

Adaptogens & the Healing Response: *From Surviving to Thriving*

By Donald Yance, Jr., C.N., M.H., R.H.

ALL LIVING ORGANISMS—including animals, plants, and even bacteria—survive because of their innate or acquired abilities to respond appropriately to the ever-changing environment. Remarkably, many compounds that are vital to a plant's ability to adapt also help humans adapt to life stressors through a beneficial relationship that we are just beginning to understand.

Adaptation can be broadly classified into two categories: *functional adaptation*, which helps the organism to survive, and *reproductive adaptation*, which ensures the survival of the organism's genetic material—an organism cannot be considered successful if its type goes extinct. Although the process of adaptation may be easier to observe in animals, adaptation is essential for all living things.

Plants show an amazing variability of adaptive changes. One easily observable example is the changing colors of leaves in the fall. Chlorophyll, the pigment responsible for photosynthesis, disappears as the days grow shorter. This allows an array of flavonoids, which are always present in the leaves, to appear. Flavonoids give leaves their beautiful fall colors. But these compounds provide more than just beauty. Plants produce them as an adaptive

measure as sunlight diminishes and the weather cools, to aid in the storage of nutrients and to ward off damaging insects.

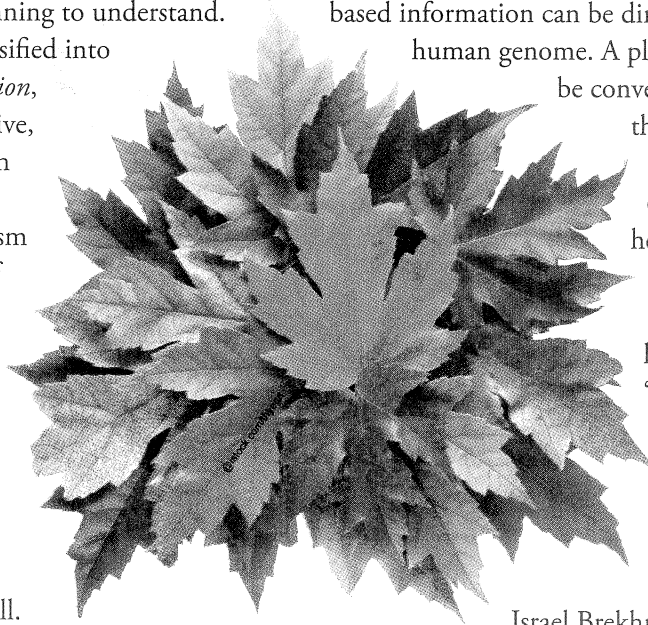
These strategies are an illustration of adaptation that originates in organically coded information within the organism. What is most remarkable is that this plant-based information can be directly communicated to the human genome. A plant's adaptive capacity can

be conveyed directly to us through the use of appropriate botanical medicines—specifically, by a unique class of herbs known as adaptogens. Revered in traditional medical systems, these herbs are often referred to as “elite” or “kingly,” because they enhance one's inner vitality, encourage a state of balance, and increase endurance. In recent history, Soviet researcher

Israel Brekhman gave this category of plants the name *adaptogens* because of their unique ability to help the organism adapt to the changing conditions of life.

Adaptogens Defined

The essence of adaptogens is that they combat the nega-



tive effects of stress and improve resistance, thereby improving our health and well-being. Essentially, adaptogens help us to live with greater mental and physical endurance and vitality, while mitigating the cost of stressors and building our reserves through enhancing our regenerative (anabolic) capacities.

An adaptogenic herb is traditionally regarded as one that meets the classical definition as described by Brekhman:

- Adaptogens are safe, having no significant side effects or contraindications.
- Adaptogens have a general, nonspecific action to improve resistance to stress.
- Adaptogens have a balancing, normalizing effect on body functions, regardless of the origin of disruption or the direction of the homeostatic disturbance.

In my clinical practice, I distinguish three main categories of adaptogens and use herbs from each of these categories in all of my formulations to achieve the best possible results:

1. *Primary adaptogens*: Meet the classical definition of adaptogens.

2. *Secondary adaptogens*: Meet most of the traditional criteria or have met all of the criteria but lack sufficient scientific validation.

3. *Adaptogen companions*: May not meet all of the traditional criteria but play a supporting role by enhancing the hypothalamic-pituitary-adrenal (HPA) axis and anabolic metabolism.

Primary Adaptogens

Primary adaptogens meet very specific criteria, have solid scientific research validating their use as adaptogens, enhance the general resistance of the entire body, act in a nonspecific manner, and have a normalizing effect against all forms of stress.

The activity of primary adaptogens is focused on metabolic regulation through their proven effects on the HPA axis during stress-adaptation responses. They have an ability to maintain or restore homeostasis and allostasis and encourage anabolic restoration. Primary adaptogens help to smooth out the highs and lows of the neuroendocrine stress response by regulating and normalizing the hormones involved. They strengthen all systems, promote optimal response and hasten recovery of function, and help

Primary adaptogens have an ability to maintain or restore homeostasis and allostasis and encourage anabolic restoration.

