

Metabolic News

The Newsletter of Metabolic Nutrition

June 2007

Metabolic Nutrition Has Moved

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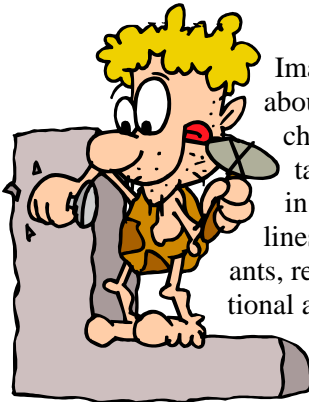
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The Stress Nexus

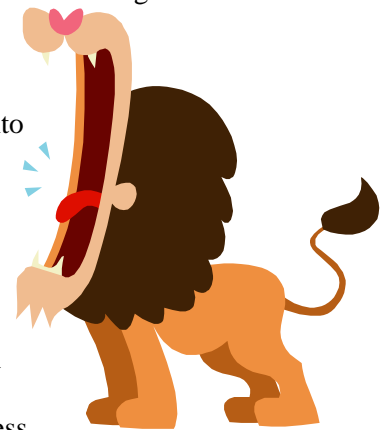
By Christine N. Hardy, MA, CNE



Imagine that you are a caveman/woman going about your business, and all of a sudden a lion comes charging at you. How do you react? Do you fight or take flight? In today's society, we are constantly in fight or flight mode, "dodging the lion": deadlines, traffic, family demands, environmental pollutants, relationship quandries, poor quality foods, emotional angst, etc.

Stress is defined as anything in the external world that knocks us out of homeostatic balance (the body's ability to remain in balance and adapt to the stress we impose on it). If homeostatic balance is not restored, disease, and eventually death, may follow. Stress can hurt you or help you. It affects each of us uniquely, and we all react differently. Our reactions depend on our upbringing, personalities, genetic make-up, etc. When we are stressed, the body tries to get ready to deal with a crisis, and depending on the stressor, it can be frightening. This heightened state of worry and anxiety may lead us to overindulge in sugar, fried foods, alcohol, smoking, or drugs and medications to cope. So how does this reaction begin in the body?

You sense a stressor and a signal is sent to the brain which triggers the adrenal glands to kick into high gear. The adrenal glands, which allow us to adapt to these stressful situations, are the body's shock absorbers, and the core of the endocrine stress response system. Two of the most important adrenal hormones are epinephrine (adrenaline) and cortisol, both in charge of the fight or flight response. According to Dr Richard K. Bernstein in his book, *Diabetes Solution*, "Epinephrine deals primarily with short-term stress, pain, fright, anger, and hypoglycemia. Elevated blood levels of epinephrine can cause tremors, and increased heart rate and blood sugar. Cortisol is produced as a result of both acute and long term-stress."(1997, pg. 366)



Recently, a lot of attention has been directed toward the effects of excess cortisol on weight gain and the difficulty in losing weight. The hormone cortisol is produced in the adrenal cortex in response to adrenal cortical stimulating hormone (ACTH) produced in the pituitary gland.

The Stress Nexus.....



It belongs to a class of hormones called glucocorticoids, which affect practically all organ and tissue systems in the body.

Cortisol's most important job is to help the body respond to stress, as well as to regulate the metabolism of proteins, carbohydrates

and fats, blood sugar, energy production, inflammation, the immune system, and healing. In addition, cortisol at normal levels plays a vital role in regulating thyroid function (since it is required to convert T4 into T3, the active form of thyroid hormone). Therefore, when the adrenals are overtaxed, hypothyroidism can result.

If you have too little cortisol, you may suffer from fatigue, chronic fatigue, exhaustion, or Addison's Disease. Addison's Disease is an endocrine or hormonal disorder. In his article *The Hidden Causes Behind Hormone Balance*, Sherrill Sellman, ND explains that "since the adrenals contribute to about 35 percent of premenopausal female hormones and almost 50 percent of postmenopausal hormones, compromised adrenal function profoundly affects hormonal balance. (Vitamin Research News, 5/2007) This is why Addison's Disease can cause a woman's menstrual cycles to become irregular or stop altogether.

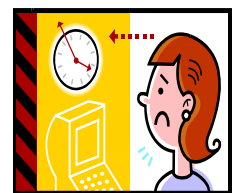
Addison's occurs when the adrenal glands do not produce enough cortisol. The disease is characterized by weight loss, muscle weakness, low blood pressure, irritability, depression, discoloration and darkening of the knees, elbows, scars, and creases in the palms. On the other hand, if the adrenals are producing excessive cortisol, or if excessive cortisol or glucocorticoid (steroid) hormones are being used, Cushing's Syndrome can develop.

"Persons with Cushing's Syndrome take on a characteristic appearance; they are generally heavy in the abdomen and buttocks but have very thin limbs, and they have rounded moon faces. Round, red marks mimicking acne may appear on the face, and the eyelids may appear swollen. Cushing's Syndrome can be a sign of an underlying condition, Maladaptation Syndrome, also known as Hyperadaptation, or adrenal burnout.

An increased growth of body hair is common, and women may grow mustaches and beards." (Prescription For Nutritional Healing, Balch, 2006). Other signs that the adrenal glands are producing too much cortisol: weight gain (especially around the abdomen), depressed immune function, blood sugar imbalances, muscle wasting, memory loss, hot flashes, night sweats, thinning skin. This phenomenon was first described by professor Hans Selye in 1936.

Signs and Symptoms of Overworked Adrenals:

- Glucose intolerance
- Heart palpitations
- Fatigue
- Anxiety/nervousness
- Carbohydrate cravings
- Waking 2-4 AM for no reason
- PMS
- Sluggish in the morning, low energy in the afternoon, second wind at night
- Salt cravings
- Muscular and/or joint pain
- Moon face
- Obesity
- Poor wound healing
- Loss of bone density



What else can happen over the long haul to a stressed individual? Poor Brain Health!

