polysaccharides, and anti-inflammatory flavonoids.



History/Folklore

Licorice has been used for a long time as a food and medicine in China and the Middle East. The ancient Greek botanist Theophrastus (third century BCE) mentioned in his classic *Enquiry into Plants* that the roots that grew in Scythia (in Asia Minor) were very sweet and useful for people with dry coughs or respiratory diseases. Dioscorides (c. 40–90 CE), a Greek physician who wrote one of the most influential medical books in the ancient world, *De Materia Medica*, gave licorice its Latin genus name, *Glycyrrhiza*. In ancient Greek, *glukos* means “sweet” and *riza* means “root.” So the Latin name for this plant is derived from the Greek words meaning “sweet root.”

In traditional Chinese medicine, licorice was often used in different formulas as a harmonizer. Its sweet taste made it a welcome addition to

many medicinal formulas. It also added numerous health benefits. Licorice was often used to treat hoarseness of the throat, ulcers of the bladder, wheezing, painful urination, and consumption (tuberculosis). In older Chinese medicine books such as the *Shennong Bencaojing*, licorice was said to balance the five viscera (organs) and six bowels. Licorice also supposedly strengthened the bones, enhanced muscle growth and strength, and, if applied topically, healed wounds.

Scientific Studies

Various Modern research shows licorice to possess a full spectrum of activities: antiviral, anti-inflammatory, antiallergic, demulcent (moistening effect), liver-protective, and hormone balancing. Within formulations it is used as a potentiator as it's touted to increase the effects of steroids and antitumor and antiulcer herbs, while increasing immune function, including the production of interferon and natural killer cells.

Anti-inflammatory Properties Studies show how licorice extract promotes regulatory T cells, suggesting that licorice can protect against autoimmune and inflammatory diseases.

Cardiovascular Protection + Weight Management In a clinical study, patients with high cholesterol who were given an ethanol extract for a year noticed a significant decrease in LDL cholesterol and regulation of blood pressure. In other studies, licorice flavonoids were observed to help with weight management by enhancing fat oxidation during light exercise and assisting with blood sugar regulation.

Brain Protection Licorice flavonoids (like glabridin) are known to prevent oxidative damage in the brain and stroke-related injuries.

Possible Prevention of Cancer Growth Licorice extract has been shown to suppress several different types of cancers, including pancreatic, prostate, breast, lung, skin, gastric, and endometrial, while also assisting with DNA repair from carcinogen-induced illnesses. Compounds have also been effective against cancerous cell proliferation, inflammation, and cell death resistance.

Side Effects Licorice in excess can cause a condition known as hypokalemia, in which a person retains sodium, loses potassium, and experiences higher blood pressure. Caution is advised for people who may have hypertension. For anyone who is ingesting licorice for an extended period of time, maintaining a diet that is high in potassium and low in sodium and checking blood pressure regularly are recommended.

Mucuna (Dopamine Bean)

Botanical Name *Mucuna pruriens*

Family Fabaceae

Energetics Sweet, warming

Part Used Seeds

Properties Anti-inflammatory, immunostimulant, anticancerous, adaptogenic

Constituent L-dopa



Folklore/History

Mucuna has been used in Central America for centuries as a general tonic. The beans are traditionally roasted and ground to make a coffee substitute called nescafe (not to be confused with the commercial brand Nescafé!). Mucuna beans are also grown by indigenous peoples throughout Central America, who cook and eat them like any other vegetable.

In Brazil and other South American countries, the seed has been a folk remedy to treat Parkinson's disease and similar illnesses that cause

tremors. It has also been used for decades to treat depression, impotence, infertility, intestinal gas, and intestinal worms. It is considered a diuretic, a nerve tonic, and an aphrodisiac. Macuna has a long history of use in Ayurvedic medicine, which recommends it for intestinal worms, diarrhea, snakebites, sexual dysfunction, performance anxiety, tuberculosis, impotence, infertility, sterility, rheumatic disorders, muscular pain, gonorrhea, gout, delirium, diabetes, and cancer.

Mucuna's panacea-like use and folkloric reputation are the reasons behind its being called the "magic velvet bean." It is commonly used as a brain enhancer and libido and fertility booster because of its L-dopa content. Many indigenous cultures in Central America, South America, and India consider mucuna to be a heal-all, though technically it is not an official adaptogen. It is often treated like an adaptogen because of its broad-spectrum healing abilities, including its antiaging and antioxidant properties. It is also believed to combat oxidative stress, enhance insulin release, and facilitate the growth of nervous tissue.

Scientific Studies

One of the infamous constituents within mucuna is L-dopa. L-dopa is a precursor to the neurotransmitter dopamine, norepinephrine (noradrenaline), and epinephrine (adrenaline). The body uses L-dopa to manufacture dopamine. Dopamine has a significant role in the body as it makes it possible for us to transfer information from neuron to neuron, assisting in part of the regulation of our mood (in particular our feel-good hormones), motor control, sex drive, immune function, growth hormone levels, growth hormone release, and behavior.

Dopamine Booster Mucuna has received a lot of attention from the medical community as it can significantly help reduce symptoms of Parkinson's disease. People with Parkinson's have low to no dopamine production in parts of the brain. The naturally derived L-dopa from mucuna can cross the blood-brain barrier and help in the production of dopamine, restoring its brain levels and neurotransmission. Clinical trials have demonstrated that the powder derived from *Mucuna pruriens* decreased symptoms of Parkinson's disease better than the standard pharmaceutical levodopa. Studies have also shown that the naturally derived L-dopa and the synthetically derived levodopa treatment were

effective, yet the naturally derived one was absorbed and reached peak levels faster.

Mood Elevator and Nootropic Mucuna has also shown impressive ability to fight depression due to its neurological balancing. When it comes to depression, we talk about serotonin and norepinephrine much more often than we do about dopamine. It is now understood that the deficiency of dopamine in specific parts of the brain is what can trigger low moods and depressive symptoms. Low dopamine in the brain's emotional (mesolimbic) centers can cause the inability to feel pleasure, which is common in depression. Low dopamine in cognitive areas can trigger a lack of motivation, another common symptom of those suffering from depression. In several studies, *Mucuna pruriens* extract showed significant dopamine-boosting action, improved symptoms of depression in general, as well as significantly lower stress levels.

Neuroprotective Properties Mucuna has been successfully used by the medical community to treat ADHD. Dopamine is known to be neuroprotective, boosting cognition and other cerebral functions. A study done on children and teenagers with critical ADHD showed improved symptoms in 77 percent of the cases with a combination of *Mucuna pruriens* and vitamins, minerals, and other supplements (such as vitamin C, calcium, vitamin B₆, folate, L-lysine, L-cysteine, and selenium).

Safety Considerations Mucuna overdose can cause headaches, movement disorders, fatigue, tremors, fainting, and thirst. Synthetic levodopa and other drugs used in treating Parkinson's disease cause similar and more severe side effects.

Reishi

Botanical Name *Ganoderma lucidum*

Family Ganodermataceae

Energetics Bitter, warm

Part Used Mushroom

Properties Adaptogen (mild), cholesterol-lowering, anti-inflammatory, antioxidant, antiviral, heart tonic, hepatoprotective, immunomodulator, and nervine

Constituents Reishi contains immunostimulating polysaccharides known as beta-glucans, bitter triterpenes such as ganoderic acid and ganoderenic acid, and a protein known as lingzhi-9.



History/Folklore

Reishi has been recognized as a medicinal mushroom for over 2,000 years, and its powerful effects have been documented in many ancient scripts. Reishi, also known as lingzhi in traditional Chinese medicine, is one of the most revered longevity tonic herbs within the Eastern pharmacopeia, making it one of the oldest mushrooms known to be used therapeutically. Reishi is one of the more popular remedies and, unfortunately, has been overharvested to the point of near extinction in its native locations. Although some herbalists classify it as an official adaptogen, and others consider it a secondary adaptogen, there isn't enough evidence yet to classify it. Based on all the research found in both modern and ancient texts, I believe it should be classified as a primary adaptogen.

The word *lingzhi* represents a combination of spiritual potency and the essence of immortality. The herb is regarded as the “herb of spiritual potency,” symbolizing success, well-being, divine power, and longevity. Among cultivated mushrooms, *G. lucidum* is unique in that it is valued more for its pharmaceutical properties than its nutritional properties. A variety of commercial *G. lucidum* products are available in various forms, such as powders, dietary supplements, and teas. These are produced from different parts of the mushroom, including the mycelia, the spores, and the fruit body. The specific applications and attributed health benefits of

lingzhi include management of blood glucose level, immune system modulation, hepatoprotection, bacteriostasis, and more.

