

Preventative Behavioral Health Treatment: Stress and Medical Illness

We are all familiar with the term stress, but what is it really, and how does it affect us? These are important questions which researchers in many disciplines are working on answering. Stress, in its most frequent interpretation can be known as a physiologic reaction to conditions in response to interactions between persons and their environment 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% of Americans say that they are concerned about the level of stress in their everyday lives¹.” Other studies have concluded that “75% of all doctor visits are stress related²”, 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 which impacts an enormous amount of people.

Stress can affect people on both a physical and 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 men³. 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. Steinberg a researcher for the National Institute 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.⁴” 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 contribute to a large variety of other infections including cancers that are suspected of a viral origin, and even basic colds and flu⁵.

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 on the heart. Additionally the stress response induces the secretion of glucocorticoids like 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 products⁶. 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 which also contribute to disease. As stated by Robert E. Doherty, Professor of Psychology at Carnegie Mellon “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 sick⁷.” 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 outcome in patients already diagnosed.

Part two of a multipart series on the link between physical and behavioral health

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