



ADRENAL FATIGUE

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Is Adrenal Fatigue The Reason You're So Tired?

Your adrenal glands, located on top of your kidneys, secrete specific hormones which work together effectively to help you manage stress.

Constant stress (both physical and emotional), disorders such as Cushing's syndrome and Addison's disease, as well as poor nutrition are

ways a person can succumb to disruption of proper adrenal gland function.

Pioneer endocrinologist Hans Selye noted that all forms of stress are handled the same way — and stress is cumulative in its effects. In what he considered the “fight or flight” response, the adrenal glands enlarge and secrete large quantities of adrenal cortical hormones. These hormones mobilize the body’s energy reserves putting the body on RED ALERT and diverting all biochemical resources to immediate survival. The body’s self-healing mechanisms are arrested, the immune system is suppressed, blood sugar rises and digestion and assimilation are inhibited. The stomach lining becomes thin and ulcerated and the thymus gland and lymphatic tissues shrink. This “fight or flight” response works well under emergency situations, but is not suited for our modern lifestyle; battling traffic, competing for parking spaces and watching the evening news produces the same physiological responses as running for your life:

Types of Stress

Environmental stress includes heat, cold and noise

Chemical stress includes pollution and drugs

Physical stress can occur from overexercising, trauma or an infection

Psychological stress includes worry and fear

Biochemical stress such as nutritional deficiencies and excessive refined sugar consumption, as well as imaginary stress

Imagine you're walking through the woods one afternoon and come upon a bear. Instant fear elevates your adrenaline levels and sets off your fight or flight instinct. You turn and run, not looking back, until you're at a safe distance from the bear.

Only after you're out of harm's way does your adrenaline level return to normal and your body calms itself down. This is how adrenal glands normally operate.¹

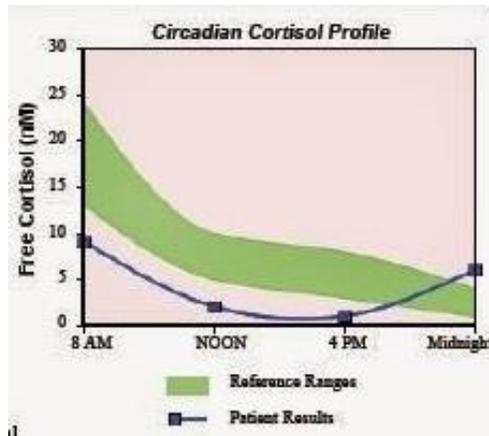
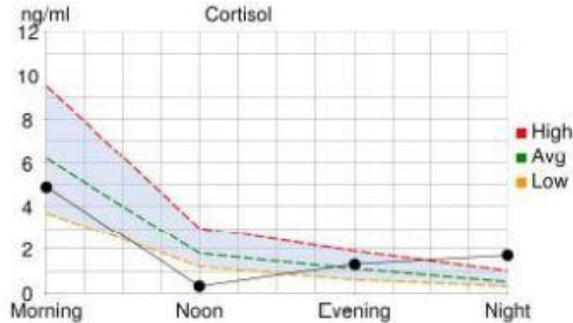
3 Stages of Adrenal Fatigue

One: A normal functioning adrenal gland produces cortisol, a hormone that helps the body deal with stress. Stage one of adrenal fatigue occurs when the adrenal gland increases production of

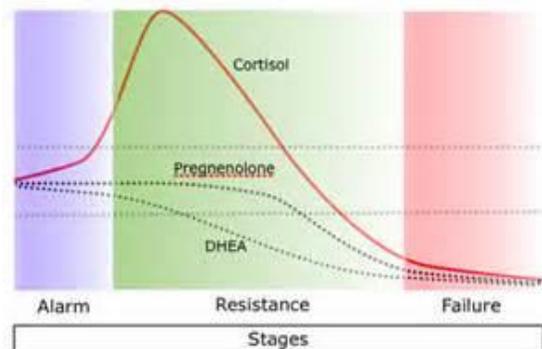
cortisol which, when elevated, produces physiological symptoms that are similar to seeing the bear in the woods and/or becoming frightened. In this stage, the body will stay in a high stress state, never calming down and never being able to escape the bear.

Two: During this phase, the body steals pregnenolone from cholesterol to make more cortisol. This phenomenon is called "pregnenolone steal." In this stage, cortisol levels are unstable. They fluctuate up and down, sometimes from week to week, day to day, or even hour to hour. A person who suffers from stage two adrenal fatigue may feel fine one day and then the next be extremely fatigued. The adrenal gland will first give the body a low period, where it doesn't pump any cortisol, but then it becomes stressed and compensates by pumping too much cortisol.

