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TIRED? MOODY? ADRENAL FATIGUE MAY BE TO BLAME

The epidemic of exhaustion affecting so many Americans today may have at its root a condition that is common and easy to correct—yet that condition often goes unrecognized by medical doctors. The culprit is adrenal fatigue (AF).

Adrenal glands produce stress hormones in response to stressful situations. With AF, the hormone response mechanism is so overwhelmed that it becomes ineffective. AF is usually triggered by long periods of mental, emotional or physical stress, and it is worsened by poor nutrition and unhealthy lifestyle choices.

In my estimation, 20% of Americans suffer from some degree of AF. And I find that this disorder often causes—or contributes to—the development of numerous other illnesses, particularly chronic fatigue syndrome and diabetes. When AF is correctly diagnosed and treated, the other conditions often are relieved as well.

STRESS HORMONE FACTORY

Located on top of each kidney is a crescent-shaped adrenal gland. The hormones these glands secrete affect blood pressure, heart rate, metabolism, liver function, immunity and the body's response to stress. Although the adrenal glands produce many hormones, two in particular become depleted in cases of AF—*dehydroepiandrosterone* (DHEA) and *cortisol*.

DHEA. The body converts DHEA into estrogen and testosterone. Abnormally low DHEA levels may

contribute to cardiovascular disease, autoimmune disorders, poor resistance to infection, diabetes, weight gain, osteoporosis, sexual dysfunction, menopausal symptoms and mood disorders. DHEA also plays a role in aging. On average, the citizens of the Japanese Island of Okinawa (one of the world's longest-living people) have much higher DHEA levels at age 70 than Americans do—30% higher for men and 172% higher for women.

Cortisol plays an important role in fighting infection...stabilizing blood sugar...controlling the body's use of proteins, carbohydrates and fats...and regulating the sleep cycle. Cortisol is secreted at higher levels during the fight-or-flight response to stress, providing a burst of energy, heightened alertness and decreased pain sensitivity. But when cortisol levels are elevated for long periods, production by the adrenal glands drops. Insufficient cortisol can make you prone to fatigue, infection, allergies, diabetes and thyroid dysfunction.

Depletion of DHEA and cortisol adversely affects the way your body handles stress, inflammation, blood sugar regulation, energy production, immune response and cognitive function. That's why AF can be a contributing factor in a surprising number of ailments. A weakened immune response plays a part in cancer as well as in recurring infections, particularly of the respiratory tract. And poor regulation of blood sugar can

contribute to both diabetes and alcoholism (alcoholics often crave simple sugars, which are found in alcohol, so improving blood sugar balance can help reduce alcohol cravings).

MAKING THE DIAGNOSIS

Conventional medical doctors often don't recognize AF—even though the condition was described in medical literature in the early 20th century. It was known then as *hypoadrenia*, which means low- or under-functioning adrenal glands.

If you show signs of AF (see "Adrenal Fatigue Symptoms"), your best bet for diagnosis and treatment is to see a holistic doctor. For a referral, consult the American College for Advancement in Medicine (888-439-6891, www.acam.org). In addition to assessing your symptoms, the doctor may perform...

Saliva testing to measure cortisol levels. This test is more accurate than a blood test. A pattern of low cortisol levels throughout the day indicates AF. I ask patients to collect saliva samples in test tubes upon waking...before lunch...in the late afternoon...and before bed. Cortisol levels are normally highest in the morning and decrease throughout the day. People with severe AF usually have below-normal cortisol readings during at least two of the four time periods. I also use a saliva test that measures the DHEA level in the morning, when it is normally highest.

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Saliva testing of cortisol levels is used by many research institutions, particularly to assess the effects of stress. Several commercial labs offer saliva hormone testing—including Quest Diagnostics, the nation's largest conventional medical lab, which is used by medical and naturopathic doctors. To use Quest, you must have a prescription for the test from a doctor. A lab I have used for years that usually doesn't require a doctor's order is ZRT in Beaverton, Oregon (866-600-1636, www.salivatest.com). The adrenal function test, including four cortisol samples and a morning DHEA reading, costs \$150, which is not covered by insurance. If your state does not allow residents to order lab testing directly (check the list on the ZRT Web site), you can order the kits at the same price through my clinic (call 858-450-7120).

Blood pressure measurements, taken three times—first while you lie on your back, then when you sit upright and again when you stand up. Normally, systolic (top number) and diastolic (bottom number) blood pressure will increase between 5 mm Hg and 10 mm Hg from the first reading to the third. If blood pressure *drops*, it may indicate AF—the adrenal glands may not be producing the stress hormones needed to maintain blood pressure.

Pupil testing, performed in a darkened room. A practitioner shines a flashlight from the side across one eye, and the pupil should continue to get smaller. With AF, the pupil first contracts and then dilates again.

HEALING STRATEGIES

Lifestyle changes and treatment reduce symptoms in most people with AF in four to six weeks. In severe cases, full recovery may take several months. *My advice...*

Curb stress. A hectic lifestyle sets the stage for AF. Are you working too hard? Is your job emotionally draining? Are your relationships unsatisfying? Try to alleviate stress and seek out emotional support.