Many revered Daoists and monks believe that reishi is a powerful “shen tonic,” which translates loosely to an herb that “nourishes the spirit.” Although this claim cannot be verified by science directly, reishi has been used as a “spirit tonic” as it’s known to profoundly relax the nervous system, calm the mind, and induce a state of relaxed focus. This last benefit has long been valued by spiritual seekers, meditators, and those looking to relieve the stresses of daily life.

Scientific Studies

Neuron Booster According to recent studies published in scientific journals, reishi has demonstrated measurable antioxidant and life-extending properties, as well as the ability to stimulate activity in brain neurons by increasing nerve growth factor (NGF) levels in cells. A study on reishi’s constituents, particularly its polysaccharides, demonstrates life-span-promoting effects.

Anti-inflammatory + Antioxidant Properties Studies have shown that within 14 days of consuming reishi extract, there is an increase in anti-inflammatory/antioxidant markers and minimized oxidative damage to the blood.

Hormonal Regulator Reishi’s effects on the hormonal system are legendary. Reishi, like most adaptogenic herbs, also supports and balances the endocrine and hormonal systems in the body. Hormones are the “molecules of consciousness” and are said to be one of the main centers of our emotions; they are powerful biopeptides that directly control our mood, perception, sleep-wake cycles, bonding, and human connection.

Immune System Enhancer Reishi contains large numbers of organic compounds that are proven to strengthen our immune cells and improve general immune system health. *G. lucidum* can activate or deactivate certain parts of the immune system, which is why it has a modulating role instead of a more active one.

Antibiotic Properties Reishi, when combined with antibiotics, has been shown to increase antimicrobial activity in the body to higher levels than synthetic antibiotics working alone. Studies also show that taking reishi, along with antibiotic prescriptions, enhances the effects and efficiency of synthetic antibiotics.

Liver Support Reishi supports the liver and particularly aids the body in heavy-metal detoxification.

Cardiovascular Support Reishi is 10 to 20 percent protein. Animal studies performed using extracts of its protein showed lower blood pressures in hypertensive rats, with effects lasting up to eight hours. Other studies have shown that reishi can help reduce both cholesterol and insulin resistance.

Anticancer Properties Reishi has properties that significantly protect against multiple types of cancer. The protection it provides is mostly due to inflammation reduction and the inhibition of cell and tumor growth. Extensive research has shown reishi to be useful in both cancer prevention and cancer treatment.

Studies also have shown reishi's antitumoral properties. Reishi is known to suppress cell adhesion and cell migration of highly invasive breast and prostate cancer cells. In different parts of Asia, it is used as an alternative method to treat leukemia.

Neuroprotective Properties Reishi has been found to protect nerve cells against damage, degeneration, and impairment of function. It significantly decreases fatigue, anxiety, and depression, and improves one's outlook and sense of well-being.

Side Effects Reishi can potentially overstimulate the immune system. Although it is known for its liver-protective qualities, there are a small number of studies showing potential links between reishi and liver toxicity. Consuming large amounts can cause dryness of the mouth, throat, and nasal area along with itchiness, stomach upset, nosebleed, and bloody stools.

Rhaponticum (Maral Root)

Botanical Name *Rhaponticum carthamoides*

Family Asteraceae

Energetics Bitter, slightly sweet and resinous, cool, slightly dry

Part Used Root

Properties Adaptogen, antioxidant, antitumor, heart tonic, hepatoprotective, immunostimulant, and nervine

Constituents Ecdysteroids, phenolics (flavonoids and phenolic acids), polyacetylenes, sesquiterpene lactones, triterpenoid glycosides, and terpene



Folklore/History

Rhaponticum is a classic herb within Mongolian, Siberian, and Chinese tonic herbalism. In Mongolian herbalism the root was commonly used for respiratory issues, liver imbalances, blood weakness, and kidney diseases. In Siberian folk medicine it was used as a sexual tonic, to improve mood, as a natural antidepressant, and for physical vigor. Many indigenous people within that area used the root on long journeys as they traversed the challenging terrain and climate in Siberia.

Scientific Studies

Improved Athletic Performance Soviet and Russian athletes have used rhaponticum due to its reputation as an aid to muscle recovery. Since the

1940s, it has been successfully used to improve athletic performance, build muscle tissue, enhance uric and lactic acid excretion, and stimulate blood flow to the muscles. The ecdysteroid constituents have been shown to speed up recovery time from debility or excessive physical exertion, enhancing endurance and stamina.

Prevention of Oxidative Stress The phenolic compounds and antioxidants found in rhaponticum have been extensively studied for their ability to prevent oxidative DNA damage and lipid peroxidation.

Brain Protection Rhaponticum may help protect the brain from excitotoxicity in the hippocampus and may also help protect the brain during strokes by decreasing the density of synapses in the cerebral cortex. This action can help prevent some of the destructive changes that often take place during strokes. Rhaponticum is believed to enhance the immune system, help stabilize blood sugar levels, and prevent hemolytic anemia (excessive destruction of red blood cells), a condition associated with chemotherapy and radiation.

Anticancer Properties Studies show that rhaponticum can help prevent carcinogenesis, the onset of cancer. Rhaponticum has been shown to combat the onset of the following cancers: brain, breast, ovarian, cervical, lymphoma, and leukemia.

Side Effects Maral root is not recommended during pregnancy, as it can stimulate labor.

Rhodiola (Golden Root)

Botanical Name *Rhodiola rosea*

Family Crassulaceae

Energetics Sweet, slightly bitter, spicy, cool, dry

Part Used Root

Properties Adaptogen, antidepressant, antioxidant, antiviral, immunostimulant, nervine, mild central nervous system stimulant, anti-arrhythmic (protects against irregular heartbeats), cardioprotective, and

neuroprotective

Constituents Rhodiola contains rosavins (rosavin, rosin, rosarin), salidroside, flavonoids (rodiolin, rodionin), polyphenols, and terpenes.



History/Folklore

Chinese emperors craving the secret to long life and immortality organized expeditions to Siberia to collect and bring back the plant. Siberians secretly transported the herb down ancient trails to the Caucasus Mountains, where it was traded for Georgian wines, fruits, garlic, and honey. In Siberia, rhodiola was taken regularly, especially during the cold and wet winters, to prevent sickness. In Mongolia, it was used for the treatment of tuberculosis and cancer. In the mountain villages of Siberia, bouquets of rhodiola roots are still given to couples prior to marriage to enhance fertility and ensure the birth of healthy children.

Rhodiola is a very popular plant within the traditional healing systems of Asia and Eastern Europe. For millennia, it has been used as a brain-protective herb and is known to stimulate the nervous system, improve blood circulation, provide energy, decrease depression, enhance work performance, eliminate fatigue, and prevent high-altitude sickness. Rhodiola was even popular among the Vikings, who used it to improve mental and physical endurance.

Traditionally, rhodiola has been used to treat diarrhea, headaches, hernias, and hysteria, as well as cognitive dysfunctions. It is an astringent and has been reported useful for mouth pain, kidney stones, swellings, and back disorders. Its roots have been used for skin diseases, and it is said to benefit hair growth. It has vasoconstrictive and hemostatic effects on

hemorrhoids. Lastly, it is said to help manage stress and fatigue.

Scientific Studies

Powerful Antioxidant + Cardioprotective Properties The protective qualities of the antioxidants in rhodiola make it an excellent tonic against free radicals, preventing cellular and DNA damage. Studies have shown that rhodiola extract can greatly help lower blood pressure, as well as have great potential for reducing the risk of heart disease.

Protection against Oxidative Stress Oxidative stress is thought to contribute to the development of a wide range of diseases, including neurodegenerative diseases, diabetes, cancer, rheumatoid arthritis, and cardiovascular and liver diseases. Oxidative stress can block our biological ability to detoxify, repair, and regenerate, resulting in the inability to eliminate free radicals and the toxicity of different stress responses. Rhodiola, like many adaptogens, protects the body from the potential damage from oxidative stress.

Tumor Growth Suppression Rhodiola protects body tissue against free radicals and toxins capable of harming DNA and causing cancer.

Antidepressant Properties According to human clinical trials, rhodiola appeared to multitarget various components of the neuroendocrine system, neurotransmitter receptors, and molecular networks, which are directly associated with uplifting our mood. These results confirmed the antidepressant-like effect of rhodioloside, which might be primarily based on its stimulation of neurotransmitters and its anti-inflammatory effect.