This can be visualized by looking at the following diagrams. The first chart below depicts normal (healthy) circadian cortisol levels. In the second chart you can detect levels rising in the evening, which is troublesome.



Three: The third stage in adrenal fatigue is complete fatigue. The adrenal gland ceases to pump out hormones causing low levels of cortisol, serotonin (a



neurotransmitter), DHEA and epinephrine (adrenaline). A person generally feels very depressed in the third stage, and medical help may only come in the form of anti-depressant drugs instead of investigating adrenal gland function, which is well-known in the more natural modalities of health and healing.

Mike Adams of Natural News explains “In this stage, the body is unable to produce adequate energy, and is fatigued. Accelerated aging and breakdown of the body's protective barriers, such as the skin, blood-brain barrier and gut barrier, are the hallmarks of this particular physiological state.”

~*~ *The WHO now recognizes adrenal fatigue as a distinct illness.* ~*~

How Stress Hormones Work

Both high and low cortisol states can be dangerous. Normally, DHEA buffers the effects of high cortisol levels, bringing your hormones back into balance after a stressful event. Cortisol and DHEA maintain a delicate balance in your body, as do all the hormones, neurotransmitters and other molecular compounds that work together to create a state of health or disease.

Effects on the Body

If cortisol production is excessive due to chronic stress, it can damage body tissues and exhaust the adrenals.

Adrenal fatigue can also be very taxing on the body because it negatively affects the immune system and gut health. It can affect the stomach's intestinal lining, breaking down the integrity of the intestines causing diarrhea, constipation, inflammation and irritable bowel syndrome.

Cortisol levels also have an effect on blood pressure, elevating levels when more cortisol is produced, and lowering blood pressure when there is less. Over time, however, blood pressure will become elevated, as well as higher cholesterol levels and chance of developing diabetes.

Symptoms of Adrenal Fatigue

Fatigue - trouble getting out of bed

Insomnia

Afternoon lows - extreme fatigue mid-afternoon

Sugar cravings

Depression and anxiety

Inability to lose weight

Decreased sex drive

Inability to handle everyday stresses

Light headedness upon standing

Often getting sick - cough, sore throat, cold and flu

Thyroid disorder

Hot flashes - not associated with menopause

Chronic lifestyle factors that overstress the adrenals:

Blood sugar imbalances

Gut inflammation

Food intolerances

Nutritional deficiencies

Infections (bacterial, fungal or viral)

Autoimmunity

Environmental toxins (pesticides, heavy metals, pollutants, etc.)

Physical trauma

Bad posture and ligament damage in the spine and joints

Constant mental and emotional stress⁶

Supplements To Consider

Psyllium

Psyllium works like an intestinal broom, as my grandmother used to say, by increasing stool weight and moisture, and acts like a gentle lubricant to facilitate healthy bowel movements. This is of major importance in your adrenal program, or any health regimen, because disease begins in the colon! Dr. Bernard Jensen states “In treating over 300,000 patients, it is the bowel that invariably has to be cared for first before any effective healing can take place.”³

Carnitine

Carnitine is an amino acid derivative with the essential function of helping fat enter the cell’s mitochondria – tiny energy powerhouses in your cells - to be used as a fuel source for the body. This action is a super energy booster when one is suffering from adrenal fatigue/exhaustion. Fat is a vibrant source of energy but requires carnitine for transport. Simply put, without enough carnitine, fat cannot be used as a fuel source for the body. Carnitine can also help preserve lean body mass, encourage the body to burn more fat, and promote a healthy cardiovascular system and blood lipids.

Ashwaganda

Ashwaganda, also known as Indian Ginseng, is an [adaptogenic] herbal medicine that acts like a tonic: Strengthens and fortifies the body so that it is better able to withstand stressful situations. In other words, it helps the body to maintain its equilibrium, even during difficult times.

According to one scientific study: “Ashwaganda exerts a positive influence on the endocrine, cardiopulmonary, and central nervous systems.”² The mechanisms of action for these properties are not fully understood but I suspect the good results are due to general balancing of hormones due to a few healthy changes on this program.

