Balancing Cortisol for Health

April is a busy month for students, faculty, and staff because the end of the semester is near. Students are wrapping up end of the semester projects and preparing for final exams; faculty are cramming in the last bit of information on their syllabus as well as grading papers; and staff is preparing for commencement, awards banquets, ceremonies, etc. All of this activity also brings about higher levels of stress. When our body is subjected to stress day in and day out, unhealthy changes occur at the chemical level.

In my November 2015 newsletter, I wrote about the body’s response to stress, whether it be a full on attack or thoughts of stress. The body goes into a sympathetic nervous response, the flight-or flight response, that supports us during life-threatening events. When this occurs, cortisol and other hormones are released.

Cortisol is primarily responsible for regulating blood sugar, helping to metabolize fats, protein and carbohydrates and assisting in managing our stress response. We all have times of stress in our lives, and cortisol helps us to function during these times.

Cortisol is a powerful hormone necessary for life, but in excess, can lead to health concerns. If stress is persistent, cortisol levels become unbalanced which can lead to adrenal fatigue. Adrenal fatigue can lead to high levels of fatigue each day, difficulty getting out of bed each morning, mineral depletion in the blood such as potassium, magnesium and sodium, a weakened immune system and an inability to handle stress. When we encounter stress, we depend on our adrenals to regulate our stress response and release the hormones that allow us to increase our strength, focus and awareness when we need it. When our adrenals are fatigued, this natural response doesn’t occur eventually leading a person to feel a lack of enthusiasm, irritable, anxious or depressed.

Other symptoms of chronic stress and elevated levels of cortisol in the bloodstream are food cravings, specifically foods that are high in sugar and refined carbohydrates such as cookies and/or chips. Cortisol interferes with the hormones that control appetite. You may find you are hungry more often and have a difficult time staying satiated. High levels of cortisol lead to weight gain in the abdominal region and loss of total body muscle mass. Sleeping rhythm is thrown off with high levels of cortisol as well.
Balancing Cortisol for Health Continued...

Chronic stress, at some point, will also change your brain. This TED-ed video, “How stress affects your brain”, explains how prolonged day-in day-out stress can affect the size, structure and function of the human brain.

As you can see, chronic stress becomes a snowball effect that is detrimental to your health and potentially life threatening.

Tips to Help

Reduce stress: I know, easier said than done. But many times our stress levels are correlated to our response to stressful situations. Learning how to cope with these situations more effectively will help to balance cortisol levels.

- Deep breathing: One quick and fairly easy technique to use is the HeartMath technique called Heart Focused Breathing. “Focus your attention in the area of the heart. Imagine your breath is flowing in and out of your heart or chest area, breathing a little slower and deeper than usual. Inhale 5 seconds, exhale 5 seconds or whatever rhythm is comfortable.”

- Activate a positive or renewing feeling: Another HeartMath technique to add to the Heart-Focused Breathing is to make a sincere attempt to experience a regenerative feeling such as appreciation or care for someone or something in your life. “Try to re-experience the feeling you have for someone you love, a pet, a special place, an accomplishment, etc. or focus on a feeling of calm or ease.” With practice, you can do both steps in one breath cycle. Shift your focus to your heart as you inhale and activate a positive feeling as you exhale.

- Exercise/movement: All it takes is 30 minutes a day to reduce cortisol levels in the body. But don’t do exercise for the sake of exercise, do something you enjoy!

- The body, mind and soul remembers the positive and renewing feelings you receive when you exercise or move in ways that support and honor you (March 2016 Newsletter).

Get Plenty of Sleep: Getting at least eight hours of sleep each night can reduce cortisol levels by more than half of that of people who get less than six hours. Cortisol is a key player when it comes to our sleep patterns, energy and mood because our bodies produce different chemicals during the day and night. The natural rhythm of this cycle is known as the Circadian Rhythm. Under normal circumstances, cortisol levels tend to be higher in the morning when daylight is developing. You will often feel a boost of energy to get your day going. As the day goes on, cortisol levels should drop so you are prepared to get a good night’s rest.

Similar to cortisol, melatonin levels begin to increase in the evening or as daylight fades to help you relax and prepare for sleep.