Antistress, Antianxiety + Prevention of Adrenal Fatigue Rhodiola has shown impressive results for those suffering with stress-related fatigue, and is particularly indicated for those who have acute exhaustion associated with chronic stress. Studies have demonstrated how rhodiola is able to increase mental performance, particularly the ability to concentrate, while decreasing the cortisol response, thereby preventing burnout with fatigue syndrome.

Neuroprotective and Nootropic Actions Nootropics are drugs that may increase cognitive function via their antidepressive, memory-enhancing, or concentration-enhancing properties.

Effects on Parkinson's Disease Rhodiola can help keep neurotransmitters like dopamine from being degraded, which can prevent neural damage in those with Parkinson's disease.

Aphrodisiac Properties Rhodiola is said to facilitate blood flow, so it has been used to treat erectile dysfunction. *Rhodiola rosea* is believed to restore menses in women. It also helps regulate menstruation.

Side Effects *Rhodiola rosea* inhibits the metabolic capacity of CYP2C9 in humans (important in the oxidation of xenobiotic and endogenous compounds).

Schisandra (The Five-Flavor Berry)

Botanical Name *Schisandra chinensis*

Family Magnoliaceae

Energetics Sour, sweet, salty, bitter and pungent, warm, dry

Parts Used Fruit, seeds

Properties Adaptogen, antioxidant, anti-inflammatory, immune tonic, astringent, hepatoprotective, nervine, and expectorant

Constituents Lignans such as schisandrin B, gomisans, and schisandrol A are considered to be the active constituents of schisandra. The berries also contain essential oils and vitamin C.



History/Folklore

This precious fruit has a long history of folkloric use in traditional Chinese medicine and other Eastern healing traditions. The Chinese name for schisandra is wu wei zi, which means “five-flavor fruit.”

Many Eastern traditions believe that schisandra contains all five flavors (sweet, sour, bitter, pungent, and salty). The seeds are pungent and bitter, the peel and flesh are sweet and sour, and the whole fruit is salty. Within traditional Chinese medicine, each flavor is associated with a particular organ and is said to benefit one of the five yin organs: the liver, kidneys, heart, lungs, or spleen. Among its many healing powers, schisandra is perhaps best known for its astringent capacity. Astringents are a class of herb that takes action in the body by contracting soft tissues to stop or reduce bleeding and mucus or other discharges. Schisandra can thus assist with problems such as diarrhea, frequent urination, excessive discharge, excessive sweating, and skin tightening (as occurs in the healing of wounds). Its adaptogenic nature regulates many organ systems, including the central and sympathetic nervous system, the endocrine system, the immune systems, the respiratory system, the cardiovascular system, and the gastrointestinal tract.

Scientific Studies

Various Schisandra’s adaptogenic properties help maintain an internal balance in the body and reduce biochemical indicators of stress on the body. These adaptogenic properties help the body calm down and cope with mental and physical stress.

Hepatoprotective Properties One of schisandra’s signature benefits is its liver-protecting and blood-purifying abilities. Studies show that schisandra extract provides significant protection against harmful toxic exposure such as drug, agricultural, and environmental toxicity. Schisandra reduces stress-induced liver damage by lowering feelings of stress in the body, thus protecting the possible manifestation of liver tumor cells activated by stress. Studies have also shown its effectiveness in treating hepatitis C and helping to reduce triglycerides, thereby assisting in the prevention of fatty liver diseases.

Improved Blood Flow Improving blood flow throughout the body also improves the regulation of body fluids. A regular intake of schisandra increases the flow of nitric oxide in the blood, which relaxes smooth muscles and expands blood vessels. This is particularly helpful for athletes or those participating in intense physical activities.

Immune + Cardio Protection The berries and/or seeds of schisandra are thought to enhance the endocrine system and nonspecific immune system function. Nonspecific immune cells are the cells in the immune system most affected by stress, and they tend to be inhibited by chronic anxiety, anger, depression, and fear. Schisandra has also been shown to support and protect heart tissue, thus preventing damage to the heart. Studies have found that schisandra has a normalizing effect on blood pressure, by lowering elevated blood pressure or raising low blood pressure.

Other major scientific discoveries about schisandra include that it provides DNA protection, has chemoprotective properties, inhibits multidrug resistance in cancer cells, and improves eyesight, hearing, and mental acuity.

Side Effects It is not recommended that schisandra be ingested during acute viral or bacterial infections, such as bronchitis, pneumonia, influenza, and deep colds. Schisandra is not recommended for people who have gastroesophageal diseases, epilepsy, or peptic ulcers.

Shatavari

Botanical Name *Asparagus racemosus*

Family Liliaceae

Energetics Sweet, bitter, warm, moist

Parts Used Root, stem

Properties Adaptogen, antibacterial, antispasmodic, aphrodisiac, demulcent, diuretic, immune tonic, lung tonic, galactagogue, and gastroprotective

Constituents Shatavari contains anti-inflammatory steroidal glycosides such as diosgenin, shatavarins I–IV, and sarsasapogenin. It also has

immune-stimulating polysaccharides.



History/Folklore

Shatavari has been revered as an essential longevity tonic, or rasayana, for hundreds (if not thousands) of years in Ayurvedic medicine. Rasayanas are a class of herbs within Ayurveda known as powerful rejuvenators that promote general well-being and longevity. It is believed that these herbs improve physical strength, combat the effects of aging, and improve memory and intelligence. “Shatavari” literally translates to “she who has one hundred husbands,” as the herb was a prized sexual and reproductive tonic believed to increase fertility, particularly in women. Men have also been known to use it for fertility. This plant has long been used to enhance the immune system, regulate hormonal imbalances, and regulate menstruation. It has also been used as a galactagogue (an herb or drug that increases the production of breast milk).

In traditional Chinese medicine, this rejuvenating and nutritive herb was considered best for such problems as fragility, low libido, fatigue, and dry skin. It is believed to increase kidney qi, thus improving vitality, longevity, and essence (particularly in women).

Scientific Studies

Galactagogue, Milk Production Booster Shatavari is a well-known galactagogue. It increases the production of corticoids and prolactin, which

improve the quality and amount of breast milk produced by a lactating mother. Shatavari also stimulates the secretion of steroid hormones that improve milk production. It is also believed to increase breast weight.

Estrogen Booster Shatavari contains phytoestrogens, the precursors of estrogen. This discovery has resulted in its successful use by women with low natural estrogen levels caused by menopause or hormonal imbalances.

Gastroprotective and Antiulcer Properties Shatavari possesses gastroprotective and antiulcer properties. In a recent animal study, shatavari inhibited gastric ulcers in animals given indomethacin, a nonsteroidal anti-inflammatory drug.

Shilajit (Invincible Rock, Mummy)

Botanical Name *Asphaltum bitumen*

Family None

Energetics Warm, bitter, pungent, salty

Part Used Pitch

Properties Adaptogen, anti-inflammatory, antioxidant, hypoglycemic, immunomodulator, antiulcerogenic, inhibits allergic response

Constituents Humus, various minerals, dibenzo alpha pyrones, and organic acids such as fulvic, humic, benzoic, and hippuric acids

History/Folklore

Shilajit is a rare, resinous substance found in the mountain regions of Karakoram and in the Himalayas, Tibet, and the Caucasus. It can also be found in the Altai Mountains in southern Siberia.

It is composed of various plant organisms and humus compressed by multiple layers of sedimentary rock. *Shilajit* is a Sanskrit word that can mean “the invincible rock,” “the conqueror of the mountains,” and “the destroyer of all weakness.” It has been in use for thousands of years as a vital herbal tonic in Ayurvedic medicine. It has become popular with the Hunza tribe in the Hunza valley (sometimes called Shangri-La), which is part of the Himalayan and Karakoram mountain ranges. This valley is

known for its natural beauty and the health of its people. Their diet consists of food rich in fiber and whole grains. One of the Hunza tribe's best-kept longevity secrets is shilajit. It is astoundingly rich in organic minerals, antioxidants, amino acids, nutrients, phytochemicals, and fulvic acid. Its naturally occurring humic and fulvic acids—two of nature's most potent detoxifiers of heavy metals and other pollutants—are one of shilajit's most powerful benefits.

Extensive research has been conducted to determine what shilajit is exactly. There are several theories, including one that says it is made up of the bacterial and/or fungal remains of degraded plants rich in resin and latex. Another theory suggests that it is created by mosses and liverworts that break down soil and rocks. Different locations produce shilajit with varying chemical compositions.

Shilajit has historically been used to improve general physical and mental strength, to delay the effects of aging, to normalize blood sugar and insulin, to enhance libido, to promote healing after injury, to enhance brain function, to support the immune system, to help arthritic pain, and to combat high blood pressure and obesity.

