Stress, cortisol, and adrenal fatigue — the downward spiral

by Alice Sykes PhD

Our patients' most common symptoms are fatigue, insomnia, weight gain, and depression. Does that sound like you? If so, your underlying problem may be adrenal fatigue.

Every woman who comes to our clinic with these symptoms gets an adrenal test. And the results — over thousands of cases — are remarkably consistent: only 1% have cortisol levels indicating healthy adrenal function, while 99% suffer impaired function, ranging from significant adrenal stress to complete adrenal exhaustion.

The effects of adrenal dysfunction can be profound: fatigue and weakness; suppression of the immune system; muscle and bone loss; moodiness or depression; hormonal imbalance; skin problems; autoimmune disorders; and dozens of other symptoms.

The good news is that adrenal fatigue can almost always be relieved. Let's look both at the problem and the solution.

The original, life-saving role of the adrenals.

To understand how adrenal fatigue develops, it is important to understand the original, evolutionary function of the adrenal glands. The adrenals are walnut-sized glands located on top of each kidney, and are important control centers for many of the body's hormones. The outer layer, or cortex of the gland, produces hormones including cortisol, DHEA, estrogen and testosterone. The centers of the glands produce adrenaline, the hormone for which they are named.

Now think primitive for a moment. The basic task of your adrenal glands is to rush all your body's resources into "fight or flight" by increasing production of adrenaline and other hormones. When healthy, your adrenals can instantly increase your heart rate and blood pressure, release your energy stores for immediate use, slow your digestion and other secondary functions, and sharpen your senses.

Let's emphasize two points about this healthy stress response. First, it takes priority over all other metabolic functions. Second, it wasn't designed to last very long.

Now for the life we live today.

Unlike our ancestors, we live with constant stress. Instead of occasional demands followed by rest, we're constantly over-worked, under-nourished, exposed to environmental toxins, worrying about others - with no let-up.

Think primitive again: every challenge to the mind and body creates a demand on the adrenal glands. The list of challenges is endless: lack of sleep, a demanding boss, the threat of losing your job, financial pressures, personality conflicts, yo-yo dieting, relationship turmoil, death or illness of a loved one, skipping meals, reliance on stimulants like caffeine and carbs, digestive problems, over-exercise, illness or infection, unresolved emotional issues from our past or present.

The destructive side of cortisol.

In its normal function, cortisol helps us meet these challenges by converting proteins into energy, releasing glycogen and counteracting inflammation. For a short time, that's OK. But at sustained high levels, cortisol gradually tears your body down.

Sustained high cortisol destroys healthy muscle and bone; slows down healing and normal cell replacement; co-opts biochemicals needed to make other vital hormones; impairs digestion, metabolism and mental function; interferes with healthy endocrine function; and weakens your immune system.

Adrenal dysfunction may be a factor in many related conditions, including fibromyalgia, hypothyroidism, chronic fatigue syndrome, arthritis, premature menopause and others. It may also produce a host of other unpleasant symptoms, from acne to hair loss. Please click here to see a list of adrenal fatigue symptoms and related conditions.

The loss of DHEA production.

When the adrenals are chronically overworked and straining to maintain high cortisol levels, they lose the capacity to produce DHEA in sufficient amounts. Dehydroepiandrosterone, commonly known as DHEA, is a precursor hormone to estrogen, progesterone, and testosterone, and is necessary to moderate the balance of hormones in your body. Insufficient DHEA contributes to fatigue, bone loss, loss of muscle mass, depression, aching joints, decreased sex drive, and impaired immune function. Please click here for more information about the role of DHEA in adrenal fatigue.

Why adrenal dysfunction is seldom detected.

Conventional medicine is truly wonderful at treating disease-state conditions. Unfortunately its focus on drugs also tends to suppress early-stage symptoms rather than treat their underlying causes. This can have the effect of delaying treatment until a disease state has developed.

In the conventional standard of care, any cortisol level within a very broad range is considered normal, and anything outside that range indicates disease. In our practice, we measure cortisol at several points in the day to track the adrenals' day-night pattern (called the "diurnal rhythm") using a panel of simple saliva tests. We hope to see cortisol elevated in the morning to help you get going, lower but steady throughout the day to sustain energy, then fall in the evening to support restful sleep.

In the early stages of adrenal stress, cortisol levels will be too high during the day and continue rising in the evening. This is called "hyperadrenia". In the middle stages, cortisol may rise and fall unevenly as the body struggles to balance itself despite the disruptions of caffeine, carbs and other factors, but levels are not normal and are typically too high at night. In advanced stages, when the adrenals are exhausted from overwork, cortisol will never reach normal levels ("hypoadrenia").

Conventional medicine will detect only the extremes of these conditions, when damage to the adrenals has already occurred (Cushings Disease or Addisons Disease). Within those extremes, you can feel miserable and still be told your adrenals are normal. But by responding to early-stage symptoms, we can reverse the developing dysfunction.

Do you remember how you deserve to feel?

In general, if you feel happy and well, have steady energy and emotions, sleep soundly 7-9 hours a night, wake up feeling rested, recover well from stress, and maintain a healthy weight without dieting, then your adrenals are probably doing well.

On the other hand, if your energy lags during the day, you feel emotionally unbalanced much of the time, you sleep poorly or less than 7 hours a night, can't lose excess weight even while dieting, use caffeine or carbohydrates as pick-me-ups — these are all red flags indicating adrenal dysfunction.

In most cases you can restore healthy adrenal function.

The first step is to have a full physical to rule out disease or other factors. In our experience, women with mild to moderate cases of adrenal fatigue can see significant improvement through these steps:

- Dietary changes to enrich your nutrition and reduce carbohydrates and stimulants. We also recommend the addition of high-quality nutritional supplements, including essential fatty acids from fish oil.
- Stress reduction, including moderate exercise and taking more time for yourself. (It's helpful to make a list of your stressors, especially those that are constant.)
- Get more rest. Your body needs time to heal.

Women with more severe symptoms, or who have reached complete adrenal exhaustion, usually need greater intervention. At our practice we use the steps outlined above with the added natural support of phosphorylated serines, low-dose compounded DHEA, ginseng and glycerated licorice. We personalize the therapy to each woman's symptoms and test results. (We urge you not to self-prescribe these substances, as they can have adverse health effects. Please click here to learn more about DHEA supplements.)

It's important to emphasize the role of emotional factors. Guilt, pain from past hurts, self-destructive habits, unresolved relationship problems — your past and present

emotional experience may serve as an ever-present stressor. Dealing with these problems directly is much more beneficial than trying to compensate for the stress they create, in the same way that "an ounce of prevention is worth a pound of cure".

In all but the most extreme cases, we expect to see dramatic improvement within about four months. For mild to moderate adrenal fatigue the turnaround can be much faster. Remember, you may feel too tired to make changes now, but by moving forward in stages, you'll build the strength you need to stay with it. In perimenopause we get to change so many things. You will love how you feel when you do.

Adrenal Fatigue, the 21st Century Stress Syndrome by James Wilson. An excellent and up-to-date introduction.

The Relaxation & Stress Reduction Workbook by Martha Davis. Used by our nurses in the Personal Program.

The Cortisol Connection: Why Stress Makes You Fat and Ruins Your Health, by Shawn Talbott & William Kraemer.

The Relaxation Response by Herbert Benson, MD. An updated version of the classic text.

The Schwarzbein Principle II, Dr. Schwarzbein's second book, explores more deeply the relationship between adrenal stress and insulin resistance.

Dr. Northrup gives great inspiration in her work Creating Health lecture/tape series as well as her written books.