



PURA VIDA HEALTHCARE
Your Mind-Body Connection

The Joy of Stress

~ Adapted from presentation given by Nicola Dehlinger, ND and Melaney Sreenan, PhD on 12/3/12.

PART 1

This is a time of year that gets full, busy, cold, pressured – in a word – stressful. I think most of us acknowledge that stress is officially a part of our daily (non-vacation) existence. And that doesn't mean that we have to be a victim of it – we actually have a lot more control over how stress impacts us than we might imagine. The key is learning how to perceive it in a way that feels more positive (or at least neutral – this is simply what is). This is probably something most of us already know and haven't internalized as being that important or accessible. However, once you understand how many different systems in your physical body are affected, it might be more motivating to become more proactive how you approach the stress in your life.

The first part of this article will address some of the physiology of stress and what it is actually doing to your body. The second part will look at some options for handling stress more optimally so you can live life to the fullest!

When we think about how the body responds to a stressor, it's important to remember that the stress systems are designed to fuel up the muscles and lungs so that we can LITERALLY flee or fight. When we get stressed in front of our computer, in our cars or living rooms, we are not utilizing the fuel the body provides properly. Or if we remain stressed over time, we don't recover fully from the impact and refuel our tanks. These are the scenarios where stress gets us into trouble. Some of the basics you probably already know are that heart rate increases, breathing gets faster, we sweat, we want to evacuate our bladder/bowels (needing to go to the bathroom is only going to slow our escape down!), body temperature fluctuates, and muscles contract. This can lead to higher blood pressure, irregularities in digestion, headache, and tense muscles.

What might be newer information to you is how stress affects some of the bigger systems in the body. Blood shunts from the digestive tract to skeletal muscle (that explains the butterflies in your stomach) so that we have optimum circulation to the limbs that are going to help you escape. Essentially, you stop metabolizing food properly, saliva (which starts digestive enzyme cascade) dries up, kidneys decrease output and your bowel and bladder sphincters close up (leading to more constipation-like symptoms).

Your adrenal glands are stimulated to release cortisol (more on that later) and aldosterone (which further increases blood pressure). Over time, your adrenals get tired from always being asked to perform, leading to weak muscles, craving for sweets/starches, dizziness and sleep disturbances. Your thyroid is stimulated to help utilize more glucose and deal with the increased metabolic demand. Again, over-working the thyroid can be a major factor in anxiety, as a pooped out one can factor into depression. And, because pro-creation is not helpful while escaping the saber-tooth tiger, your reproductive organs stop working normally – stress inhibits both erection and vaginal lubrication.

Cortisol – the word we all hear and don't really understand why it's such a big deal for us. It's the number one reason are doctors worldwide recommending stress management as effective treatment and prevention of chronic diseases like heart disease, cancer, diabetes, auto-immune issues, ulcers, high blood pressure, bone demineralization, depression, anxiety, obesity...to name a few. But how does it work and why does it matter? I'm so glad you asked! If you think about steroid medications, you know that they are great anti-inflammatories. So it would make sense that cortisol (also a steroidal compound) has a big role in regulating inflammation in the body. But, a couple of things happen when cortisol is hanging out in the system all the time.

First, with chronic exposure to cortisol, the cells and tissues become desensitized and cortisol becomes less effective. This impacts the immune cells in particular. Chronic cortisol decreases lymphocyte activity (the immune cells that attack and destroy bacteria and viruses) and the overall immune system gets depressed. There is extensive research demonstrating that chronically stressed people are more likely to get sick and interventions like regular exercise or meditation boosts immune response. Interesting to note is that symptoms of the common cold are actually from the inflammatory response of the body fighting the infection, not from the bacteria/virus itself.

Cortisol is meant to flood your body's system for a short time, do it's very effective and powerful job, and then you are meant to rest and return to balance. Chronic stress exposure leads to systemic inflammation because cortisol, which has many roles in the body, is expected to spend too much time regulating the stress response, so fewer resources are dedicated to controlling inflammation. Also, because the cells are so used to the cortisol, the cortisol becomes less effective over time. Inflammation is being identified as the underlying determinant in a myriad of chronic, degenerative diseases.

“Enough!” you say. Agreed. Unfortunately that's not where it ends. There are 3 parts of the brain that are particularly vulnerable to stress hormones. The hippocampus is associated with certain types of learning and memory. The prefrontal cortex has to do with working memory and executive functioning (think: focus, critical thinking and follow through). Both of these areas have been shown to shrink in response to chronic stress. The third part, the amygdala, is associated with the physiological and behavioral responses associated with fear. This part, however, is shown to enlarge under prolonged stress exposure. Literally, the world becomes a more fearful place the more stress we are under. Never fear, however – these processes are totally reversible as we learn to manage our stress differently.

Be sure to catch next month's article to learn what changes you can make in your life TODAY to help you dance with stress more gracefully...

PART 2

Last month we talked about the impact that stress literally has on the body. While knowledge is power, it is important to discuss some effective interventions to deal with stress in a different way so that the physiological cascade doesn't have such a negative on our overall health. It may seem impossible or unattainable to have stress impact you differently than it is now. Solutions for dancing more gracefully with stress are not only possible, but they are listed below. What are you waiting for?!?!?

Perhaps most importantly, it is helpful to realize that when we get stressed or triggered, it's usually because our feelings got hurt on some level. By acknowledging the story that accompanies our stressor, we can tend to that emotional need or realize that what is upsetting us isn't actually the event. For example, take the impending arrival of family – it's not necessarily their plane landing that is anxiety-provoking, but rather what the family will do/say/think that gets us revved up. It may take us to that core belief of “not being good enough” or fear of being judged. That is really useful information to go into the visit with so that you can take time before, during and after to offer yourself affirmations to counter these negative belief patterns.

Gratitude

Biophilia

Nutrition

Sleep. You knew that one was coming. Well, here it is! And let me tell you why...we are biologically designed to sleep about 9 hours each night (gasp!). When we go to sleep, our natural rhythm dictates that we increase cholesterol, blood pressure and blood sugar so that we can sleep through the night without waking up to eat or because our blood pressure got too low. When we wake before 8-9 hours of sleep, these factors are still increased in our body. (For more information on this and tons of research, check out the book, “Lights Out: Sleep, Sugar and Survival” by T.S. Wiley and Bent Formby.)