Scientific Studies

Various Scientific interest in shilajit has increased dramatically during the last 20 years. The first studies began in shilajit's place of origin, the central Asian regions of the former USSR (Kyrgyzstan, Tajikistan, and Uzbekistan). Years of scientific research and study have led to shilajit's use as a growth-promoting, restorative tonic given to elite athletes in Russia and other former Soviet republics.

Nutrient Density Pure shilajit resin is composed of 85 minerals in ionic form, and approximately 2 to 10 percent naturally occurring humic and fulvic acids, with the remaining portion composed of minerals and other medical substances. However, be aware that adulterated products that claim to be pure are typically 10 to 30 percent actual shilajit powder and about 70 to 90 percent extracted humic and fulvic acids, which can be produced cheaply in a lab and added afterward. Be aware that adulterated shilajit powders do not possess the same powerful medicinal properties,

nor will they reveal the touted results.

Endocrine and Cellular Protection from Oxidative Stress Studies have shown that shilajit reduces chronic fatigue syndrome in animals. Shilajit has also demonstrated powerful cellular oxygenator effects, reversing mitochondrial and DNA damage. In other words, it's a powerful rejuvenator with strong antiaging properties. It is known to protect against damage caused by oxidative stress, radiation, and cellular stress, and to be chemoprotective. The antioxidants within shilajit have also been shown to protect against gastrointestinal damage caused by oxidative stress.

Anti-inflammatory Properties Shilajit has been shown to reduce pain and inflammation, making it one of the most-sought-after remedies for those suffering from arthritis. Humic acid and fulvic acid can greatly reduce levels of inflammation.

Cardioprotective + Cholesterol-Lowering Properties Shilajit's cardioprotective properties stem from its ability to increase glutathione and antioxidant levels. Shilajit can also benefit people with problems involving blood lipids. In one study, it reduced total cholesterol levels and increased levels of HDL cholesterol (aka good cholesterol).

Increased GABA and Antipsychotic Properties GABA is a neurotransmitter and a cornerstone of the calming system in the body. It can be viewed as the "braking system" in the realm of neurotransmitters, and controls the actions of epinephrine, norepinephrine, and dopamine. Studies also show how shilajit greatly increased the levels of GABA in the brain, significantly inhibiting seizures, anxiety, and psychotic episodes.

Safety Considerations Shilajit can contain large amounts of uric acid and should not be taken by people with gout or uric acid calculi (small uric acid kidney stones). In large doses it might cause nausea.

Suma (Brazilian Ginseng)

Botanical Name *Pfaffia paniculata*

Family Amaranthaceae

Energetics Sweet, warming, slightly bitter

Part Used Root

Properties Anti-inflammatory, immunostimulant, anticancerous, adaptogenic

Constituents Nortriterpene pfaffic acid, six pfaffic acid saponins (pfaffosides A–F), pterosterone, ecdysterone, and ecdysteroid glycosides



History/Folklore

Suma, a plant native to the Amazon basin, is known as “para toda,” meaning “for all things,” and also as “Brazilian ginseng.” The indigenous peoples of the Amazon region who named it “paratoda” have used its root for generations, and it is used in a variety of ways, including as a general tonic, an energy rejuvenator, and a sexual tonic. It is also used as a general cure-all for many types of illnesses. For at least 300 years, suma has been used as an aphrodisiac, a calming agent, and an ulcer treatment. Several indigenous Brazilian tribes still consider it a key herbal remedy and food.

Suma is not yet recognized as an official adaptogen due to a lack of research, though research has shown that the root can increase the body’s resistance against many physical, chemical, and biochemical threats, and can serve as an antistress agent. In North American herbalism, suma root is applied as a nutritive and regenerative tonic and is believed to help regulate many of the body’s systems.

As an immunostimulant, suma can help treat exhaustion and chronic fatigue, impotence, arthritis, anemia, diabetes, cancer, tumors, mononucleosis, high blood pressure, PMS, menopausal symptoms, hormonal disorders, and many types of stress. In the current herbal medicine of Ecuador, suma is considered a tonic and “normalizer” for the cardiovascular system, the central nervous system, the reproductive system, and the digestive system. It is used to treat hormonal disorders, sexual dysfunction, sterility, arteriosclerosis, circulatory and digestive disorders, rheumatism, and bronchitis.

Suma has been called “the Russian secret,” as it has been used by Russian Olympic athletes for many years due to the increase in muscle building and endurance that it promotes without the negative side effects associated with steroids. This folk secret has been backed up by modern science due to suma’s anabolic-type phytochemical called beta-ecdysterone and three novel ecdysteroid glycosides that are found in high amounts in suma.

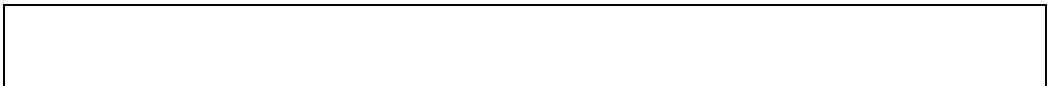
Scientific Studies

Various Modern research shows suma to greatly improve resistance to stress and disease, increase stamina and endurance, and assist in recovery after illness or injury. It is considered a nerve and glandular restorative and tonic. Being an immunostimulant, it increases resistance to pathogens, greatly aiding tissue and wound healing. Suma is also known as “female ginseng” as it’s known to be a hormone balancer; it also aids in the treatment of menstrual and menopausal symptoms, vaginal atrophy, and infertility, and increases sexual function (in both men and women), while minimizing the effects of birth control medications.

Nutrient Density Suma is nutritionally dense, containing 19 different amino acids, a large number of electrolytes; trace minerals; iron; magnesium; zinc; vitamins A, B₁, B₂, E, K; and pantothenic acid. Its high amount of germanium accounts for its properties as a cellular oxygenator. The root also contains a large amount of iron, as well as novel phytochemicals, such as saponins, pfaffic acids, glycosides, and nortriterpenes.

Anticancer and Chemoprotective Properties Suma is widely recognized for its promising anticancer activity. Studies in Japan have confirmed anticancer benefits through the use of natural suma root. In one in vivo study, the administration of 750 mg of powdered suma root was reported to inhibit the proliferation of lymphoma and leukemia in mice. Studies also confirm that it prevents the proliferation of cancer cells, but studies have yet to show the abolishment of cancer cells. More studies have recognized its chemoprotective chemistry while inhibiting the proliferation of cancer.

Safety Considerations Suma has been shown to contain significant plant sterols, which might have estrogenic properties or activities and/or cause an increase in estrogen production (not clinically proven).



• CHAPTER THREE •
RECIPES
RITUALS FOR EVERYDAY HEALTH



Warm Tonics: Warming Tonics and Lattes
Functional Foods: Broths, Smoothie Bowls, Power
Balls
Cocktails & Spritzers: Chilled Elixirs and Spritzers
Body Care: Body and Face Oils



WARM TONICS

This section includes soothing recipes that I love to use on a daily basis. Here you'll find classic warm infusions, decoctions, lattes, and brews with the upgrade of plant medicines. When composing warm tonic beverages be sure to pair them with high oxygen carriers such as matcha, turmeric, or a super-berry; nourishing superfoods like coconut; or protein-rich, plant-based milks. These allow for whole-body nutrition and deeper assimilation of the adaptogens' chemistry.

MINERALIZING MORINGA-MATCHA

A warm tonic that could easily replace your coffee habit

This drink provides a plethora of nutrients, healthy fats, and medicinal herbs. Matcha and moringa make the perfect duo, as they are packed with

antioxidants. High-antioxidant sources naturally energize us because they are cellular oxygenators (natural energy reserves). In Ayurvedic medicine, moringa and matcha were used as digestive and blood cleansers, as they were able to remove impurities, toxins, parasites, and metabolic waste, while boosting cellular rejuvenation. Below is an added twist to your morning latte ritual.

INGREDIENTS

2 teaspoons matcha powder (don't include the matcha if you'd like it caffeine-free)

1 teaspoon moringa powder

¼ cup plant-based milk (reduce to your liking, or opt out)

1 teaspoon eleuthero powder

1 teaspoon nettle powder

12 fluid ounces water (add more water if you'd like to reduce the strength)

½ teaspoon coconut butter, or sub with 1 teaspoon coconut cream powder
Sweetener, to taste (maple syrup, coconut sugar, stevia, or sweetener of your choice)

For extra decadence a pinch of vanilla powder

Note Boiling water isn't always the best temperature to use in these warm tonic recipes, as it's known to kill the properties of heat-sensitive ingredients, such as matcha and moringa. It also draws out a bitter flavor that you may not like so much.