Elderberry

(*Sambucus nigra*)

Elderberry—A flavonoid-rich adaptogen companion

Plant family: Caprifoliaceae (Honeysuckle Family)

Other common names: Elder flower, elder leaf

Parts used: Leaves, flowers, berries, inner bark

Therapeutic dosing range:

• Fluid extract 1:1 2-5 ml.: 1-2 times daily

• Standardized extract (5% Total Flavonoids): 500-2000 mg. daily

• Tea (may be mixed with leaf and flower): 2-6 cups daily

Safety profile: There are no known adverse reactions

Elderberry, as well as elder flower and leaf, grow all over the North American Northwest and have long been used in traditional Western medicine. Elder flower and leaf are in classic diaphoretic teas, and together with elderberries are ingredients in my *Flew Away* formula, a classic formula for colds and flu. Elderberry is also in *Vital Adapt*, my general adaptogenic tonic formula.

Elderberry is used as a general nutritive tonic, providing a high concentration of flavonoids, as well as an immune tonic to prevent and alleviate many cold and flu symptoms including runny nose, cough, sore throat, fever, and muscle pain. Elderberry is especially great for children in the fall and winter as an overall immune tonic.

Habitat and Cultivation

The black, or common, elder is a small tree or shrub with dark purple berries and white to light yellow flow-

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While one person might perceive their situation as dire, another might perceive that same situation as exciting or challenging, while others might find it as dull as ditchwater.

—Charles Linden in *Stress Free in 30 Days, Hay House, 2013*

Elderberry

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ers. It blooms in June and July, and the berries mature in September and October. The flowers, berries, and inner bark are used as medicine. *S. nigra* is indigenous to Europe, growing in conditions similar to those of the American variety. In the United States, it grows in low, damp grounds, thickets, and waste places. The two plants possess similar medicinal properties.

Traditional Use

Elderberries have long been used as food, particularly in the dried form. Elderberry wine, pie, and lemonade are some of the popular ways to prepare them. The leaves were touted to be pain relieving and to promote healing of injuries when applied as a poultice. Native Americans used the plant to treat infections, coughs, and skin conditions. In a warm infusion, elder flowers are diaphoretic and gently stimulating. In cold infusion, they are diuretic, alterative, and cooling. The flowers and expressed juice of the berries have been beneficially employed in scrofula, cutaneous diseases, syphilis, rheumatism, and so forth. The inner bark of *S. nigra* is an emetic and cathartic and has been successfully used to treat epilepsy.

Modern Research

Elderberry extract has been shown to possess significant antioxidant activity and is known to impair angiogenesis.

Nonspecific Immune Enhancement: Elderberries boost cytokine produc-

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to regulate energy use by enhancing cellular energy transfer. These adaptogens enable us to make more efficient use of oxygen, glucose, lipids, and proteins.

Some specific positive results of the HPA regulation provided by primary adaptogens include the following:

- Increasing and modulating the flow of energy throughout the day
- Decreasing feelings of stress
- Increasing endurance
- Supporting mental alertness
- Promoting deep, restful sleep

Examples of primary adaptogens:

American ginseng root (*Panax quinquefolius*)

Ashwaghandha root (*Withania somnifera*)

Asian ginseng root (*Panax ginseng*)

Eleuthero root and leaf (*Eleutherococcus senticosus*)

Aralia, or Manchurian spikenard root (*Aralia mandchurica* or *Aralia elata*)

Rhodiola root (*Rhodiola rosea*)

Rhaponticum (*Rhaponticum carthamoides*)

Schisandra seed and fruit (*Schisandra chinensis*)



Secondary Adaptogens

Herbs are secondary adaptogens when they meet most, but not all, of the criteria of primary adaptogens. Although secondary adaptogens demonstrate some normalizing activity, especially of the immune, nervous, and hormonal systems, they may not directly support the HPA axis.

The protective effects of secondary adaptogens come with regular use when combined with primary adaptogens. Secondary adaptogens share the following attributes:

- Their normalizing activity focuses on the immune, nervous, or endocrine systems.
- While they may meet some, or most, of the qualifications of primary adaptogens, they have yet to be studied extensively.
- Many of these plants are rich in fatty acids, sterols, and phenolic compounds.
- Many of these plants enhance anabolic metabolism.

Examples of secondary adaptogenic herbs:

Astragalus root (*Astragalus membranaceus*)

Bacopa stems and leaves (*Bacopa monnieri*)



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Gotu kola leaves and aerial parts (*Centella asiatica*)

He shou wu root (*Polygonum multiflorum*)

Holy basil, or tulsi, whole aerial plant (*Ocimum sanctum*)

Licorice root (*Glycyrrhiza glabra*)

Notoginseng root (*Panax notoginseng, pseudoginseng*)

Oat seed (*Avena sativa*)

Reishi mushroom (*Ganoderma lucidum*)

Wild yam root (*Dioscorea mexicana*)



Herbal Adaptogen Companions

While this third group of herbs has demonstrated enormous general health benefits similar to those of primary and secondary adaptogens, they do not meet the criteria to be officially termed adaptogens. Thus, I call them adaptogen companions, because their actions enhance or synergize the effects of primary and secondary adaptogens. An herb such as green tea falls under this classification. I also include specific nutritional agents in this classification.

