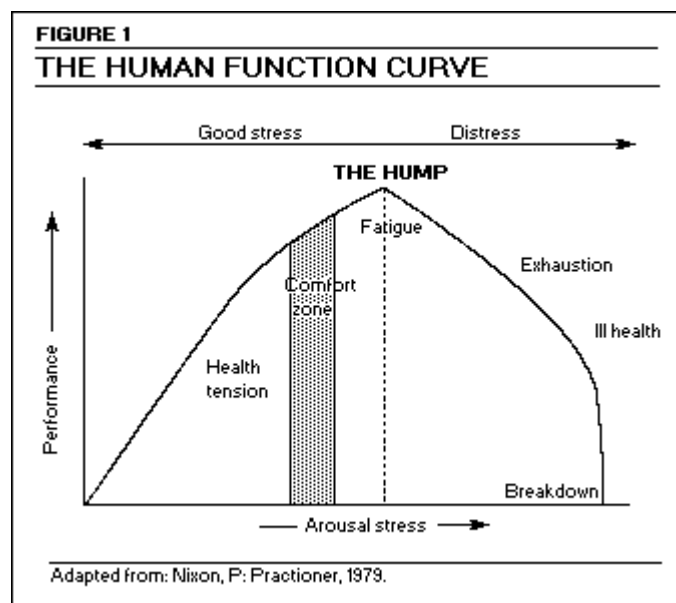


Stress, regardless of the severity or duration, is a reality no one can escape. We live in a time when we are working harder, eating unhealthier diets, exercising less, taking more prescription drugs, and sleeping less than at any other point in history. Influencing and further exacerbating this dismal picture are the worsening economic recession, fear of terrorism, the shrinking job market, and the increasing cost of and decreasing access to health care. Have you ever considered the effect of stress on your health? If you haven't, then this article is going to provide you with some very sobering information.

Approximately eighty percent of disease is *not* hereditary but rather environmental in origin. Environmental stressors include where you live, what you eat, how you sleep, whether or not you exercise, the chemicals exposures you are subjected to, your **stress levels**, and the list goes on. Our bodies were designed to mount two types of stress responses, the *acute* response which is the immediate reaction, for instance, when you are about to hit the car in front of you. Then there is the physiologic response to *chronic* stress during which time your body manufactures certain hormones to allow you to either *fight* the stress or *flee* the stress. The stress response in nature typically lasts fifteen to thirty minutes during which time the zebra either runs away from the lion or is eaten by the lion. Our bodies were never designed to withstand stress for *years* and remain healthy...and hence the contribution of stress to the development of disease.



As the graph illustrates, a certain level of stress is actually beneficial if moderately intense and of short duration. The chemical changes occurring during these early periods of stress heighten

physical and mental function to allow for an adequate “fight response”. If, however, the arousal stress persists beyond a certain threshold of tolerance, a limit will be reached beyond which optimal physiologic performance will begin to decline leading to wear and tear of cells and tissues causing symptoms and ultimately disease and premature death.

Sleep disturbances are one of the most commonly reported symptoms of stress. Nearly half of the U.S. population reports stress disrupted sleep citing concerns over money and employment as the primary reasons. Currently, the top ten most stressful professions are: IT, Medicine, Engineering, Sales and marketing, Education, Finance, Human Resources, Operations, Production, and Clerical. Some of the most common reasons cited for work stress are lack of control, excessive workload, feeling undervalued, and lack of job satisfaction.

Approximately 75% of visits to primary care physicians are for stress related problems, and due to the time constraints now imposed on physicians, there is limited time to delve into these issues with patients. In fact, patients’ own time constraints prevent them from adequately addressing and reducing stressors in their lives. The subsequent unhealthy behaviors (such as smoking and excessive alcohol consumption) patients adopt to counteract the effects of perceived stressors then fuel even more physiological stress, further harming the body.

The physiological effects of stress can manifest as many symptoms including but not limited to fatigue, depression, anxiety, insomnia, weight gain, blood pressure fluctuations, constipation, diarrhea, headaches, and heartburn. Consequently, the pharmaceutical companies derive an approximate annual profit of nearly \$700 billion dollars which includes sales of \$17 billion dollars from anti-depressants, \$2 billion dollars from sleeping pills, \$2 billion from weight loss medications, and \$20 billion from medications for gastrointestinal ailments. Nearly half of all Americans take at least one prescription drug. In many of these cases, prescription drugs fail to address the true underlying problem, cause adverse side effects, inadequately treat symptoms, and lead to approximately 106,000 deaths annually.

A comprehensive review of the medical literature reveals thousands of entries confirming an evidence based correlation between stress and the development and propagation of disease. *The Journal of the American College of Cardiology*, April, 2008, stated “There are extensive data concerning stressors contributions to diverse pathophysiological changes including sudden death, myocardial infarction and ischemia (heart attacks and angina), heart motion abnormalities as well as to alterations in cardiac regulation”.

Neuroimmunomodulation, January, 2006, reported their findings that “Psychological stress decreases insulin sensitivity and increases insulin resistance and may hence be important in the development/onset of diabetes...”

The physiologic effects of stress also have been found to contribute to the development many other diseases including high blood pressure, ulcer disease, migraine headaches, irritable bowel syndrome, impaired thyroid function, impaired immunity, memory loss, reproductive disorders, autoimmune disease, osteoporosis, mood disorders, diabetes, fibromyalgia, chronic fatigue syndrome, and premature aging.

The economic impact of stress induced health problems is multifaceted. In addition to the direct medical cost, there are the indirect costs to businesses and their employees. In 2002, the journal *Metabolism* noted "The disability caused by stress is just as great as the disability caused by workplace accidents or other common medical conditions such as hypertension, diabetes, and arthritis." One third of American workers report *high* levels of stress resulting in absenteeism rates of 19% and job turnover rates of 40%. Sixty percent of workers compensation awards are related to stress. In 1996, The National Institute of Occupational Safety and Health developed a team of experts to monitor the effect of all causes of stress on health and business. Their annual international meetings serve to educate, identify, and reform issues within this realm.

It is of vital importance that people begin paying attention to the factors causing stress in their lives. In my next segment, I will discuss ways in which individuals can take actions to reduce stress and improve their health.