DIRECTIONS

- Add the matcha, moringa, eleuthero, and nettle into a small pitcher or large cup.
- Pour (almost) boiling water over them.
- Allow them to steep for about a minute, add coconut butter and

sweetener, and whisk until thoroughly dissolved.

Can you believe that moringa is extremely high in protein? It contains 18 out of 20 amino acids and all of the essential amino acids. It has 4 times the calcium of regular cow's milk, 25 times the iron of spinach, 15 times the potassium of a banana, 4 times the vitamin A of a carrot, and 7 times the vitamin C of an orange. And, due to its (very) high vitamin C and E content, it can improve brain function by preventing the degeneration of neurons.

MUSHROOM DOPA MOCHA

An uplifting and feel-good cup of cacao

The Mayans and other cultures that had access to cacao considered it a sacred and medicinal food. Cacao was held in such high esteem that Mayans called it the “food of the gods.” It was so revered that images of cacao pods were painted on the walls of stone temples, and Mayan artifacts have been found that show kings and Mayan gods drinking chocolate. Cacao was often consumed during religious ceremonies and marriage celebrations. It was a staple in all kitchens, as it was highly revered for its longevity-boosting properties. Many interesting pharmacological studies support cacao's traditional uses, and it is now lauded by scientists as a powerful neuroprotector, a natural mood booster (like mucuna!), an anxiety reducer, a muscle relaxant, and a cardiovascular tonic. In addition, cacao's high concentration of polyphenols boosts cognitive abilities, increasing brain function and circulation.

INGREDIENTS

- 1 tablespoon cacao powder
- 1 teaspoon reishi mushroom powder
- 1 teaspoon mucuna seed powder

½ teaspoon chaga mushroom powder
½ teaspoon cordyceps mushroom powder
2–4 fluid ounces cashew milk (or milk of choice)
1½ tablespoons coconut cream powder
Sweetener of choice
12 ounces hot water
Optional: 2 ounces brewed coffee

DIRECTIONS

- Place all ingredients in a blender and blend for about 10 seconds (or until creamy). Pour in a cup and sprinkle with cacao powder to make it beautiful. Pour and enjoy!





BRAIN-BOOSTING COFFEE

A bulletproof coffee with botanical nootropics

Combining nootropic (brain enhancing) herbs with a caffeinated carrier definitely gets the job done. Adaptogenic brain tonics can also help curb the damaging effects of coffee, potentially improving your cognitive performance and preventing some of the adrenal downfall. Although

coffee is an inflammatory source, if you're going to have it anyway, then by all means, just make sure to add your adaptogens!

When you first start taking nootropics, you might feel like nothing is happening. That's what I experienced when I started combining my favorite brain herbs like gotu kola, bacopa, lion's mane, and ginkgo. Then, a week later, I quit taking them, and I noticed their absence immediately. This is because, when your brain works better, it feels as if you're just having a smooth, clear day. It's only when the herbs are gone that you notice something is off. That's the kind of effect you might feel when you start consuming adaptogenic brain tonics, unless of course you have a high degree of self-awareness. Give the mixture some time to take its tonifying effects on you before you give it up.

INGREDIENTS

3 tablespoons ground coffee (fine)

¼ teaspoon lion's mane powder*

¼ teaspoon gotu jkola powder*

20 ounces hot water

Optional:

¼ teaspoon reishi powder* (for added adrenal protection)

2–4 ounces plant-based milk of choice

1 teaspoon coconut butter (or coconut cream powder)

***Substitutions:** If you do not have access to the herbal brain powders, you can switch them out for the other brain powders, or, instead, use 1 teaspoon of an adaptogenic brain tonic (liquid) of your choice.

Note Unless you're already a fan, I highly suggest switching your coffee ritual to drip style. Please avoid coffeemakers or plastic-derived coffee machines. They're terrible for your health and the environment, not to mention the acidic coffee they brew.

DIRECTIONS

- Place a paper filter in the dripper.

- Add the ground coffee and herbal powders to the filter and gently tap it to level the surface. Place your cup beneath the cone.
- Very slowly, pour your hot water evenly throughout the entire area. Pour the hot water in a steady spiral toward the outer edge and then back toward the center. Again, do not pour all the water out in one surge. You want the herbs to have enough time to expand and release within the coffee.
- Once your cup is full, you're ready to enjoy! Add your choice of sweetener and milk, if you so desire.

QUICK CASHEW MILK RECIPE

Makes about 5 cups

INGREDIENTS

- 1 cup raw cashews, soaked for at least 2 hours and drained
- 4 cups filtered water
- Pinch of salt (optional)

DIRECTIONS

- In a high-speed blender, combine the cashews and water.
- Blend on high until smooth and milk-like.
- Pour into sealable jars and store in the fridge for 2–3 days. No straining needed, but do so if you'd like it finer.

NO-STRESS TURMERIC TONIC TEA

A golden cup of anti-inflammatory goodness

This is a delightful anti-inflammatory tea to help jump-start your morning and wake up the gut and kidneys. Turmeric's anti-inflammatory properties make it an excellent companion to calming and rejuvenative herbs. In this tea, turmeric is paired with the polysaccharide-rich adaptogens like eleuthero, ashwagandha, and astragalus for a soothing and restorative touch.

INGREDIENTS

1 teaspoon ground turmeric
¼ teaspoon ground cinnamon
¼ teaspoon ground cardamom
Pinch of ground nutmeg
¼ teaspoon astragalus powder
¼ teaspoon ashwagandha powder
1 cup homemade cashew milk (recipe on [page 93](#))
2–4 ounces hot water
Sweetener of choice, to taste

DIRECTIONS

- Place all ingredients in a blender and blend for about 10 seconds. You can also opt for a hand blender or milk frother. Pour and enjoy immediately!

I always suggest making your own nut milk. It's so easy and a lot healthier for you. Nut milk with zero fillers is a healthy fat and a clean protein that's actually anti-inflammatory. Take a few extra minutes and load up your fridge with these healthy milks; this way you'll have the best carrier for your medicines!



Many of the pharmaceutically derived nootropics or “smart drugs” have dangerous side effects. Although they provide immediate gratification to those seeking it, the side effects and their synthetically derived nature are not worth the long-term cost. Studies have shown that they may result in addiction, migraines, brain fog after long-term use, digestive discomfort, or insomnia.



DEEP DREAM TEA

A dreamy and restorative bedtime tea

Makes about 3 servings

The following herbs are soothing and restorative to the nervous system (this type of herb is called a nervine). Both nervines and adaptogens can be invaluable allies in coping with normal day-to-day stresses like work,

family, finances, seasonal mood slumps, excessive caffeine, anxiety-driven thoughts, and wakeful nights. Specially blended for the dreamer, this tea is believed to stimulate vivid and easily recallable dreams.

INGREDIENTS

2 teaspoons tulsi leaf
1 teaspoon blue lotus petals
1 teaspoon skullcap leaf
1 teaspoon passionflower leaf
1 teaspoon rose petals
20 ounces (2½ cups) hot water

Note Reduce the amount of water if you want the tea stronger.

DIRECTIONS

- Steep all ingredients in a teapot for 3–5 minutes, strain, and enjoy!

Note I usually do a second round after a few minutes of steeping, as the herbs continue to release more of their nutrients. Another way to ensure a proper medicinal steep is to let the ingredients steep for several hours. Then, filter the tea and enjoy it at room temperature. For those suffering from insomnia, I recommend making this tea a couple hours before bedtime.



FUNCTIONAL FOODS

Perhaps more than anything else in our lives, the foods we regularly include in our diet help determine whether or not we will become ill or remain healthy. Everyday foods play a critical role in controlling inflammation levels, balancing blood sugar, regulating cardiovascular health, helping the digestive organs to process and eliminate waste, and significantly contributing to our mood and mental health. Did you know that certain foods even contain powerful active ingredients that help control how our genes are expressed? Ancient Greeks, like Hippocrates, weren't the only ones who believed food to be thy medicine. All traditional systems of healing have taught for thousands of years that food is medicine, and a healthy diet is a powerful tool for protecting one's body and mind.

MEDICINAL CACAO-MUSHROOM MOLE

An Oaxacan savory sauce with a euphoric kick

Mole is a traditional sauce in Mexican cuisine. The most common origin story is that the word *mole* comes from the Nahuatl (Aztec language) word *milli* or *mōlli*, which means “sauce” or “concoction.” So, in a way, *mole sauce* means “sauce sauce.” The legend tied to the Nahuatl origin story is that the sauce came from pre-Hispanic times, when the Aztec king Montezuma served mole to the conquistadors, thinking they were gods. Supposedly, the inclusion of cacao was part of the original recipes, as cacao itself was considered a sacrament, or a food of the gods. Using cacao in a savory dish is exquisite, as it adds a deep flavor and medicinal properties to the food. This sauce can be used in a variety of dishes, including tamales, rice, legumes, protein-of-your-choice dishes, and many more.

