

SOUTHSIDE

HEALTH & WELLBEING

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THE STRESS RESPONSE

You've got a big presentation in an hour, but you've hardly had a chance to prepare. Urgent e-mails keep popping onto your display screen, each one sending a stab of anxiety through your chest. As minutes tick by, you search frantically for slides and handouts, knowing your boss will summon you any second. Your heart races and your head pounds.

Modern life is full of time pressure and frustration. In other words, it's stressful. Racing against deadlines, sitting in traffic, arguing with your spouse — all these make your body react as if you were facing a physical threat. This reaction gave early humans the energy to fight aggressors or run from predators. It helped the species survive.

Today, instead of protecting you, it may, if constantly activated, make you more vulnerable to life-threatening health problems. Fortunately, though, you can develop skills to avoid some stressors and limit the effects of others. The payoff includes less fatigue, more peace of mind and — perhaps — a longer, healthier life.

WHAT IS THE STRESS RESPONSE?

Often referred to as the "fight-or-flight" reaction, the stress response occurs automatically when you feel threatened. Your pituitary gland, located at the base of your brain, responds to a perceived threat by stepping up its release of adrenocorticotrophic hormone (ACTH), which signals other glands to produce additional hormones. When the pituitary sends out a burst of ACTH, it's like an alarm system going off deep in your brain. This alarm tells your adrenal glands, situated atop your kidneys, to release a flood of stress hormones into your bloodstream. These hormones — including cortisol and adrenaline — focus your concentration, speed your reaction time, and increase your strength and agility.

HOW STRESS AFFECTS YOUR BODY

After you've fought, fled or otherwise escaped your stressful situation, the levels of cortisol and adrenaline in your bloodstream decline. As a result, your heart rate and blood pressure return to normal and your digestion and metabolism resume a regular pace. But if stressful situations pile up one after another, your body has no chance to recover. This long-term activation of the stress-response system can disrupt almost all your body's processes, increasing your risk of obesity, insomnia, digestive complaints, heart disease and depression.

- **Digestive system.** It's common to have a stomach ache or diarrhea when you're stressed. This happens because stress hormones slow the release of stomach acid and the emptying of the stomach. The same hormones also stimulate the colon, which speeds the passage of its contents. Chronic stress can also lead to continuously high levels of cortisol. This hormone can increase appetite and cause weight gain.

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- **Immune system.** Chronic stress tends to dampen your immune system, making you more susceptible to colds and other infections. Typically, your immune system responds to infection by releasing several substances that cause inflammation. In response, the adrenal glands produce cortisol, which switches off the immune and inflammatory responses once the infection is cleared. However, prolonged stress keeps your cortisol levels continuously elevated, so your immune system remains suppressed.

In some cases, stress can have the opposite effect, making your immune system overactive. The result is an increased risk of autoimmune diseases, in which your immune system attacks your body's own cells. Stress can also worsen the symptoms of autoimmune diseases. For example, stress is one of the triggers for the sporadic flare-ups of symptoms in lupus.

- **Nervous system.** If your fight-or-flight response never shuts off, stress hormones produce persistent feelings of anxiety, helplessness and impending doom. Oversensitivity to stress has been linked with severe depression, possibly because depressed people have a harder time adapting to the negative effects of cortisol. The byproducts of cortisol act as sedatives, which contribute to the overall feeling of depression. Excessive amounts of cortisol can cause sleep disturbances, loss of sex drive and loss of appetite.
- **Cardiovascular system.** High levels of cortisol can also raise your heart rate and increase your blood pressure and blood lipid (cholesterol and triglyceride) levels. These are risk factors for both heart attacks and strokes. Cortisol levels also appear to play a role in the accumulation of abdominal fat, which gives some people an "apple" shape. People with apple body shapes have a higher risk of heart disease and diabetes than do people with "pear" body shapes, where weight is more concentrated in the hips.
- **Other systems.** Stress worsens many skin conditions — such as psoriasis, eczema, hives and acne — and can be a trigger for asthma attacks.

How Can Naturopathy Help?

The physiological effects of stress can be treated through the use of various herbal remedies.

Rhodiola rosea: has been clinically proven to increase attention span, memory and work productivity.

Panax ginseng: In a randomized double blind study involving 232 adults between 25 and 60 years of age, 4 weeks of taking Panax ginseng significantly improved fatigue.

Withania somnifera: has been proven as protective against the negative effects of elevated cortisol levels in chronic stress.

Vitamin B6: A deficiency of vitamin B6 has been associated with significant increases in depression, fatigue and mood during chronic stress.

Tyrosine: The amino acid tyrosine was found to reduce the effects of stress and fatigue on cognitive task performance in a study conducted with a group of 21 cadets during a demanding military combat training course.

A Naturopath will work with you to determine the appropriate herbs and the correct dosage for your particular problem.