ADRENAL STRESS & HORMONE BALANCE

FINDING BALANCE THROUGH HORMONE TESTING
Do You Have Risks of Adrenal Imbalance?

Ask yourself:

Do I need more sleep?

Am I usually tired when I wake up in the morning, but too ‘wired’ at night to fall asleep?

Can I live without coffee?

Do I generally feel run down?

Do I feel energized, or worn out after exercise?

Is it harder to bounce back from illness?

Do I need a vacation?

Symptom Checklist:

☐ Aches and pains
☐ Sleep disturbances
☐ Chronic health problems
☐ Irritability
☐ Weight gain in waist
☐ Depression
☐ Evening fatigue
☐ Morning fatigue
☐ Anxiety
☐ Allergies
☐ Bone loss
☐ Sugar/food cravings
☐ Susceptibility to infections
☐ Autoimmune diseases
☐ Diabetes/prediabetes
☐ Poor concentration
☐ Low libido
☐ Sensitivity to chemicals

Sound familiar? The more of these symptoms you have, and the more persistent they are, the more likely you are to be walking around with undetected adrenal fatigue.

Ask your healthcare provider about hormone testing for adrenal imbalance associated with stress disorders.
Adrenal Glands and Hormone Balance

The adrenal glands, otherwise known as the “stress glands” enable your body to cope with stress and survive. Shaped like two tiny pyramids, they sit atop the kidneys and from this central location mobilize your response to every possible change within your environment. Whether coming from outside of ourselves in the form of a natural disaster, or from within, like the anxiety we experience before public speaking, it is the adrenals’ job to help us adapt to the situation.

They accomplish this by secreting key hormones like adrenaline (epinephrine) to mobilize the body’s natural “fight or flight” response in an emergency, and cortisol, the primary stress hormone that fine-tunes our response to the stress and strains of everyday living.

Adrenals in balance produce adequate amounts of DHEA and cortisol to power us through the day, taking stress in stride. Together these hormones impact just about every process in the body, from energy production and immune activity to cellular maintenance and repair. They are key regulators of glucose, insulin and inflammation, and play a major role in bone and muscle building, mood and mental focus, stamina, sex drive and sleep cycles.

Adrenals out of balance are overworked and unable to produce enough essential hormone to keep us running on all cylinders. When a person is under constant physical or emotional stress, the adrenal glands are taxed to release elevated amounts of cortisol, the master stress hormone. But over time, if stress levels remain high, adrenal output is diminished. When that happens, cortisol levels plummet, along with our energy. We start to run out of steam, sleep fitfully, get sick and pack on pounds through the middle. These are the hallmark signs of adrenal fatigue.
Stress and Adrenal Fatigue

The difference between stress we can handle, and stress that gets out of hand – stress vs. distress – marks the difference between adrenal balance and imbalance. The latter occurs when mental, physical or emotional stressors call our adrenal glands to action too often or in a sustained manner, which eventually may lead to adrenal fatigue.

Cortisol’s main impact on the immune system is double-edged. Acute stress sends white blood cells to their battle stations to pump up our defenses against disease. Chronic stress weakens immune reserves leaving us vulnerable to illness, inflammation, and any virus that comes along.

Long Term Stress Effects

When stress is prolonged, adrenal hormones start fluctuating up and down, triggering blood sugar and insulin imbalances, food cravings, weight gain and sleep disturbances. Adrenals under pressure create imbalances of other hormones, e.g., stealing progesterone away from its reproductive duties to make extra cortisol, or inhibiting thyroid function and metabolism.

If stress levels stay high, the adrenals remain in “survival mode” to keep us going: by increasing alertness (i.e., sleeplessness), appetite (i.e., overeating) and fat reserves (i.e., stored as belly fat), while health and immunity against illness and disease steadily weaken.
What Does Adrenal Fatigue Feel Like?