Ingredients

5 dried ancho chilis

5 dried guajillo chilis

¼ cup raisins or diced prunes

2 tablespoons virgin olive oil

1 large onion, peeled and chopped

6–8 garlic cloves, peeled and chopped

1¼ teaspoons each of cinnamon, ground cloves, dried oregano, powdered cumin, and ground coriander

¼ cup pepitas

¼ cup almonds

2–3 plum tomatoes

½ teaspoon each of mushroom (as powder), reishi, cordyceps, lion’s mane, chaga, agaricus, shiitake, and maitake*

1¼ cups cacao powder

Note If you only have access to fresh mushrooms, sauté them along with the onions, garlic, and spices. If you do not have access to some of the

mushroom varieties mentioned, use about a handful of a different mushroom (either a mixture or a single kind). If you do not have access to all of these mushrooms, don't worry. Use what you have and increase the amounts proportionally to make the sauce medicinal.

DIRECTIONS

- Remove stems and seeds from the chilis and submerge them, along with the raisins, in hot water until soft (about 30 minutes). Add just enough hot water until they are all completely submerged. Once they're soft, puree them in a blender.
- In a skillet, sauté the onions in the olive oil for about a minute, then add the garlic. Before the garlic turns golden, add spices and pepitas and herbs, stirring constantly. If the mixture looks a bit dry, add a bit of oil to loosen it and to keep it from burning or sticking to the pan.
- Add the almonds, tomatoes, mushrooms, sautéed onions and garlic, salt, pepper, and cacao powder to the blender. Puree all ingredients until smooth. Traditionally, melted cacao paste is what is used instead of powder, but I personally like to use a full-fat heirloom cacao powder.
- Add more warm water, if necessary, until you reach a smooth and velvety consistency. Some people prefer a thicker sauce, while others like it runnier. It really just depends on the kind of dish you'll be using it with.
- Serve warm or store it in the fridge until you're ready to use it. Enjoy!

ADAPTOGENIC ENERGY BALLS

Coconut-Cacao Bliss Truffles

Most of us have some form of stress in our lives, and food is a big factor in

our inner and outer peace. I'm a big fan of having easy and nutrient-dense ingredients readily available so that I can make something quick for myself and the kids. Ready-made substantial and wholesome bites will provide long-term energy compared to processed or frozen foods, which will leave you hungry and hurt your health. You can switch out the adaptogens as you please or include other nutrient-dense companions that pair well. This recipe is also an easy way to mask the flavors of certain adaptogens while still getting their nutrients. And I can speak from experience. Kids love these!

INGREDIENTS

1 cup unsalted almonds (cashews are a great alternative)
1½ cups coconut cream powder (you can sub with other pulp, like the leftovers from your homemade nut milk)
1 cup pitted dates (ideally Medjool, but any soft, good-quality date works)
1/3 cup raw cacao powder
3 tablespoons coconut oil, melted
1 teaspoon he shou wu powder
1 teaspoon maca powder
1 teaspoon ashwagandha powder
1 teaspoon mesquite powder
Pinch of pink salt (or good-quality salt of choice)

Optional toppings:

Vanilla powder, coconut cream powder, rose petals (actually, any edible dried flowers look lovely), flaky salt, bee pollen, raw cacao powder, toasted coconut flakes

DIRECTIONS

- Place the raw almonds into a food processor. I prefer food processors, as they're easier to handle for these kinds of creations, but a high-powered blender like a Vitamix also works. Pulse several times, until they are roughly chopped.
- Add the rest of the ingredients and keep pulsing the mixture. If

you're using a blender, you might have to let it rest, as it gets quite chunky. Pause the blender and scoop with the spoon or with the tamper, to help it. Then give it another go.

- Chunky is normal. You want the mixture to be smooth enough that you can make it into balls, but don't overdo it, as it could lose its perfect chunky texture.
- Scoop into a bowl and let it chill for about 30 minutes so that the coconut oil hardens a bit. After it has chilled for a little while, it's time to get dirty! Use the sizing option you like the most. I prefer a heaping tablespoon size, as this feels like the perfect amount for a quick bite. I sometimes make the balls in smaller sizes just for the kids.
- Once you have all the balls rolled, dust them with the fun stuff. Coconut cream powder, cacao nibs, bee pollen, and edible flower petals always look nicest. Other powders like cacao and matcha tend to get greasy quickly, and they look less vibrant, but they still taste great. Store covered in the fridge for up to one week.

CHICKPEA MISO VITALITY BROTH

A probiotic rich, savory soup

1 SERVING

This is an exquisite and nutrient-dense broth loaded with nutritive and immune tonics. My favorite way to use medicines is through soups and teas, as you can really draw out the medicinal qualities through decoction. Be sure to simmer your mushrooms, as that opens their cell walls, increasing their bioavailability. The probiotic powers in raw miso, and in fermented foods in general, are highly complementary, as they facilitate the absorption of complex nutrients and medicines. The bacteria found in fermented foods increase digestive capacity, while also boosting immunity (and beauty!).

INGREDIENTS

10–12 ounces hot water
½ teaspoon cordyceps powder
½ teaspoon lion’s mane powder
½ teaspoon reishi powder
1–2 garlic cloves, minced
1 teaspoon shallot, minced
2 teaspoons chickpea miso
Fennel root, finely sliced
A handful of dulse (seaweed)
Fennel leaves (garnish)
Smoked paprika, to taste

Note If you’re unable to locate chickpea miso, sub with any soy-free miso. Substitute dulse with nori or any dried seaweed you have at your disposal.

DIRECTIONS

- In a small pan, bring water to a boil. Add the mushroom powders, garlic, shallots, and miso to the pan, stirring constantly. Allow this to simmer for about 15 minutes.
- Pour into a bowl, and top with fennel leaves, dulse, paprika, and any toppings or added veggies you like. Keep in mind that the miso is already salty, so please avoid adding excess salt. Enjoy!

Probiotics boost immunity! Just as toxins enter our bodies and make us sick, the healthy, microscopic organisms within miso take residence in our digestive tracts, giving us a plethora of healing benefits. According to several studies, miso is also a great source of essential vitamins, phytochemicals, microorganisms, salts, minerals, plant proteins, carbohydrates, and fat.

CLEANSING TAHINI DRESSING

Creamy tahini dressing with nutrient-dense liver herbs

Dark-green leafy vegetables are probably the most concentrated source of nutrition of any food group. They are a rich source of minerals (including iron, calcium, potassium, and magnesium) and vitamins, including vitamins K, C, E, and many of the B vitamins. The high vitamin K content accounts for a number of health benefits, including bone-protective properties and protection against inflammatory diseases. Studies show that the high concentration of antioxidants present in green leafy vegetables may be the reason why they're one of the best cancer-preventing foods around.

INGREDIENTS

- 2 tablespoons tahini butter
- 1 clove garlic, minced
- 1 tablespoon nutritional yeast
- 1 teaspoon raw apple cider vinegar
- 1 teaspoon adaptogenic liver blend
- 1 tablespoon extra virgin olive oil
- 2 ounces (4 tablespoons) water
- 1 tablespoon Liver Glow Superpowder (a mix of dandelion root, nettles, burdock, spirulina, chlorella, he shou wu, schisandra)
- ¼ teaspoon salt

Note To make it oil-free, replace the oil with ¼ avocado.

LIVER GLOW BLEND

I highly encourage you to make your own herbal blend of liver-supporting herbs. Here are some of my favorite complementary herbs that pair well with liver-protecting adaptogens. I keep these on hand so that I can easily

add them to meals: dandelion root, burdock, nettles, spirulina, moringa, and chlorella. They pair well with liver-protecting (hepatoprotective) adaptogens, such as schisandra, guduchi, amla, gynostemma, and he shou wu. For a nourishing green blend, use the following complementary herbs as a base, for example: 1 tablespoon burdock root, 1 tablespoon dandelion root, 1 tablespoon spirulina, 1 tablespoon chlorella, and 1 tablespoon nettles. Then you can top off with your chosen adaptogens, such as 1 teaspoon schisandra, 1 teaspoon he shou wu, and ½ teaspoon amla.

DIRECTIONS

- Combine all ingredients in a bowl and whisk intensely. Or place them in a high-speed blender and puree until smooth.
- Then add a couple handfuls of fresh, leafy greens with your choice of fresh veggies and other toppings, like seaweed and hemp seeds. Enjoy!

