The Role of Adaptogens in Women's Health

By Integrated Healthcare Practitioners

Adrenal fatigue is just one of the examples of the afflictions of the stress of modern life. The stressors we face on a daily basis, such as family and financial problems, increased work load, lack of physical exercise, insufficient rest, poor diet, environmental toxins, electromagnetic radiation all contribute to more stress on the stress-adaptive organs, the adrenal glands and other stress regulating systems in the body.

Men and women respond differently to stress, both physically and mentally. They attempt to manage stress in very different ways and also perceive their ability to do so differently. Findings suggest that while women are more likely to report physical symptoms associated with stress, they are doing a better job connecting with others in their lives and, at times, these connections are important to their stress management strategies.

Stress on the Rise for Women

Women are socialized to be the caretakers of others. More women than men have both a career outside the home and continue to try to juggle traditional responsibilities after hours. In fact, over 70 per cent of married women with children under the age of 18 are employed outside the home. Women are often known as "multi-taskers' — struggling to balance a career with the role as 'perfect' wife and mother at home. As women progress through life's stages, hormonal imbalances associated with premenstrual, post-partum and menopause can also affect chemical vulnerability to stress, depression and anxiety.

The Role of Adaptogens

Adaptogenic herbs are one of the most important groups of herbs to take into the 21st century. Adaptogens not only increase the resistance to the adverse effects of long-term stress but the majority are also tonifying, immune-stimulating and increase the general sense of well-being.

The term "adaptogen" was first defined by Russian pharmacologist Nikolai Lazarev in 1947. These herbs were classified as a group of substances that could improve the body's nonspecific resistance after being exposed to various stressing factors, promoting a state of adaptation to that exceptional situation. Israel Brekhman, his successor, established that a plant should meet four requirements in order to be considered an adaptogen: (1) it is harmless to the host; (2) it has a general, nonspecific effect; (3) it increases the resistance of the recipient to a variety of physical, chemical, or biological stressors; and (4) it acts as a general stabilizer/normalizer.

By 1984 Russian scientists had published in excess of 1,500 pharmacological and clinical studies on adaptogenic herbs and research continues today with little doubt that adaptogens increase an organism's adaptation to stress and have a normalizing influence on our physiology.

The various phases of hormonal change, such as monthly premenstrual time, the perimenopause transition and pregnancy, can challenge a woman's stress adaptation mechanisms. The 'hallmark' hormone of stress, cortisol, is synthesized in the adrenal cortex and regulated via the HPA axis. The effects of cortisol are felt virtually throughout the entire body and impact several mechanisms—especially the regulation of hormonal balance in women. For example, chronic stress suppresses gonadotropin hormones from the pituitary that act on the ovaries and testes, which can lead to the disruption of a normal menstrual cycle and eventually lead to the complete impairment of reproductive function.

There are several adaptogenic herbs that have been studied extensively and proven very effective in the support of the body during times of increased demands and stress. Most notable are Rhodiola (Rhodiola rosea), Ashwagandha (Withania somnifera), Siberian ginseng (Eleutherococcus senticosus) and Maca (Lepidium meyenii). Given the strong connection between cortisol and its impact on hormonal balance, there is an absolute role for adaptogens in women's health.

Rhodiola rosea

Rhodiola rosea (also known as golden root and Arctic root) has been categorized as an adaptogen by Russian researchers due to its ability to increase resistance to a variety of chemical, biological and physical stressors. It has been used in the traditional medicine systems of Eastern Europe and Asia for more than 3,000 years with a reputation for stimulating the nervous system, improving depression, enhancing work performance, improving sleep, eliminating fatigue and preventing high-altitude sickness. Rhodiola seems to help the body adapt to stress by affecting the levels and activity of serotonin, dopamine and norepinephrine. It is believed that the changes in the above monoamine levels are due to inhibition of the activity of the enzymes responsible for monoamine degradation and facilitation of neurotransmitter transport within the brain.

