

Fatigue? Adrenal Fatigue? And What to Do!

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Is it normal to get tired as we grow older?

As we age, hormone production and nutrient status decline. Hormone function is about 50% by the age of 50. Absorption of B-12 declines naturally with age. Although this is still considered “normal,” it is not “optimal”. The decline of hormones and nutrients results in a host of symptoms (including fatigue, insomnia and weight gain) and ultimately leads to degenerative diseases such as arthritis, heart attacks, high blood pressure, diabetes, osteoporosis and cancer. Correction of hormones and nutrients to “optimal” levels, detoxification and mind-body interventions are effective in correcting energy levels back to normal.

Why are we seeing more fatigue and adrenal compromise?

With increasing frequency we are faced with the progression of fatigue to adrenal insufficiency and often adrenal failure. These are the people, *of any age*, who come in with fatigue, achiness, insomnia, inflammation, hypersensitivity to everything, panic attacks and many more symptoms. These are the ones who end up with diagnoses such as fibromyalgia, anxiety disorder and early arthritis. As such, this has been appropriately called “The 21st Century Stress Syndrome” by Dr. James Wilson. At this point in history, we will rarely encounter the patient who has strong adrenal function because:

- 1) We are depleting our hormones and nutrients faster, as we live in a world where we are exposed to more stimulation of the nervous system. We are aware of conscious stimuli such as beeping phones, alerts, global news, social media, too many people and too many opportunities to interact, and often unaware of the subconscious stimuli such as electromagnetic fields and energies.
- 2) We have low reserves to begin with. The USDA reports over 50% reduction in the nutrient content of our top 34 crops in the years 1959 to 1999. Studies support a steady decline in hormone levels over time in age-matched controls. One study has reported a 15% population decline in men’s testosterone levels from 1997 to 2004.

What is “adrenal fatigue” or “adrenal burnout”?

With the current levels of stress in daily life, we are seeing more and more dysfunction of the adrenal gland. The body is programmed to respond to acute stressors with an acute stress response, which includes elevation of cortisol, epinephrine, heart rate, blood pressure and general sympathetic nervous system response. When people are exposed to long periods of emotional or physical stress, the adrenal gland does not have the nutrients to produce a normal cortisol response. The adrenal gland then enters an insufficiency status (some call *adrenal burnout*), characterized initially by severe fatigue. As it progresses and cortisol levels decline, symptoms may include body pain, multiple sensitivities, allergies and difficulty dealing with normal life stressors. Other signs and symptoms of adrenal insufficiency may include:

- Frequent flu
- Afternoon slump
- Frequent waking at night
- Panic attacks
- Dependency on coffee or stimulants for energy
- Inability to take stress
- Light headedness when standing up from laying down
- Salt and sugar cravings
- Increased PMS symptoms
- Unexplained abdominal weight gain
- Allergies, rashes and skin conditions
- All inflammatory conditions including auto-immunity and cancer

As the adrenal gland is ultimately the gland that mounts our survival response (“fight or flight”), the body attempts to make up for deficient cortisol by converting hormones such as DHEA, progesterone and testosterone, causing further symptoms associated with these hormones including infertility. With adrenal insufficiency comes decreased conversion of T4 to T3, increased reverse T3 (which blocks T3 receptors) and a dysfunctional thyroid. These conditions are treatable by high dose nutrition, hormone replacement, detoxification and mind-body interventions.

What are causes of fatigue and adrenal insufficiency?

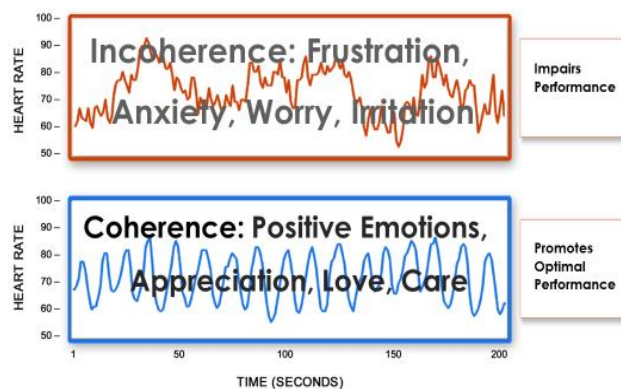


Fatigue is caused by imbalances in each of the 5 areas of the 5-point model (Figure 1)