Chronic stress hormones secreted into the brain can allow a person think more clearly over the short term. For example, a student cramming for a final exam initially benefits from increased oxygen delivery and nutrients to the brain. However, by the sixth hour, the student will be thinking less clearly, the neurons won't work as well and the capacity for memory retrieval will fade.

Over the course of days to weeks of sustained stress, these neuronal processes can begin to atrophy and retract in the hippocampus area of the brain. It used to be believed that if you lost brain cells they were lost forever. We now know that you can make new neurons in the brain in response to things like learning and environmental stimulation. However, stress will block the formation of new neurons. Improve your ability to remember and think. Learn to cope with stress!

The Stress Nexus.....

Restoring adrenal function is a prerequisite for hormonal balance. Those who suspect adrenal exhaustion can determine whether the body is producing healthy levels of adrenal hormones through salivary hormone concentrations. Metabolic Nutrition offers a take home salivary hormone kit. It requires the collection of saliva in tubes at intervals throughout the day. The kit comes equipped with a UPS label, packaging, etc. We offer two different testing kits:

Hormone Profile II

Estradiol
Testosterone
Progesterone
DHEA
Cortisol (2x during the day)

Hormone Profile III

Same as hormone profile II
Cortisol (4x during the day)

Results take 7-10 business days. They will be mailed to the clinic for evaluation. Once results are obtained, balance can be achieved through supplementation such as: Glandular extracts, vitamins (B-vitamins, especially vitamin B5), vitamin C, magnesium, herbs, DHEA, pregnenolone, bio-identical hormone creams, etc., depending on the individual. We suggest that hormones be re-tested three months after starting a balancing protocol. Depending on the person, hormones can become very well balanced within three months.

Additional Recommendations

Stress is a fact of life. While you may not be able to rid yourself entirely of stress, you can work on ways to lower it!



- *Learn better ways to manage your time.*
- *Find out what is causing stress in your life and really address it so that you can let go and thrive.*
- *Exercise.*
- *Let your feelings out. Talk, laugh, cry, and express frustration and anger when needed.*
- *Go to bed by 10 pm to ensure balanced cortisol levels.*
- *Eat right for your Metabolic Type.*



As always, we offer **Same Day Shipping (Placed before 1 PM)**

Free Shipping for orders over \$200

Gift Certificates available

Supplements on Sale This Month

Cytozyme AD-An adrenal glandular used to repair, strengthen, and rejuvenate tired adrenal glands.

90 tablets..... reg. \$40 **Now \$32.00**

Adrenotone +-A blend of herbs and vitamins for nutritional enhancement of adrenal cortical and medullary function, adrenal rejuvenation, addresses depletion common to those suffering from the effects of chronic stress. (Specifically for Group 1 types-Sympathetics and Slow Oxidizers)

90 capsules..... reg \$22 **Now \$17.60**

NEW! Re-Hydrate- Do you urinate too often? Tired? Low energy? Try an amazing homeopathic remedy that locks water into the cells for maximum hydration, oxygen and energy, as well as provides adrenal and neurotransmitter support. Drop liberally into water throughout the day to become more grounded and alert.

2oz.....reg \$21 **Now \$16.80**

200mg of Zen-*Zen in a bottle!* A GABA and L-Theanine combo to calm and balance the nervous system. Zen is best taken away from food. Ease that busy mind, and keep carbohydrate and sugar cravings at bay.

60 capsules.....reg \$22 **Now \$ 17.60**

NEW!!-Modifilan-An organic extract made from the brown seaweed Laminaria Japonica -Modifilan contains organic iodine to regulate the metabolism and support the nervous system, improve gastro-intestinal tract function, aid in decreasing high blood sugar and cholesterol levels, strengthen the hair and nails, boost the immune system, and detoxify the body from heavy metals, free radicals and toxins.

90 capsules.....reg \$29 **Now \$ 23.20**

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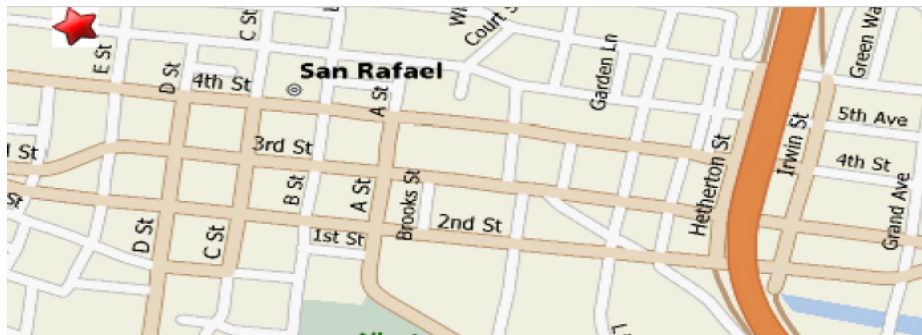
1530 Fifth Avenue, Suite A

From San Francisco, the Peninsula, the East Bay

Take the **Central San Rafael** exit.
Take the first left onto **Third Street**
(heading west, underneath the freeway overpass).
Take a right onto **E Street**.
Take a left onto **5th Ave.** **1530** is on the right hand side.
Suite A is upstairs.

From Novato, Santa Rosa, the North Bay

Take the **Central San Rafael** exit.
Turn right onto **5th Ave.** (heading west).
Just past **E Street**, turn right into parking lot at **1530
5th Ave.** **Suite A** is upstairs.



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Dedicated to the memory of Dr. Harold J. Kristal