Get enough rest. Go to bed by 10 pm, and aim for eight to nine hours of sleep nightly. Whenever possible, take a 15- to 30-minute nap after lunch, even if you're getting the required

amount of sleep. On weekends, nap for an hour or two.

If you have insomnia, it's vital that your sleep problems be resolved. Take a walk in the early evening or listen to relaxing music. One hour before bedtime, take 100 mg to 200 mg of *5-hydroxytryptophan* (5-HTP), an amino acid that increases brain serotonin levels and promotes relaxation...or take 0.5 mg to 3 mg of melatonin, a hormone that induces sleep. Both are available at health-food stores.

Eat right. People with AF are prone to blood sugar swings that sap energy, so it is imperative to eat breakfast. I also recommend between-meal snacks, such as whole-grain toast or whey protein drinks. My favorite is Jay Robb's Whey Protein, which is naturally sweetened. It is available at major health-food stores and at www.jayrobb.com (877-529-7622). Almonds, walnuts and macadamia nuts are good snack foods, since they provide protein for blood sugar stabilization. Avoid simple sugars, such as those found in fruit juice and soda, as well as processed grains, such as white breads and pastas. These trigger a quick spike and subsequent drop in blood sugar levels.

Don't severely restrict salt intake unless you have high blood pressure. People with AF often benefit from salt because it helps maintain blood volume and proper circulation. Aim for 2,400 mg of sodium daily. Limit caffeinated beverages, such as coffee, tea and cola, to one cup daily because caffeine stimulates the already overtaxed adrenal glands. Avoid alcohol, which contains simple sugars.

Exercise in moderation. Too little exercise is harmful, since exercise helps balance stress hormones. But overexercising worsens fatigue. *General guideline:* If you're exhausted after your workout or feel more worn-out than usual the next day, you're doing too much. Start by walking 15 minutes daily. As your adrenal glands recover, you can gradually increase to 45 minutes of moderately intense exercise daily.

Avoid lung irritants. Cigarette smoke, air pollution and allergens can worsen AF by stimulating cortisol release. If

you smoke, please quit. Avoid second-hand smoke, and reduce exposure to allergy triggers with a high-efficiency particulate air (HEPA) filter.

Clear up infections. Acute and chronic respiratory infections as well as other types of infections can exacerbate AF symptoms. To speed recovery, work with a holistic doctor, who can recommend natural immune boosters, such as the herb astragalus.

HELPFUL SUPPLEMENTS

The following nutritional supplements are invaluable in promoting adrenal function. Take them until you recover. All are available at health-food stores. (Do not use if you are pregnant or breast-feeding.)

Adrenal glandular extract (AGE) is made from cow or sheep adrenal tissue. It contains growth factors (substances that promote cell healing and regeneration) and nutrients that support gland function and adrenal repair. Take one to two tablets, two to three times daily, on an empty stomach. If you get a headache, have insomnia or feel jittery, lower the dosage.

Ashwagandha is an herb used traditionally in Ayurvedic medicine for normalizing adrenal gland function. I like Jarrow's Sensoril Ashwagandha, which uses a form of the herb that has been well studied and standardized. Take one to two capsules of this product daily on an empty stomach. Side effects are rare.

Rhodiola rosea, an herb that has been extensively researched, supports normal adrenal function. I recommend using a product such as Paradise Herbs' Dual Action Rhodiola, which is standardized to 3% to 5% rosavins (the active ingredient). Take 500 mg twice daily, on an empty stomach. If you feel jittery, try a lower dose.

B vitamins are involved in the production of stress hormones. Particularly important is *pantothenic acid* (vitamin B-5), which is best taken at a dosage of 500 mg, three times daily. Side effects are uncommon. The rest of the B vitamins can be taken as part of a multivitamin formula.

Vitamin C is needed for the adrenal glands to synthesize hormones.

I recommend 1,000 mg to 2,000 mg twice daily. Reduce the dosage if you develop loose stools.

For severe cases of AF, hormone support with DHEA and cortisol may be required. This therapy should be administered by a knowledgeable doctor. The goal is to reduce the workload of the adrenal glands so they can heal. Over time, the hormone replacement can be reduced, then discontinued once the adrenals are functioning optimally.

For more information on AF, I recommend the book *Adrenal Fatigue: The 21st Century Stress Syndrome* by James Wilson, ND (Smart Publications).

ADRENAL FATIGUE SYMPTOMS

Patients with AF typically experience low energy or exhaustion (even after a good night's sleep), plus one or more of the following...

- Light-headedness upon standing up
- Mood swings, especially irritability
- Decreased ability to cope with stress
- Low libido
- Poor concentration
- Impaired memory
- Slow recovery from illness
- Low back pain
- Salt and/or sugar cravings
- Inability to lose or gain weight, despite calorie reduction or increase

CONDITIONS ASSOCIATED WITH ADRENAL FATIGUE

Although AF is not the direct cause of all the conditions below, it can be a contributing factor in...

- Alcoholism
- Arthritis
- Asthma
- Exercise burnout (becoming ill after intense workouts)
- Autoimmune disorders, such as lupus and multiple sclerosis
- Cardiovascular disease
- Chronic fatigue syndrome
- Depression and/or anxiety
- Diabetes or hypoglycemia (low blood sugar)
- Insomnia
- Menopausal symptoms
- Osteoporosis
- Recurring infections ■ ■