- 1) *Hormones*: suboptimal levels of thyroid, progesterone, testosterone, DHEA, pregnenolone and cortisol can be major factors in contributing to fatigue. Often these hormone levels may be in the “normal” range, but not the “optimal” range (>75th percentile) . It is not necessary to take each of these hormones, since several of them can convert to the others. For example, progesterone can convert to DHEA and cortisol.
- 2) *Nutrients*: although all vitamins and minerals are required for optimal energy, there are a few that are known to be vital to our energy production pathways. Those include: **B-12**, **B-6**, **magnesium**, and **vitamin C**, which are needed for the adrenal glands which produce “cortisol,” and **iodine**, **zinc** and **selenium**, which are required for thyroid activation.
- 3) *Toxins*: water intake and the function of our bowels, liver and gallbladder affects detoxification and the absorption of nutrients that are vital for energy:
 - Most B-vitamins are made by the good bacteria in the intestines. Indigestion, bloating and sluggish bowels are indications that nutrient absorption and production are low. Any antibiotic will destroy the normal bacteria in the intestines.
 - Constipation (moving bowels less than 2 times a day) is well known to be associated with low energy and productivity.
 - Heartburn and heartburn medications (such as Pepcid, Prilosec, etc) decrease absorption of B-12.

- Tissue pH less than 7.0 increases dysfunction of all energy producing metabolic pathways and decreases oxygenation and therefore energy.
- 4) *Mind balance*: Perceived and unperceived stressors are major contributors to fatigue as they evoke nervous system responses (such as incoherent draining heart rate variability in Figure 2) which rapidly deplete the reserve of nutrients and hormones. When the reserve is depleted, we are in a state of “adrenal insufficiency” or “adrenal burnout.”
- Perceived stressors generally lie in the area of relationships, illness, finances, jobs, commitments and hardships.
 - The silent/ subconscious stressors play the larger role. These include our chosen emotions (frustration, anger, irritation) and environmental stimuli such as phones, people, crowds, noises, commitments, news, etc.

Figure 2. Incoherent Heart-Rate (Top) drains reserve of hormones and nutrients.



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- 5) *Body Balance*: low tissue oxygen and pain are major contributors to fatigue. When you are in pain, your body is using cortisol and nutrients more rapidly in order to detect pain and respond.

What are cures for fatigue and adrenal insufficiency?

The two most important factors to address include 1) reduction of stressors and 2) 8 hours of solid sleep, which induces adrenal recovery. Fatigue can be resolved in over 85% of cases. Resolution time can vary from 12 weeks to over 6 months depending on how severe the fatigue and how aggressively you treat. The more severe the fatigue, the more interventions needed. To

address fatigue, you must address imbalances in each of the 5 areas of the 5-point model (Figure 1):

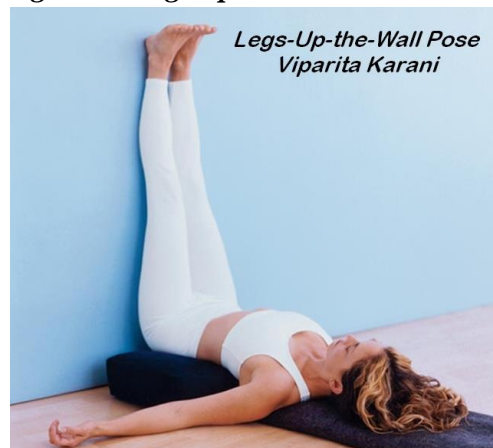
1. *Hormones*: measure your hormones in blood, saliva or urine and optimize levels with bio-identical hormones. Progesterone and Melatonin can be especially helpful to induce 8 hours of solid recovery sleep. Start thyroid if there are no symptoms of anxiety or heart palpitations and tachycardia.
2. *Nutrients*:
 - Measure your nutrition status with Spectracell™ blood analysis and optimize levels to the 75% percentile and above. Results take 4 weeks.

