

# ADRENAL STRESS & HORMONE BALANCE



**FINDING BALANCE THROUGH  
HORMONE TESTING**

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## ***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:**

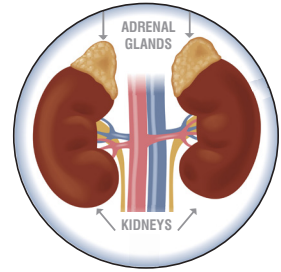
- |  |   |
|--|---|
| <input type="checkbox"/> Aches and pains         | <input type="checkbox"/> Allergies                    |
| <input type="checkbox"/> Sleep disturbances      | <input type="checkbox"/> Bone loss                    |
| <input type="checkbox"/> Chronic health problems | <input type="checkbox"/> Sugar/food cravings          |
| <input type="checkbox"/> Irritability            | <input type="checkbox"/> Susceptibility to infections |
| <input type="checkbox"/> Weight gain in waist    | <input type="checkbox"/> Autoimmune diseases          |
| <input type="checkbox"/> Depression              | <input type="checkbox"/> Diabetes/prediabetes         |
| <input type="checkbox"/> Evening fatigue         | <input type="checkbox"/> Poor concentration           |
| <input type="checkbox"/> Morning fatigue         | <input type="checkbox"/> Low libido                   |
| <input type="checkbox"/> Anxiety                 | <input type="checkbox"/> 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 smart phone. 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

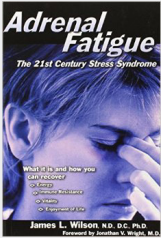
Weight Management Profile

CardioMetabolic Profile

Sleep Balance Profile



## Recommended Reading

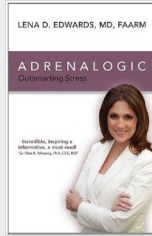


### Adrenal Fatigue, The 21st Century Stress Syndrome

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.

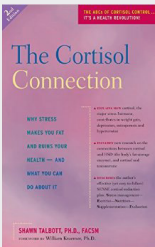


### Adrenalogic: Outsmarting Stress

Lena D. Edwards, M.D.

Adrenalogic 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.



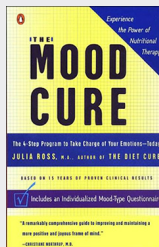
### The Cortisol Connection

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.

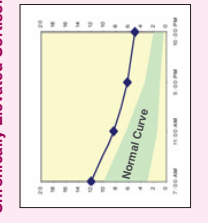
In this book, the author proposes that we are in a “bad-mood epidemic” and that much of our

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.

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

Cortisol that does not follow the normal pattern can trigger blood sugar imbalances, food cravings and fat storage, especially around the middle. Related imbalances of low DHEA commonly result in loss of lean muscle, lack of strength, decreased stamina and low exercise tolerance.

### Chronically Elevated Cortisol



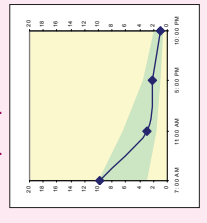
### Chronically Elevated Cortisol

**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

### Sleep Drop in Cortisol



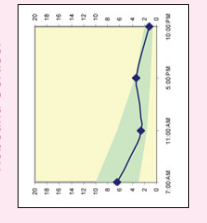
### General symptoms include:

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
- Exercise mid morning to boost energy with a combination of muscle building and cardiovascular activities
- Schedule more time for fun activities

### Rebound Cortisol



### General symptoms include:

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

### Lifestyle suggestions:

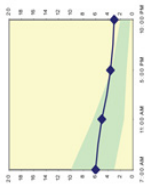
- Reduce stress and improve coping skills
- Take breaks, stretching, yoga, deep breathing
- No skipping meals; protein snacks between meals to stabilize blood sugars
- Hydrate throughout the day, herbal teas and water, avoid soft drinks
- Reduce consumption of refined carbohydrates and caffeine
- Get adequate sleep (at least 7 hours)
- Exercise mid-morning to boost energy with a combination of toning and stimulating activities



### Elevated Evening Cortisol

#### Cortisol

Higher than normal evening and night cortisol production.



#### 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.

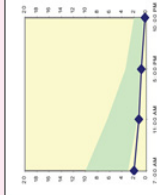
#### Lifestyle suggestions:

- 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

#### Adrenal Exhaustion

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

### Adrenal Exhaustion



#### 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

## 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



## 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> lists health care 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?







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