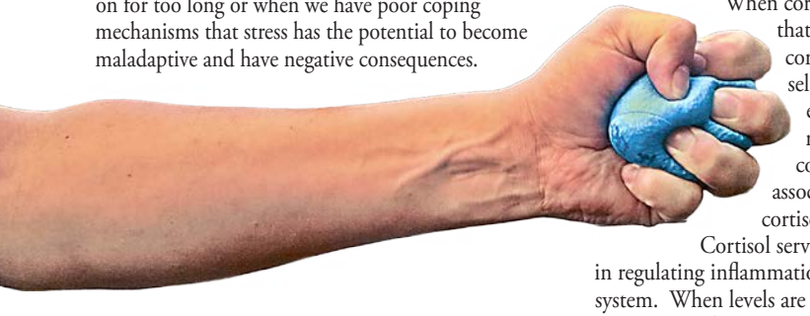
How Stress Causes Disease

*BY **BIJANA KADAKIA**, ND*

In last month's article, I wrote about how important stress management is in the management of anxiety. That link seems fairly obvious, but how we cope and manage stress is also essential in the prevention and management of physical diseases. Research is bearing out the link between stress and disease with a growing list of concerns. In this article, I want to explore a few of the pathways of how stress may affect our health in a few specific ways.

Before I get into specifics, let me be clear that all persons have stress in their life and that our stress response is incredibly adaptive to short stressful situations. It is when stress is too intense, goes on for too long or when we have poor coping mechanisms that stress has the potential to become maladaptive and have negative consequences.



Some of the conditions affected by stress include frequent infections or slow wound healing, muscle tension, arthritis, headache, back pain, blood pressure and heart disease, diabetes, obesity, depression, digestive problems, ulcers, asthma, Alzheimers disease and cancer. In addition to these specific complaints, stress has been associated with accelerated aging and premature death. Stress really is making us sick, making us hurt and shortening our lives.

When we perceive a stress, our brains respond by activating the autonomic nervous system and stimulating the release of cortisol from the adrenal gland. Our nervous system releases epinephrine which triggers a cascade of physical responses including stimulating the heart to beat faster and harder, increasing blood pressure, affecting breathing, and releasing stored glucose (sugar) into the bloodstream. The release of cortisol prolongs these responses and if stress continues, cortisol may continue to be released in higher than usual amounts. Over time, though, the adrenal glands, which produce cortisol, may not be able to keep up with demand and cortisol levels may fall below normal. Both high and low levels of cortisol can influence health.

Elevated cortisol suppresses the immune system making us vulnerable to infections and making it harder for the body's healing mechanisms to act. Long term elevated levels of cortisol are also associated with abdominal obesity, insulin resistance and eventually diabetes. I mentioned above that our innate stress response causes a release of sugar into the bloodstream. In the short term, this is highly adaptive. I use the analogy of being chased by a bear - in this scenario, sugar would feed the muscles needed for running and be highly adaptive. However over time, elevated cortisol reduces cells sensitivity to insulin and prolongs the state of elevated blood sugar which eventually may become diabetes.

When cortisol levels decrease, changes that were set in place with high cortisol do not necessarily self-correct and can be exacerbated by problems resulting from low levels of cortisol. One of the problems associated with low levels of cortisol is increased inflammation. Cortisol serves an important purpose in regulating inflammation and our immune system. When levels are too low, inflammation can get out of control, resulting in exacerbation of inflammatory conditions. Acute stress can serve as a trigger for autoimmune disease and long term stress which deregulates the immune system and allows autoimmune disease to flourish.

This isn't meant to be a medical course, but meant to provide you with an overview so that you understand how important stress management is. If you are interested in exploring the impact stress may be having on your life, consider an adrenal stress test which can be administered at our office in Tualatin where we've been proudly serving the community since 2008.

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