Interventions which may be used include:

- IM injections of methyl form of B-12 and folate weekly
 - High dose “stress B’s” and multivitamin /mineral support for adrenals and thyroid with Active forms of B-Vitamins, Zinc, Selenium and Iodine (Essentials 5 in 1)
 - High dose Magnesium Glycinate/ATA (MagnesiumRx) and Vitamin C 4-8 grams
 - For the first 4-8 weeks, IV delivery of these nutrients may be useful (Myer’s Cocktail) to boost energy levels. IV delivery is initially useful especially when there are gastric/intestinal symptoms indicative of poor absorption.
 - Dietary interventions (such as increasing raw plant intake and reducing refined flours) should take place slowly as energy levels improve.
3. *Toxins*:
 - First step should be to ensure 100 ounces a day of mineralized water. Every morning, set aside a pitcher with your entire water supply for the day. Avoid plastic. Add one lemon and 92-mineral pink salt (to mineralize) to taste. Add/substitute coconut water for more mineralization.
 - Measure AM urine pH to assure it is >6.7.
 - Since the function of our bowels affects the absorption of nutrients, correction of gastric symptoms is a must. The first steps here include PureBiotic probiotics (that cover upper and lower intestines) and Probiozyme enzymes for digestion with every meal. As heart burn resolves, medications can be reduced.
 - Address constipation through dietary increase in fiber, water intake and mineral salts (such as pink salt) and supplements (such as magnesium and cleanse formulas).
 - Eventually one must address refined flours, preservatives, plastics, EMF, skin/body products and water and air quality. Do not attempt to detoxify the body or remove viruses and parasites until energy and sleep are improved, since this often results in deterioration.
 4. *Mind balance*: the major intervention here should consist of reducing the stimulation to the nervous system. We recommend:
 - Dedicating 12 weeks to yourself and putting *you* first. Simplify life to basics by reducing all commitments possible (evenings and weekends).

- Reduce external stimuli which use your reserve (such as phone alerts, ringers, news, people, commitments and activities).
 - Breathing exercises that induce the physiologic “relaxation response” which is characterized by Coherent Heart Rate Variability (Figure 2), lower use of reserves, lower heart rate, lower blood pressure, and increased blood flow to the organs. This can include simple awareness to the inhale and exhale several times a day, abdominal breathing and meditative breathing, or my favorite which is using a bio-feedback phone app such as Inner Balance from HeartMath.org and Heart-Focused Breathe for 3-5 minutes several times a day.
5. *Body Balance. It’s all about getting oxygen to all parts of the body:*
- The first thing to do here is to reduce vigorous physical activity and exercise until your reserves are optimal. This means do not exercise in the cardio-range.
 - Do focus physical activity on breathing and moderate walking 20 minutes.
 - Restorative yoga poses that will rapidly enhance adrenal recovery and energy include “Legs up the Wall” (Figure 3) and “Downward dog”.

Figure 3. Legs up the wall



- Grounding your body electrically by being outdoors with bare feet, allows the electrical charges accumulated on your body to discharge into the ground. This increases blood oxygen exchange.
 - Since pain is a major contributor to depleted reserves and low energy, pain needs to be addressed through anti-inflammatory supplements, diet, regional hyperthermia (I-Therm), acupuncture and chiropractic interventions.
6. *Adrenal glandulars and herbal formulas* containing cordyseps, Siberian ginseng, Korean Ginseng, rhodiola, licorice root, and ashwaganda, are very helpful when used in conjunction with the other therapies. These should be continued for 6 months, while the adrenal is recovering. Of the ones available AdrenalForte is the most effective herbal formula.

What is the connection between adrenal function and thyroid?

When treating these patients, it becomes evident that when adrenal insufficiency is present, thyroid function is compromised. This may be due to:

- Decreased conversion of T4 to T3 (active form of thyroid)
- Increased conversion of T4 to reverse T3 (rT3), which blocks T3 receptor sites
- Down regulation of thyroid receptor

In the event of low thyroid function, it is imperative that one addresses thyroid restoration only when the adrenal supportive therapies (especially MagnesiumRx) are on board and the patient is not suffering from anxiety or heart palpitations. This is due to the fact that metabolic processes stimulated by thyroid hormone also increase adrenal demands. Specific interventions which can facilitate starting thyroid restoration include:

- Addition of magnesium glycinate/ ATA 600-1000 mg orally or transdermally.
- Correction of progesterone, DHEA, and Pregnenolone

Few Select References:

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