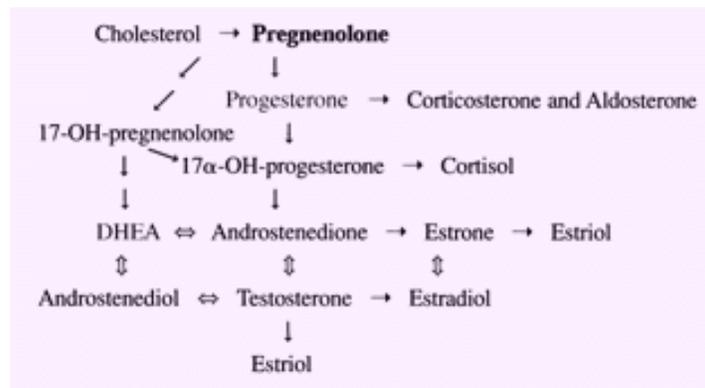
Deglycyrrhizinated Licorice (DGL)

DGL supports and improves the function of cortisol by making circulating cortisol stay in circulation. In doing so, it helps relieve the majority of the major symptoms of any type of adrenal dysfunction, such as fatigue, pain, weakness, and brain fog. DGL has antiviral properties, supports the immune system (along with other measures) and is an anti-inflammatory (heals the gastric mucosa that is weakened under stress).

Pregnenolone

Health professionals are divided over the anti-aging effects of pregnenolone, but studies have confirmed that production of this hormone in your body declines with age. According to Mercola.com, pregnenolone has been reported to reduce high stress-induced fatigue. A study published in the November 2001 issue of “Brain Research Reviews” indicates that pregnenolone and DHEA can also improve the effects of aging.

Timothy J. Smith, MD, refers to pregnenolone as the grandmother hormone, which spawns dozens of granddaughter hormones. Hormones such as progesterone, estrogen and DHEA are affected by adrenal function and their production is decreased when the adrenal gland is working to produce more and more cortisol. Pregnenolone is a top level supplement that is very helpful because its presence assures the production of many other hormones:



Hormones made from pregnenolone

Since Pregnenolone is the precursor hormone from which stress hormones are made, its presence in your body is significant. Supplementing with pregnenolone may be a good idea, but reducing your stress level is critical since adrenal dysfunction may lead to adrenal insufficiency, or Addison's disease, which is a serious and debilitating condition.

Pregnenolone supplementation is recommended by health professionals because people have reported an enhanced sense of health and well-being taking it, but most health professionals seem to agree that diet, exercise and reduction of stress are some of the best actions you can take for fatigue and the prevention of most chronic disease.

Pantothenic Acid (vitamin B-5)

Vitamin B-5 is necessary for the biosynthesis of adrenal hormones.

L-theanine

An amino acid, L-theanine has been shown to increase levels of the neurotransmitter GABA and is often helpful as a calming agent, reducing stress, thus indirectly affecting adrenal function.

Vitamin C (Ascorbic Acid)

Vitamin C modulates chronically elevated cortisol levels resulting from heavy exercise and other stressors on the body. Vitamin C decreases cortisol levels and expresses anti-inflammatory properties.⁴

Melatonin

Melatonin, an antioxidant hormone, released by the pineal gland that regulates the circadian rhythm and sleep, has an affects the pituitary-adrenal axis. Even low doses of Melatonin increase serum DHEA-Sulfate to cortisol ratios in test subjects according to a couple of scientific trials.⁵

Bioidentical hormones

Bioidentical simply means identical to the hormones in your body. These products are manufactured in a lab and have the same molecular structure as the hormones in your body. In fact, pharmaceutical companies cannot patent a bioidentical structure of the body; therefore, they invented synthetic hormones such as Premarin, Prempro, and Provera that they can patent and sell.

Bioidentical hormones are especially helpful for women with menopause issues and if that's you, it's something worth looking into to assist your body's endocrine function – especially if suffering adrenal fatigue.

Bioidentical hormones are made from a plant derivative or soy based chemical; therefore, the actual hormone powders that the compounding pharmacies use to recreate the bioidentical hormones are FDA approved (not that this fact is so impressive); Esteri-tablets, Vidal patches, sprays, and Estro-gel are all approved.⁷

Benefits of Bioidentical Hormone Replacement Therapy in Men	Benefits of Bioidentical Hormone Replacement Therapy in Women
<ul style="list-style-type: none">● Improves energy levels● Increases muscle mass and tone● Improves exercise endurance● Improves fat loss and muscle tone.● Improves sex drive & performance● Improves memory & concentration● Improves sleep● Re-grows hair on the scalp● Decreases joint pain and muscle aches● Improves bone strength● Improves cholesterol levels● Protects against heart disease● AND MUCH MORE!	<ul style="list-style-type: none">● Eliminates night sweats● Eliminates hot flashes● Eliminates vaginal dryness & itching● Eliminates pain with intercourse● Improves energy levels● Improves fat loss and muscle tone● Improves sex drive● Improves mood● Improves memory and concentration● Decreases skin wrinkles● Protects bones from osteoporosis● Reduces risk of heart disease● AND MUCH MORE!