High stress as well as low-level daily stress can keep cortisol levels from dropping off during the appropriate time of day. You may feel tired at night but you are unable to relax and fall asleep. In fact, you may experience a rapid heart rate making you feel “wired” even though you are very tired. This is a sign that cortisol levels are at dangerously high levels.
Tips to Help Continued....

- Fresh air and sunshine (June 2015 Newsletter): Since circadian rhythm is partially controlled by light, getting outside during the day is important. The sun provides one of the best sources of vitamin D which is essential to maintaining a healthy immune system and improves mental health.

- Reduce screen time: TVs, laptops, tablets and cellphones are bright enough to confuse the body’s circadian rhythm. If trying to relax before bedtime, read a book and dim the lights.

- Be consistent: The body needs a schedule. Getting into a habit of going to bed and getting up at the same time each day will help regulate your circadian rhythm.

- Avoid caffeine after 2:00 pm: You may find that you get very sluggish and sleepy in the afternoon if your circadian clock is off. Think twice before you rush to Fire And Ice for a cup of java. Caffeine takes four to six hours to metabolize, so drinking caffeinated beverages in the afternoon will make it more difficult to fall asleep at night and the cycle will never break.

- More calories early: Eating the majority of your calories (from whole foods, not highly processed foods!) early in the day boosts the body’s energy. This may recalibrate your circadian rhythms more easily.

Take Charge and Recharge Workshop

If you are interested in exploring some of the techniques for reducing stress I mentioned earlier, I am offering a workshop called Take Charge and Recharge on Thursday, April 21 and Monday, April 25. This workshop is open for students, faculty and staff. In this workshop you will learn strategies to build your resilience and boost your ability to “take charge” of yourself by better regulating your energy throughout the day. We will explore energy-management concepts so you can see where you may be draining your energy and depleting your reserves.

These sessions are limited to 12 people. To reserve a seat, please call the Human Resources office at 835-5206. The days and times for this workshop:

**Thursday, April 21**: 2:00 to 2:50, 3:00 to 3:50 and 4:00 to 4:50

**Monday, April 25**: 12:00 to 12:50, 1:00 to 1:50 and 2:00 to 2:50

“What happens outside you, and what happens inside you – happens in two entirely different worlds. You can take charge of only one of these worlds.”

~Manoj Arora, Happiness Unlimited
Healthy Snack

As I said earlier, April is a busy month. Often times we have to grab a snack and go. This is my go-to snack when I am busy and need something to keep my energy up and my mind sharp. I got this recipe from another Precision Nutrition coach.

**Caravaggio Bars (homemade protein bar)**

**Ingredients:**
- 3 cups cranberry trail mix
- 3 cups mixed nuts
- 1 cup large flake oats
- 10 scoops (20g protein/scoop) vanilla protein powder
- 1 tbsp molasses
- 1 tbsp honey

**Instructions:**
Chop the cranberry mix and mixed nuts in a food processor. Mix with large flake oats and protein powder in a large bowl (as big as you can find, otherwise you may have to do this in two batches).

Add just enough water to wet all the protein powder so that it doesn’t have a chalky consistency. Next, add 1 tbsp molasses, spread over whole batch, and mix thoroughly. After that, add 1 tbsp honey and do the same. If the mix is too dry, add a little water; if too wet, add a little protein.

Lay plastic wrap across the bottom of two 9 x 9 or similar baking dishes, leaving enough wrap on each side to wrap around the mixture and cover the top. Spoon the mix into the baking dishes on top of the wrap, and pack it in with the spoon. Cover the mix with the extra wrap, then flatten the mix with your hands. Refrigerate. No baking required.

Cut into 20 bars, 10 in each baking dish. And enjoy.

**Notes:**
Keep the mix in the fridge and covered or else it will dry out.

These bars are wicked good so make sure not to overeat them. Even though the ingredients are healthy, 2 or 3 small squares will net you 600-900 calories. And that’s a lot for a little snack.

**Nutrient Profile:**
- 1 bar = 312 calories
- 16.5 Protein
- 26.5g Carbohydrate
- 15.5g Fat

Recipe by PN

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