

Preventative Behavioral Health Treatment: Stress and Medical Illness

By Mark Rosenberg, MD, PHD. Part two of a multipart series on the link between physical and behavioral health

WE ARE ALL FAMILIAR WITH the term stress, but what is stress really, and how does it affect us? These are important questions that researchers in many disciplines are working to answer. Stress, in its most frequent interpretation, can be known as a physiologic reaction to conditions, in response to interactions between people and their environments, which exceed their adaptive capabilities. An essential understanding of stress is important because of both its frequency of occurrence, and the strong implication of causation in a variety of illnesses, including but not limited to cancer, cardiac disease, and a variety of autoimmune diseases. According to a recent APA survey “54 percent of Americans say that they are concerned about the level of stress in their everyday lives.” Other studies have concluded that “75 percent of all doctor visits are stress-related”, and the number of people who say that they experience prolonged or frequent stress is in the hundreds of millions. Stress is a serious health issue that impacts an enormous amount of people.

Stress can affect people on both a physical and a psychological level, but can vary widely in individuals based on gender, genetics, and tolerance levels. Women are far more likely to suffer from the negative impacts of stress than men. People who suffer from stress can also become victims of the bad behavior often associated with stress. Those who suffer from stress are much more likely to smoke, make poor dietary choices, and get less than

the optimal amount of sleep. All of these factors are contributors to an overall frequency and severity of many types of illness.

Stress responses sent to the brain can have a dramatic negative impact on immune cells. According to Dr. Esther Steinberg, a researcher for the National Institutes of Health, “If you’re chronically stressed, the part of the brain that controls the stress response is going to be constantly pumping out a lot of stress hormones. The immune cells are being bathed in molecules which are essentially telling them to stop fighting.” It is precisely this response that leads to an increase in autoimmune disease among people with high stress levels. Stress has been proven to both rapidly accelerate the progression of HIV/AIDS onset, and to contribute to a large variety of other infections including cancers that are suspected of a viral origin, and even basic colds and flu.

Stress, and the occurrence and progression of cancer, have now also been found to be inextricably linked. It has been noted for some time that stress can cause an increase in viral cancers, such as Kaposi sarcoma and some lymphomas, but recent evidence is also pointing to a broader cancer link. It is now believed that the neuroendocrine response or release of hormones into the blood can impair physiological processes that naturally occur to help us ward off cancers. Specifically, it is believed that this neuroendocrine responses leave our bodies weakened and can alter some of the DNA codes responsible for cell

repair and regulation of physiology within the body. This means that increased stress can lead to an increased susceptibility to cancer, and, that if you have cancer and it is accompanied by chronic stress, the progression of the disease can be much faster and more severe than it would be in someone with a decreased stress level.

Similarly, stress can contribute to cardiovascular disease. People who suffer from prolonged or excessive stress put an increase workload on the heart. Additionally, the stress response induces the secretion of glucocorticoids, such as glucagon and cortisone. In patients with chronically high blood pressure, often a byproduct of stress, these blood glucose molecules bind with proteins in the bloodstream. This is essentially the first stage of glycation, in which the body produces advanced glycation end products. Additionally, stress can lead to increased inflammation and atherosclerosis, all serious contributing factors in cardiovascular disease.

Though stress can be a complex contributor to a multitude of diseases, it is also something that can be managed with appropriate healthcare and effective techniques. By decreasing levels of stress it is possible to decrease your risk of developing disease, and, just as importantly, to decrease the odds that you will engage in poor lifestyle choices that also contribute to disease. As stated by Robert E. Doherty, Professor of Psychology at Carnegie Mellon University, “Stress increases your risk of developing disease, but it doesn’t mean that

just because you are exposed to stressful events, you are going to get sick.” There are a variety of stress management approaches which people can employ to effectively manage their stress, and decrease their likelihood of suffering from a stress-related disease or illness.

In subsequent articles, we will examine specific disease states and ways to prevent stress and

thus lower risk of development of specific disease, as well as improve to outcomes in patients already diagnosed.

Part two of a multipart series on the link between physical and behavioral health, by **Mark Rosenberg MD, PHD**, www.bhmhc.com. For more information, email: preventioninfo@bhmhc.com

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