Hepatoprotective Adaptogens

Fortunately, many adaptogens are hepatoprotective, which means they help protect against liver damage and dysfunction. By increasing liver health, we assist the detoxification of the blood and enhance our energy, vitality, and well-being. The following adaptogens protect liver health and prevent damage: amla, astragalus, cordyceps, guduchi, he shou wu, holy basil, gynostemma, licorice, lycium, reishi, rhaponticum, and schisandra.



Cleansing Tahini Dressing

IMMORTAL SOUP

A deeply rejuvenative soup for immune support and resilience

This is the kind of soup you make for *serious* rejuvenation and recovery. This soup is especially useful when recovering from an illness, healing from a major life change, battling an acute condition, or recovering from an accident. Ginseng is unfortunately in danger of extinction within its wild habitat, so *please* source it only from a place that cultivates it ethically. Fortunately, there are many farmers who are growing this precious plant with tender loving care. If you cannot find good-quality ginseng, replace it with “poor man’s ginseng,” aka eleuthero. The soup can be made with any number of vegetables or meats. Feel free to get creative and add what is local and seasonally available to you. You can also keep it vegan by adding seaweed, or add your choice of protein.

INGREDIENTS

- 1 large onion, chopped
- 1 medium-bell pepper
- 4–6 garlic cloves
- 2 teaspoons coconut oil or extra virgin olive oil
- 8 cups water or homemade veggie stock
- 1 large sweet potato, peeled and cut
- 2 large carrots, peeled and sliced into rounds
- A handful of fresh medicinal mushrooms, like maitake, shiitake, lion's mane, or agaricus
- 1 small piece of fresh ginger, minced
- 1–2 teaspoons American or Korean ginseng powder*
- 2 jujube dates (or substitute with a thumb's worth of licorice)

***Note** American and Korean ginseng are in extinction, so only use them if you are in serious need of rejuvenation, like recuperating from trauma or an illness. Be sure to source from a sustainable and trustworthy farm, and do not support wildcrafting as that is depleting wild resources that are needing to regenerate. If you find it difficult to find a good source, replace with *Eleutherococcus* or suma.

DIRECTIONS

- In a large pot, sauté the onions, bell pepper, and garlic in oil. Right before they caramelize, add the water or stock.
- Add the sweet potato, carrots, mushrooms, ginger, ginseng, and dates. Let it simmer for an hour or two. For variety, you can add other vegetables here (like shallots, squash, corn, or fennel) and your choice of protein or seaweed.
- After a couple hours, turn the heat off and sprinkle in your favorite culinary herbs of choice. My favorite is a mix of basil and sage.



AVOCADO BEAUTY BOWL

A beautifying breakfast green bowl with healthy fats and nutritive herbs

2 MEDIUM SERVINGS

INGREDIENTS

½ avocado
1 banana (or sub 2–3 Medjool dates)
¼ cup coconut milk
1 tablespoon cashew butter (or nut butter of your choice)
1 teaspoon moringa
1 teaspoon mesquite
½ teaspoon astragalus
½ teaspoon ashwagandha
½ teaspoon eleuthero
3 ice cubes (optional)

Toppings

¼ cup granola of your choice
1 teaspoon toasted coconut chips
A handful of blackberries

DIRECTIONS

- Place all ingredients, except the toppings, in a high-speed blender and puree until smooth.
- Pour smoothie into a bowl and top with your favorite ingredients. Use berries that are easily available to you, your homemade granola (or a good-quality one free of refined sugar), toasted coconut chips, and blackberries.
- Serve and enjoy!



COCKTAILS & SPRITZERS

Ancient fermentation and distillation is an art that you can find among most indigenous communities around the world. Traditionally, fizzy drinks like medicinal beers, kombucha, jun, mead, and spirit distillation were crafted for not only recreational purposes, but also as an excellent and efficient base for the intake of medicine. Most ferments contain a plethora of naturally occurring probiotics, which means that they not only help tone and increase the gastrointestinal tract by optimizing gut flora, but they also become intelligent carriers due to their oxygen-rich nature. On the following pages, you'll find alcohol-free cocktail recipes using traditional herbal extracts, herbal syrups along with kombucha, and other bubbly alternatives for an oh-so-delicious alchemical spritz.

Studies on rhodiola have demonstrated its extraordinary pharmacological properties. It can act as an antimutagen, an antioxidant, a memory enhancer, and an antidepressant. Clinical studies have also shown its ability to enhance central nervous system activity, improve memory, bolster mood, act as a

neuroenhancer, and provide antiaging effects on the brain.



HAPPINESS COCKTAIL

A healthy cocktail to change your life

To make truly state-changing cocktails, there are two general ways to go . .

. the lazy way and the super-involved mixologist way. If you choose the mixologist route, it takes a little more time, but it'll be a lot more potent and gratifying, and I can assure you that getting into the habit of preparing healthy cocktails will change your life. The lazy way involves a decoction of herbs. You use the resulting liquid instead of your herbal extract, as referenced below. But, if you're going to have a cocktail, you may not want to think about it too much. Choose the method that works best for you! The following herbs have been studied for their "antidepressant" qualities. They are known to demonstrate boosts in mood and hormonal balancing. When paired together, they can provide a euphoric, energizing effect.

HERBAL EXTRACT

INGREDIENTS

- 1 part rhodiola powder
- 3 parts Saint-John's-wort powder
- 3 parts mucuna powder
- 2 parts schisandra powder
- 1 part rose petals

DIRECTIONS

- Fill the jar about halfway with dried herbs. This amount will make it a strong tincture. Do not pack them down.
- Fill the rest of the jar with alcohol and water. As for the alcohol, try sourcing an organic or very high quality type, and one not lower than 40 percent, to ensure you withdraw the essential medicinal properties.
- Leave the herbs macerating at least 21 days, and you can leave them in extraction up to six months. Be sure to shake the jar daily to activate the ingredients.
- When the mixture is ready, strain the herbs through a cheesecloth and compost them. Store the tonic in a cool, dry place, and be sure

to label it.

Notes For those of you who don't wish to use alcohol, you can use vegetable glycerin instead. With these same herbs, follow the steps under the recipe for Adaptogenic "Simple Syrup" on [page 124](#).

If you don't want to deal with making an extract, doing a decoction of the herbs works as well. With a decoction, use the same proportions referenced above and simmer on a stove. Double the volume of the herbs you are using to calculate your water, and simmer them for about 20 minutes. When you're done with the simmering process, allow it to cool down a bit and place it in the fridge until it is totally chilled. The decoction replaces the herbal extract in the recipe.

COCKTAIL

INGREDIENTS

1 small thumb's worth of ginger

1 ounce hibiscus infusion

½ ounce herbal extract

6 ounces ginger kombucha (or use kombucha of your choice)

DIRECTIONS

- In a blender, add the fresh ginger and hibiscus infusion in 1 cup warm water. Blend until completely dissolved. Strain and place the juice in the fridge until it's chilled.
- If you're making the herbal decoction instead of the herbal extract, place it in the fridge to chill before using.
- In a shaker, combine ½ ounce of the herbal extract (or 2 ounces of the finalized herbal decoction) and 4–6 ounces of the hibiscus ginger juice. Shake well with ice.
- Pour into a glass and top off with kombucha of your choice. I recommend using a flavor profile that pairs well with the hibiscus-ginger flavors. You can also replace the kombucha with sparkling

water if you desire.

- Add flowers to beautify your cocktail and enjoy immediately!

ANTIAGING SPRITZER

An energizing and beautifying vitamin C tonic

MAKES 2 SERVINGS

This sunny and sparkly tonic can easily be enjoyed daily to add pep to your step while providing a substantial amount of vitamin C and antioxidants. Amla and camu camu are two of the highest sources of vitamin C found in nature, and they have been studied for their blood-purifying properties. This tonic is also boosted with the anti-inflammatory effects of turmeric and citrus, and dusted with the infamous he shou wu for its beautifying and rejuvenative powers. For best results, enjoy daily in the early morning or before meals.

INGREDIENTS

- 1 teaspoon turmeric
- 1 teaspoon camu camu powder
- ½ teaspoon tulsi leaf powder
- ½ teaspoon he shou wu powder
- 1 cup fresh tangerine juice
- 2 tablespoons grated ginger
- Sparkling water
- Pepper to taste
- Rosemary sprig (optional)

DIRECTIONS

- Infuse the herbs in hot water. Steep for about 10 minutes. Strain and place in the freezer for 10–20 minutes or until the mixture cools down.
- In a high-speed blender, blend the tangerine juice, and ginger until silky.
- Combine your fresh juice with your cooled tea infusion, and blend with a few ice cubes (optional) until smooth.
- Sprinkle with pepper, add a sprig of rosemary or your choice of garnish, and enjoy!