This elite group of herbs and nutritional compounds is used in a supporting role to potentiate primary herbs, harmonize formulations, and, most often, add high nutritive value. When combined with primary and secondary adaptogens, they may significantly increase life span and quality of life.

Examples of adaptogen companions:

Acerola fruit (*Malpighia glabra*)

Bilberry leaf, flower, and berry (*Vaccinium myrtillus; Vaccinium spp.*)

Elderberry berry (*Sambucus nigra*)

Ginger root (*Zingiber officinale*)

Goji berries, or wolfberry (*Lycium barbarum*)

Grape skin and seed (*Vitis vinifera*)

Green tea leaves (*Camellia sinensis*)

Hawthorn leaf, flower, and berry (*Crataegus oxyacantha*)

Japanese knotweed (*Polygonum cuspidatum*)

Rose hips (*Rosa canina*)

Rosemary leaves (*Rosmarinus officinalis*)

Turmeric root (*Curcuma longa*)



Many of the herbs classified as adaptogen companions are rich sources of plant compounds called phenols. Flavonoids are the largest of several thousand compounds belonging to the antioxidant-rich polyphenol family. Beyond their antioxidant capabilities, flavonoids exhibit anti-allergy, anti-inflammatory, antimicrobial, antiviral, and hepatoprotective abilities.

Flavonoids have powerfully protective properties and help ward off degenerative diseases. Intake of flavonoids, in the form of anthocyanins from

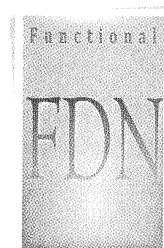
Elderberry

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tion. A unique protein found in elderberry acts as a messenger regulating immune response. Elderberry is a potent viral inhibitor. Researchers have studied its anti-influenza ability extensively in both Israel and Switzerland. Elderberry extract has also been shown to inhibit herpes virus and HIV in cell culture. The H1N1 inhibition activities of the elderberry flavonoids compare favorably to the known anti-influenza activities of oseltamivir (Tamiflu; 0.32 microM) and amantadine (Symmetrel; 27 microM). The anthocyanins present in elderberries protect vascular epithelial cells against oxidative insult, preventing vascular disease. Elderberry has shown to reduce LDL cholesterol and atherosclerosis. Elderberry may improve bone properties by inhibiting the process of bone resorption and stimulating the process of bone formation.

—Donald R. Yance

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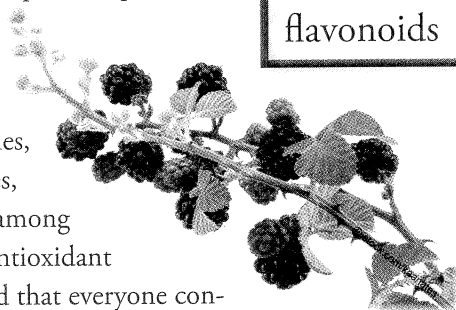
"Stop chasing symptoms and get to the root cause instead. Learn to identify underlying conditions and truly rebuild your client's health!" —Reed Davis, founder of FDN

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dietary berries, is significantly associated with a lower incidence of chronic diseases, including heart disease, cancer, and neurodegenerative diseases such as Parkinson's.

In the realm of flavonoids, berries are king. They are rich in vitamin C and a wide range of important flavonoids, including quercetin and anthocyanins, which are believed to account for the therapeutic effects. Their leaves and flowers contain flavonoids, carotenoids, volatile oil, mucilage, and tannins. Among individual phenolic compounds are quercetin and kaempferol compounds, phenolic acids, and anthocyanins.

Berries (including blueberries, blackberries, cranberries, raspberries, and strawberries) are among the foods highest in antioxidant capacity. I recommend that everyone con-



In the realm of flavonoids, berries are king. The berries are rich in vitamin C and a wide range of important flavonoids

sume at least one flavonoid-rich plant adaptogen companion daily (especially berries), whether as a food or in an herbal supplement. Choose them according to which system they nourish, or rotate their use seasonally. Δ

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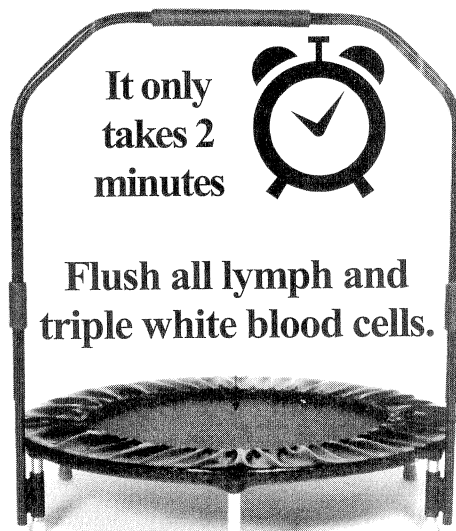
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