Source: <http://www.genemedics.com/what-are-bioidentical-hormones>

Food Program for Healthy Adrenals

Meal Suggestions (choose one)

Breakfast

Smoked salmon, rice cakes, green tea

2-3 Egg omelet from hens fed flaxseed, sweet potatoes w/rosemary, ½ cup black beans

Organic oatmeal, milk, soymilk, or goat's milk, 3 Tbsp. fresh ground flaxmeal

Hot brown rice cereal w/cinnamon, green tea

Sugar free yogurt, 1 Tbsp. flaxseed oil, ½ cup berries

Poached organic omega-3 eggs, sweet potatoes, smoked salmon

Lunch and Dinner

Large mixed green salad, small can of tuna, chopped yellow and sweet red peppers

Season sardines in water (green and white label), green salad

Swordfish steak, grilled onions, green salad with flax oil dressing

Broiled red snapper, steamed broccoli, baked yams

1 cup cottage cheese or yogurt, 1 tablespoon flax oil, 1 Tbsp. natural preserves

4 ounces wood-smoked or broiled salmon, brown rice Vermicelli pasta (Pastariso brand),
tomato sauce w/ extra oregano, thyme, and garlic, grilled vegetables

1 chicken breast with rosemary, ½ cup black eyed peas, roasted onions or garlic,
spinach salad.

Salmon burger patties made with 6 oz. chopped salmon, onions, dill, an egg, and ¼ cup
ground sesame seeds, and sautéed in skillet with 1 Tbsp. butter.

Snacks

Roasted garlic or almond butter on rice cake or celery, protein shakes with freshly ground
flaxseeds added, handful of raw almonds, hazelnuts, walnuts, brazil nuts, or pumpkin seeds,
fresh organic fruit of any kind, 2 oz. cheese, lean hormone free meat with mustard, hard
boiled egg

Avoid

Antibiotics (Crohn's), NSAIDS (if possible), corticosteroids treatment, wheat or dairy (if sensitive or allergic), sugar, alcohol, caffeine, allergenic foods, refined and processed foods, hydrogenated oils, safflower, sunflower, and corn oils

Beverages

Green drinks: Green Magma, Kyogreen, or Green Kamut: (1 tsp. 1-3x day in water)

Herbal Teas: Chamomile, Green Tea, Slippery Elm

Treatment Options

Testing adrenal function is done through a simple saliva test. After assessing the results, there are a number of different treatment options, which vary from case to case.

People live very busy and hectic lives. They often burn the candle at both ends and don't take the time they need to relax and bring the body out of stress mode. A huge part of treatment is stress control. This can be done through meditation, yoga, running, reading or however the individual is able to calm the body down.

A healthy diet is also very important for healthy adrenal function and should consist of less sugar and carbohydrate based foods. Breakfast and lunch should never be skipped, and should include more protein based foods and vegetables with small portions of complex carbs. If a person is too busy to eat, then they most likely have an adrenal issue, and they need to take a few minutes to relax and enjoy a bowl of oatmeal or a piece of fruit.

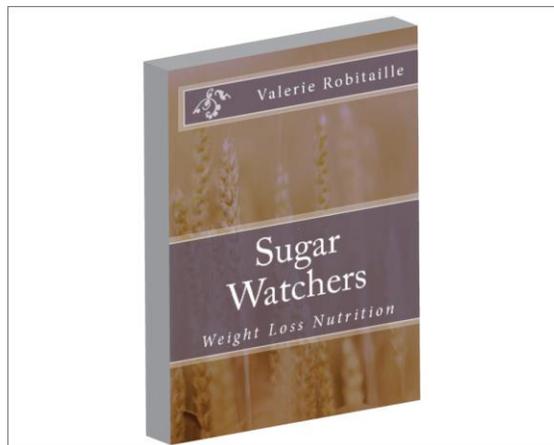
Adrenal fatigue is often treated with nutrients, as well as B and C vitamins. Some herbs that are commonly used are rhodiola, ginseng and Glycyrrhiza (licorice). Please see Supplement recommendations in this report.

It is very important to note that each person is different and therefore each treatment is different. A person that feels they may suffer from adrenal fatigue should always consult a naturopathic physician or qualified nutritionist/herbalist before taking herbal medicines.

Thank you for your interest in adrenal fatigue and your commitment to heal your body by making the vital lifestyle changes necessary to be your best self at any age!

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