

HEALTH ADVISORY

Stress, Cortisol and Your Weight

Cortisol is a steroid hormone produced by the adrenal glands in response to stress. It is usually known as the primary stress hormone. In the body, cortisol normally follows a circadian rhythm – a twenty-four hour cycle. It usually peaks in the early morning to help us wake up and face the busy day. Then, the level has a sharp drop about mid-morning and continues to gradually decline throughout the day as the body prepares for the end of the day and sleep. About 2am, cortisol reaches its lowest level, and then it begins to rise again until we awake.

Cortisol is important in the regulation of all parts of the body's metabolism of glucose, protein and fatty acids. Cortisol also helps to control mood and well being, immune cells and inflammation, blood vessels and blood pressure, and maintenance of connective tissue, such as bones, muscle and skin. There are good effects of cortisol like anti-inflammatory benefits, which are necessary at times. But, when cortisol levels are chronically elevated, it sets the stage for a multitude of potential medical problems. For instance, there is a direct correlation, between stress, elevated cortisol and weight gain.

Everyone in today's world is faced with stress. Examples of stress can be either physical, like exercise; or emotional, like being cut off in rush hour traffic. In these situations, your body responds by initiating a complex cascade of events that can alter your metabolism. Exposure to these everyday stressors causes the body to increase production of cortisol. When this happens, stimulating hormones are secreted that prepare the body for rapid action against (fight), or away from (flight) the offending stressor. So, it is cortisol that is responsible for this fight or flight mechanism. Back in the "caveman days", this stress response was a vital survival technique. Unfortunately, in modern times, the body responds in the same way even when we are faced with a so called "benign" stressor such as a project deadline. This can lead us down the path of increased disease risks.

So you might ask, "What's the difference between being "stressed" and being "stressed out"? The difference is that being "stressed" induces an adaptive stress response where your cortisol level goes up and then comes down. While, being "stressed out" suggests the inability to mount a normal stress response. Your cortisol rhythm stays flat, or constant; and therefore, your overall exposure is actually higher. Researchers believe that this non-adaptive cortisol response leads to most of the diseases that we now face with our harried lifestyle. Dutch neurology researchers have observed the same flattened cortisol rhythm and non-adaptive stress response in chronic fatigue, Fibromyalgia, PTSD, depression and burnout. Other researchers have found a dramatic association between high cortisol levels, depression, and reduced bone density largely attributed to stress induced changes in cortisol levels.

We just weren't wired to carry or harbor chronic stress, and when we are exposed to it on an ongoing basis (from our modern lifestyle), our bodies begin to break down. We were built to respond to stress quickly and then have the stress hormones dissipate

immediately. Chronic unrelenting stress has debilitating effects on long-term health. Elevated cortisol levels have been associated with the following:

- Increased appetite and food cravings
- Increased body fat
- Decreased muscle mass
- Decreased bone density
- Increased anxiety
- Increased depression
- Decreased libido
- Impaired immunity and mood swings to name a few.

It is also implicated in insulin resistance, diabetes, obesity and heart disease. Some studies suggest that there is a gender response to chronic stress with men much more likely to experience cardiovascular side effects (raised blood pressure, heart attacks); while women are more likely to succumb to depression and anxiety. Given all the possible negative health risks associated with elevated cortisol, its control is of utmost importance. Contact Total Health Solutions for an evaluation of your cortisol levels today.

Teresa Boland