Rhodiola appears to offer an advantage over other adaptogens due to its ability to exert relaxation and antianxiety in periods of acute stress. In one randomized, placebo-controlled trial of 60 patients with stress-related fatigue, rhodiola was found to have an antifatigue effect that increased mental performance, particularly the ability to concentrate; it also decreased the cortisol response to stress of awakening from sleep.

Rhodiola may also enhance fertility. It has been shown to enhance thyroid function in animal studies as well as improve egg maturation. This led to a study of 40 women with amenorrhea and infertility to be treated with 100 mg of rhodiola twice daily for two weeks. Normal menses were restored in 25 women, 11 of whom became pregnant.

Rhodiola has a very low level of toxicity. Some anxious individuals may be over activated and become agitated with Rhodiola. Rhodiola is not recommended for individuals with bipolar disorder.

Ashwagandha (Withania somnifera)

Also known as Indian ginseng, Ashwagandha is considered an adaptogen and rejuvenating tonic in Ayurveda. It provides both adrenal and immune support, increasing resistance to environmental stressors, is beneficial for pain relief, has antioxidant effects, reducing inflammation and stimulating thyroid function, has anti-stress effects by modulating cortisol levels as well as stimulates respiratory and immune function. In fact, in one double blind study, chronically stressed individuals taking Ashwagandha had significant reductions in anxiety, serum cortisol, C-reactive protein, pulse rate, and blood pressure compared with the placebo group.

Reductions in cortisol as well as optimal thyroid function may encourage balanced hormones for optimal fertility in those women struggling to conceive. Toxicity studies in humans are limited with ashwagandha.

Siberian Ginseng (Eleutherococcus senticosus)

Siberian ginseng, also known as eleuthero, has been used for centuries in Eastern countries, including China and Russia as an “adaptogen”. Research indicates that Eleutherococcus increases the ability to accommodate to adverse physical conditions, improve mental performance, and enhance the quality of work under stressful conditions. Research has also shown decreases in the testosterone: cortisol ratio as well as improvements in heart rate and systolic and diastolic blood pressure in response to a particular stressor. In fact, Eleutherococcus accounted for a 60 per cent reduction in systolic blood pressure, which suggests that this herb may be helpful for stress adaptation.

Premenstrual syndrome and perimenopause are their own kind of stress on the system and many women find their threshold of tolerating stress decreases and fatigue can result. Fluctuations in estrogen, progesterone, cortisol and thyroid interact with brain neurotransmitters such as serotonin, dopamine, GABA and therefore, eleuthero may be a beneficial herb to restore vitality

in women who are chronically fatigued or who have decreased mental and physical performance and/or stamina.

Eleuthero may elevate serum digoxin levels.

Maca (Lepidium meyenii)

Maca, the herbal root from Peru, is best known as an adaptogenic plant. Its uses have shown to be beneficial for the endocrine and reproductive systems— in treating chronic fatigue and infertility, and to support hormonal balance and enhanced stamina. Research suggests that maca's therapeutic actions are due to plant sterols stimulating the hypothalamus, pituitary, adrenal and ovarian glands, and therefore, also affecting the thyroid and pineal gland. Maca has been found to be useful in perimenopausal and menopausal women for hot flashes as well as helping with sleep, mood, fertility and energy. Research on menopausal women indicates that maca can stimulate the body's production of estrogen and reduce levels of cortisol. In one double-blind, randomized four month study of women in early postmenopause, patients were given either a placebo or two 500-mg capsules of maca twice per day for a total of 2g per day.

After two months, estrogen production had increased and FSH and cortisol had decreased. The maca also had a small effect on increasing bone density and alleviated numerous menopausal symptoms including hot flashes, insomnia, depression, nervousness, and diminished concentration.

Adaptogens continue to be an important group of herbs effective in various health conditions—especially in women's health and indicated not only to counteract stress and its resulting damage on hormonal balance but may also be used to elicit a healthy state. Although the above adaptogens are considered very safe, not much research has been conducted during pregnancy and lactation and therefore, they are not recommended during those times. Adaptogens have an important role for prevention and should be considered as key supplements in many women's health conditions.