As the name suggests, its main symptom is fatigue, yet it is unrelieved by sleep if stress is constant. Here is a common scenario:

Jane is a high-level executive, bright, savvy, ambitious. A perfectionist who trusts no one but herself, she will work 15 hours a day, 10 days in a row if need be, to get things right. She eats lunch at her desk, keeps herself going with sweets or salty foods and can’t live without coffee. She often travels on back-to-back weekends, rarely takes a vacation, and sleeps less than five hours a night, rising at 4:30 A.M. to rush to the gym for a workout before work. She is addicted to carbs and her smartphone. Jane has two teenagers, one of whom has emotional anxiety, and another who is an overachiever like her mother. None of this fazes Jane until over the course of a year, she notices that she has gained 15 pounds (mostly belly fat) that she can’t lose no matter how many hours she puts in on the treadmill. She has lately started smoking a few cigarettes to calm herself down at night. Her libido has diminished and even when she is “well” she feels like she is coming down with flu. Though she has never suffered from allergies, she recently broke out in itchy hives on a business trip. Then one day in the middle of a meeting she felt dizzy and faint. The next morning she couldn’t get out of bed and was seriously ill for 3 weeks. Her life and job performance have dramatically changed.
Healthy Adrenals

When our lives are balanced by optimal nutrition, exercise and enough sleep, the adrenals perform for us 24/7. When we are out of balance and burning the candle at both ends, the adrenals malfunction—and so do we.

In the 21st century, keeping up with life in the fast lane makes us all candidates for adrenal fatigue. People vary greatly in their ability to respond to and withstand stress. Assessing your own stress response and adrenal function can easily be done with a simple saliva test.

Hormone Testing is a Key Element of Effective Stress Management

ZRT’s Adrenal Stress Profile Advantages:

Saliva testing for DHEA and diurnal cortisol levels at 4 time points during the day is a comprehensive test that can assess full adrenal function. By reviewing test results, your healthcare provider can:

- Identify adrenal imbalances caused by too much or too little hormone
- Match tested hormone levels with your symptoms to help individualize a treatment plan
- Retest to monitor and adjust treatment as needed
- Track progress with follow-up test reports

Additional recommended profiles with multiple symptoms of hormone imbalance:

Female Comprehensive Profiles I or II
Saliva Profiles I, II, or III
Weight Management Profile
CardioMetabolic Profile
Sleep Balance Profile
**Adrenal Fatigue: The 21st Century Stress Syndrome**
James Wilson, N.D., D.C., Ph.D.

Adrenal fatigue remains one of the most under-diagnosed illnesses in the U.S.; many physicians are still not familiar with it. That is why I wrote the book and lecture around the world, because once recognized, adrenal fatigue can be treated. You CAN get better.

**Adrenallogic: Outsmarting Stress**
Lena D. Edwards, M.D.

Adrenallogic is written for all of you who may suffer from inexplicable symptoms, such as fatigue, chronic pain, and stress sensitivity in the face of “normal” test results. You know there is something more going on, but you need guidance on where to begin. This book is your starting point, empowering you with the tools you need to take control of your stress and your health.

**The Cortisol Connection**
Shawn Talbott, Ph.D.

This book is important to us all, as each of us face a host of stresses in our everyday lives … I believe it is a must-read for anyone interested in improving one’s health and better coping with the stresses of life through optimal nutrition.

- Dr. William J. Kraemer, Ph.D.

**The Mood Cure**
Julia Ross, M.A.

In this book, the author proposes that we are in a “bad-mood epidemic” and that much of our increasing emotional distress stems from correctable malfunctions in our brain and body chemistry, resulting from unmet nutritional needs. Provides readers who feel depressed, anxious and stressed with a complete nutritional repair plan.
Background on Cortisol

Tends to result in a flattened cortisol profile with loss of the morning surge, while earlier stages of the General Adaptation Syndrome generally result in one or more elevated cortisol points.

Background on DHEAS

DHEA, or dehydroepiandrosterone, is also secreted by the adrenal glands. It is the most abundant steroid hormone in the body, balancing the effects of cortisol. The ratio of cortisol to DHEA tends to increase with age because DHEA-S declines with age, while morning cortisol stays the same or increases slightly. A higher than expected ratio for a given age may be indicative of unbalanced adrenal function (cortisol too high or DHEA-S too low). Factors contributing to imbalance may include acute or chronic stress, obesity, metabolic syndrome or diabetes, and hypothyroidism.