DEEP HYDRATION MOCKTAIL

Powerfully hydrating, wonderfully nourishing

The deeply hydrating power of coconut water is an excellent conductor to your medicines. When making mocktails, be sure to use fresh and vital ingredients as your base—oxygen-rich carriers are what allow for a more efficient absorption. Here's a simple chilled tea with the added nourishing benefits of coconut water. This is an ultra-easy way to make a refreshing

and medicinal mocktail anytime throughout your day.

INGREDIENTS

1 tablespoon adaptogenic liquid tonic of your choice

12 ounces fresh coconut water

1–2 teaspoons adaptogenic “simple syrup” (add as you like; see recipe on [page 124](#))

6–8 ounces herbal tea infusion/decoction with herbs of your choice, chilled

DIRECTIONS

- Combine all ingredients in a shaker or a pitcher, and mix well.
- Store the mixture in the fridge, where it will keep for up to 3 days.

Adaptogenic “Simple Syrup”

A potent medicinal syrup that’s good to add to just about anything

I keep some medicinal “simple syrup” around, as it’s an easy, high-powered concentrate that can be added to just about any drink imaginable, from cocktails, to tea, to lemonade, to fresh juice. I literally spoon it out of the jar almost every morning or spoon-feed it to my kids as a vitamin C and energy booster. It’s basically a ready-to-go medicinal sweetener that doesn’t have any added sugars, and you can add it to any drink to make it more powerful.

INGREDIENTS

25 percent filtered water

65 percent schisandra berry powder

45 percent rose petals

75 percent vegetable glycerin

DIRECTIONS

- In a medium saucepan over medium heat, bring the water to a boil. For every cup of schisandra, use about 2 cups of water. Use this same proportion with whole berries or powder. Allow the berries to simmer for about 30–45 minutes, as this draws out the therapeutic properties. The end result should have very little water, as you want a strong and dense liquid.
- Turn the heat off and leave until the water is room temperature. Once it's completely cooled, add the rose petals into the schisandra decoction (and without straining the herbs), then add 50 percent of the mixture's total volume of glycerin. Shake and mix very well.
- It's best to allow it to macerate for a good 7 to 14 days (7 at least). Shake it daily to ensure you're motivating oxygenation and a deeper extraction.
- If you're in a pinch, it's worth noting that you can use the "simple syrup" the same day you make it. You can also spoon out some of it as needed while keeping the rest of the jar extracting for longer. Some folks even like it unfiltered in their drinks. Use it as you like, filtered or unfiltered.
- The simple syrup keeps for about 1.5–2 years if stored in a cool, dry place, away from the sun and humidity. Or store it in the fridge.



BODY CARE

Clean beauty care can be hard to come across as it's an industry that has not been regulated for quite some time. Many products out there are loaded with toxic ingredients, including known carcinogens and endocrine disruptors. In a world of chemical overload, it's vital to source from truly clean and sustainable companies that are not just "greenwashing" their products—be sure you ask and research before purchasing. Or better yet, make some of your own medicinal beauty care products, choosing your ingredients every step of the way.

HE SHOU WU BODY OIL

A collagen-boosting face and body oil

Makes about 4 fluid ounces

This is an ultra-easy “everything” oil that can be generously applied to the body, face, or areas in need of deep hair treatment. There are literally *thousands* of firsthand reports and dozens of clinical studies confirming that he shou wu (or preparations including the herb) demonstrates a remarkable ability to reverse hair loss and restore rich color to white or graying hair. Modern-day uses take advantage of he shou wu’s adaptogenic and harmonizing effects on the endocrine system. This herb is also touted for its high zinc content, which may be the secret behind its hair growth and restoration abilities. In traditional Chinese medicine, he shou wu is prized for its “jing-preserving” qualities. Jing is considered to be the primordial energy fueling life, sexuality, and our vital essence.

INGREDIENTS

2 fluid ounces jojoba oil
2 fluid ounces sweet almond oil
2 ounces he shou wu powder
2 fluid ounces vitamin E (14,000 IU)
2 fluid ounces rose hip oil
5 drops rose geranium essential oil

DIRECTIONS

- In a bain-marie type of heated bath, pour in the jojoba oil and almond oil. Add the he shou wu powder and gently stir. Keep it at a consistent temperature for about 1 hour. Keep stirring to prevent the he shou wu from clumping.
- Once the oils and powders are fully integrated, turn the heat off.
- Add the vitamin E and rose hip oil, and mix well. Add the rose geranium drops. Depending on your aroma preferences, decrease or exclude the geranium oil. Some prefer the earthy notes of the he shou wu to the flowery aroma of geranium essential oil.
- Pour the mixture in a clean bottle and enjoy the decadence.



STRESS-RELIEVING FACE MASK

An antioxidant-rich face mask with mangosteen hibiscus

MAKES 1 MASK

Healing clays like bentonite have enormous concentrations of minerals, including silica, calcium, magnesium, sodium, iron, and potassium. They can also absorb and remove toxins, heavy metals, impurities, and chemicals. Because of this, bentonite clay is a common ingredient in detox and cleansing products. Pairing bentonite clay with the high vitamin C content of hibiscus, mangosteen, and amla makes for a highly oxygenating and rejuvenating face mask.

INGREDIENTS

½ teaspoon hibiscus flower powder

1 tablespoon bentonite clay

3 tablespoons hot water

A Note on Clay If you live in an area with naturally occurring and decadent clay, always opt for that. Clay harvested from a pristine area will always be more powerful than clay in a dry form. Each clay has its own set of healing and detoxification properties. You can sub this one for green clay, blue clay, or red clay.

DIRECTIONS

- Mix hibiscus powder and bentonite clay in a small bowl. Remember: Bentonite clay should not come into contact with any metal!
- Mix in the hot water until a smooth paste forms.
- Apply the mask to a clean face and allow it to dry.
- Once dry, remove it by washing it off with warm water.

Mangosteen beauty chemistry is famous for providing high amounts of antioxidants and polyphenols (xanthenes). Several studies have found that the pericarp of mangosteen is particularly successful at curbing acne-caused inflammation. It also prevents other skin breakouts such as psoriasis, eczema, and inflammation-based rashes. Besides providing xanthenes to defend the skin, the fruit promotes microcirculation, which improves the appearance, vitality, and radiance of skin. Another study demonstrated that, thanks to its phenolic-rich makeup, mangosteen pericarp extract protects the skin from free radicals and may also guard against skin cancer.

COLLAGEN-PROTECTING LOTION

A nongreasy lotion with skin-regenerative herbs

This is a decadent, nongreasy, and easy-to-prepare lotion that supports the skin and naturally protects your collagen receptors.

INGREDIENTS

4 tablespoons raw shea butter
2 teaspoons sweet almond oil
3 tablespoons apricot kernel oil
Calendula flowers
Horsetail powder
He shou wu powder
2 teaspoons organic cornstarch
¼ cup rose hydrosol
10 drops rose essential oil

DIRECTIONS

- Melt the shea butter over low-to-medium heat in a bain-marie type of heated bath.
- Once melted, place the shea butter in the refrigerator for 10 minutes and remove it when it is partly solidified. The shea needs to be slightly cool in order to be whipped.
- Separately, also with a bain-marie-style heating method, add almond oil, apricot kernel oil, and herbs. Cook for at least 1 hour. Stir consistently and keep the low temperature consistent, as this will prevent the mixture from burning.
- Let it cool off. Strain the herbs with a cheesecloth.
- Using a hand mixer, add the cornstarch and whip for about 5 minutes, or until you get a creamy white mixture.

- Slowly add the rose hydrosol little by little while beating the mixture on low speed first. Increase the speed until the contents are thoroughly mixed. This may take as long as 5 minutes depending on your hand mixer. Add in the 10 drops of rose essential oil (or your choice of essential oil) as you're mixing.

Note This is the most important step in getting your mixture to a liquid consistency. Do not pour in the hydrosol all at once, as that will ruin the texture. The combination of oil and water is extremely delicate. Another important thing to note: If you want your cream to be thicker, add less hydrosol. Decreasing the amount of hydrosol will give the cream a butter-like texture.

- Once the cream is perfectly emulsified, it's done! Transfer it to a clean, easy-to-use jar or into smaller jars that fit in your purse. Store the cream in a cool, dry place. If kept properly, it should last for 5–6 months.
- Enjoy immediately!

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