What Test Results Can Tell You: Commonly Observed Patterns of Cortisol Imbalance

### Chronically Elevated Cortisol

**Overall higher than normal cortisol production throughout the day from prolonged stress demands.**

**General symptoms include:** Food/sugar cravings, feeling “tired but wired,” insomnia, and anxiety. High cortisol also depletes its precursor hormone progesterone.

**Lifestyle suggestions:**
- Reduce stress and improve coping skills
- Protein at each meal, no skipping lunch
- Hydrate throughout the day, herbal teas and water, avoid soft drinks
- Reduce consumption of refined carbohydrates and caffeine
- Get adequate sleep (at least 7 hours); catnaps
- Aerobic exercise: <40 min low – moderate intensity during time when cortisol level within optimal range
- Strength training: with guidance 2-3 times per week
- Enjoy exercise that decreases excessive stress symptoms
- Exercise in the morning

### Steep Drop in Cortisol

**Stress/fatigued pattern – morning cortisol in the high normal range or elevated, but levels drop off rapidly, indicating adrenal dysfunction.**

**General symptoms include:** Mid-day energy drop, drowsiness, caffeine/sugar cravings, and low exercise tolerance/poor recovery.

**Lifestyle suggestions:**
- Reduce stress and improve coping skills
- Protein at each meal, no skipping lunch
- Hydrate throughout the day, herbal teas and water, avoid soft drinks
- Reduce consumption of refined carbohydrates and caffeine
- Get adequate sleep (at least 7 hours); catnaps
- Aerobic exercise: <40 min low – moderate intensity during time when cortisol level within optimal range
- Strength training: with guidance 2-3 times per week
- Enjoy exercise that decreases excessive stress symptoms
- Exercise in the morning

### Rebound Cortisol

**Up and down/irregular cortisol, not following the normal pattern.**

**General symptoms include:** Morning/evening fatigue, dips and spike of energy, anxiety, irritability, poor concentration, impatience, cravings, low exercise tolerance/poor recovery.

**Lifestyle suggestions:**
- Reduce stress and improve coping skills
- Take breaks, stretching, yoga, deep breathing
- No skipping meals; protein snacks between meals to stabilize blood sugars
- Hydrate throughout the day, herbal teas and water, avoid soft drinks
- Reduce consumption of refined carbohydrates and caffeine
- Get adequate sleep (at least 7 hours)
- Exercise mid-morning to boost energy with a combination of toning and stimulating activities
General symptoms include: Tired but wired, irritability, cravings, low exercise tolerance/poor recovery, can’t get to sleep or wake frequently.

Note: high night cortisol promotes wakefulness.

Elevated Evening Cortisol
Higher than normal evening and night cortisol production.

General symptoms include: Tired all the time, burned-out feeling, no energy, allergies, chemical sensitivities, susceptibility to illness, irritability, cravings, sleep disturbances, exhaustion.

Lifestyle suggestions:
- Reduce stress and improve coping skills
- Gentle exercise: stretching, yoga (no exercise after 4pm)
- Eliminate caffeine, hydrate throughout the day, herbal teas and water, avoid soft drinks
- Protein snack before bed to prevent drop in blood sugar
- Improve sleep hygiene: establish routine bed/waking time; no TV, laptop, phone in bedroom; dark and cool room
- Personalized exercise and fitness program

Elevated Evening Cortisol
Adrenal Exhaustion
Adrenal fatigue/burnout pattern with overall low cortisol; normal morning cortisol surge is suppressed and diurnal pattern is flattened.

General symptoms include: Tired all the time, burned-out feeling, no energy, allergies, chemical sensitivities, susceptibility to illness, irritability, cravings, sleep disturbances, exhaustion.

Lifestyle suggestions:
- Reduce stress and improve coping skills
- Establish routine bedtime; no TV, laptop, cell phone in bedroom; dark and cool room
- Take catnaps during the day
- Glass of salt water in the morning (sea salt to taste)
- Consume small, frequent meals every 3-4 hours; protein snack at bedtime
- Reduce consumption of refined carbs and caffeine
- Choose physical exercises that do not cause rebound or worsening fatigue
- Do not exercise after 4pm

Adrenal Exhaustion
Lifestyle suggestions:
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• Reduce consumption of refined carbs and caffeine
• Choose physical exercises that do not cause rebound or worsening fatigue
• Do not exercise after 4pm
Tips for Adrenal Rebalancing

If you listen to your mind and body, you can often identify the most troublesome or persistent stress in your life; most of us know intuitively what we need to do to make a change:

- Get enough sleep. Studies of ‘short-sleepers’ (i.e., less than 7 hours a night), show increased weight gain via disruption of appetite hormones, leading to overeating, lack of satiety, and food/sugar cravings. Try to get at least 8 hours a night
- Avoid overconsumption of caffeine—coffee, black tea, energy drinks, e.g., Red Bull, etc. If you rely on caffeine to stay awake, try green tea which stimulates a response in the brain that leads to calm alertness
- Reduce refined carbohydrates that raise blood sugar and insulin levels, which promotes fat storage in the abdomen
- Increase fiber intake which slows sugar absorption through the GI tract to help control blood glucose & insulin levels
- Exercise aerobically to improve oxygenation and relieve stress
- Strength train to boost androgen hormone levels (DHEA & testosterone), increase lean muscle mass, stamina, and libido
- Stretch with Pilates, yoga, to release tension held in muscles thus lowering stress hormones
- Consider daily meditation to help decrease the impact of stress on mind and body – work up to 20 min daily sessions
- Increase fun activities that fuel your life’s passions e.g., painting, cooking, sewing, photography
- Take your vitamins! B-complex, C, D3, E, and trace minerals (magnesium, calcium, zinc, selenium, chromium, iodine) in particular, are essential ‘co-factors’ required for the production of adrenal hormones
- Adaptogens are powerful herbs known to strengthen the adrenals ability to adapt to stress at all stages – look for preparations (tinctures, capsules) with ashwagandha, maca, rhodiola, cordyceps, and/or Siberian ginseng
- If hormone testing reveals cortisol imbalances and/or lows of progesterone or DHEA, talk to your doctor about replenishing levels with bioidentical hormones
NOTES:
Record your commitment to “me time” aimed at relaxation, fun and stress-coping measures, e.g.: treat yourself to a massage or facial, join a book club; find a beautiful walking/hiking trail; watch comedies vs. horror films, cancel at least one superfluous appointment per week, talk to a financial or time management advisor, practice deep breathing, etc.
**Next Steps: Finding the Help You Need**

If you are suffering from symptoms of adrenal stress and fatigue, finding a provider who recognizes this commonly under-diagnosed condition is vitally important. ZRT Lab’s Find a Provider locator [https://myzrt.zrtlab.com/tools/findprovider](https://myzrt.zrtlab.com/tools/findprovider) lists healthcare professionals who routinely test for adrenal dysfunction and use safe, natural approaches to correct imbalances. Once you’ve located a provider in your area you might choose to work with, it’s always a good idea to make sure he/she is the right partner to assist you in restoring adrenal health.

**To that end here are 7 key questions to ask:**

1. Do you recognize adrenal fatigue as a significant health problem?
2. If so, what are the most common symptoms you treat in your practice?
3. Do you use non-invasive saliva or dried urine testing to identify the root cause of adrenal problems?
4. Which hormones do you usually test, and why?
5. Do you use test results as a guide to determine the right treatment plan for my particular needs?
6. Does your approach to adrenal rebalancing and support integrate lifestyle (diet, exercise, stress management) and bioidentical hormones as needed?
7. Do you retest adrenal hormone levels to monitor my progress and make any necessary adjustments?
**DOCTORS ANSWERS TO THE 7 QUESTIONS:**

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**TREATMENTS/SUPPLEMENTS I'VE TRIED:**

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LIFESTYLE CHANGES I’D LIKE TO MAKE:
Examples: Exercise; meditating; going to bed earlier

HOW I’M DOING:
Examples: B vitamins boost my energy; swimming relaxes me