Brampton: 220 Wexford Road Unit 2 Brampton, ON L6Z-4N7
Ph: (905) 840-WELL Fax: (905) 840 -LIFE
www.drjustineblainey.com
www.blaineywellness.com

Understanding Stress

By Christopher Kent, D.C. | July 2017

Interest in the role stress plays with the dynamics of health has resulted in a proliferation of strategies designed to minimize or "manage" stress. To many people, the very term "stress" elicts a negative response. Yet the notion that stress is an enemy we must resist or manage betrays a widespread misunderstanding of the nature of stress and how it affects our lives.

The Australian-Canadian endocrinologist Hans Selye pioneered investigations of the biological effects of stress in 1936 with the publication of his paper, "A Syndrome Produced by Diverse Noxious Agents." Since then, more than 100,000 articles and books have been written on the subject. Selye describes stress as the nonspecific response to any demand.

Experimental studies by Selye and other investigations revealed that when physical, chemical, or emotional demands were imposed on an animal, three stages could be identified which characterize the response:

1. Alarm. The initial reaction to the stressor.
2. Adaptation. The responses following the initial reaction.
3. Exhaustion. When the limits of adaptation are exceeded, and the animal can no longer appropriately respond.

Although many individuals have concluded that stress is inevitably destructive, this view is incorrect. As Selye noted, "Stress is not necessarily bad for you. It is also the spice of life, for any emotion, any activity causes stress... the same stress that makes one person sick is an invigorating experience for another... Complete absence of stress is incompatible with life since only a dead man makes no demand on his body or mind."

Selye described two types of stress: dis-stress – from the Latin "bad," as in dissonance; and eu-stress – from the Greek "true" or "good," as in eutonia.

Whether we experience a pleasant or unpleasant result from an event depends upon how our nervous system perceives, processes, and interprets that event. "Every living being has a certain innate amount of adaptation energy or vitality," Selye wrote. "The endocrine glands and the nervous system – help us both to adjust to the constant changes which occur in and arround us, and to navigate a steady course toward whatever we consider a worthwhile goal."

The Chiropractic Adjustment Could Be Your Newest Antioxidant

There is a growing body of evidence that wellness care provided by doctors and chiropractic may reduce healthcare costs, improve health behaviors, and enhance patient perceived quality of life. Until recently, however, little was known about how chiropractic adjustments affected the chemistry of biological processes on a cellular level.

In a landmark study published by Journal of Vertebral Subluxation Research, chiropractors collaborating with researchers at the University of Lund found that chiropractic care could influence basic physiological processes affecting oxidative stress and DNA repair. These findings offer a scientific explanation for positive health benefits

reported by patients receiving chiropractic care.
The researchers measured serum thiol levels in 25 patients under short-term chiropractic care, and 21 patients under long-term chiropractic care. Serum thiols are primarily antioxidants, and serve as a measure of human health status. The test provides a surrogate estimate of DNA repair enzyme activity, which has been shown to correlate with lifespan and aging.
The results were compared to the serum thiol levels of a non-chiropractic control group of 30 subjects. Long-term chiropractic care of two or more years was shown to reestablish a normal physiological state independent of age, sex, or nutritional supplements. Symptom-free or primary wellness subjects under chiropractic care demonstrated higher mean serum thiol levels than patients with active disease, and produced some values that were higher than normal wellness values in non-chiropractic subjects.
As we go through life, we experience physical, chemical, and emotional distress. These stresses affect the function of the nervous system. Thhe investigators hypothesized that these disturbances in nerve function could affect oxidative stress and DNA repair on a cellular level
Oxidative stress, metabolically generating free radicals, is now a broadly accepted theory of how we age and develop disease. Oxidative stress results in DNA damage, and inhibits DNA repair. DNA repair is the mechanism which fixes the damage caused by environmental impact.
Chiropractors apply spinal adjustments to correct disturbances of nerve function caused by vertebral subluxations. Chiropractic care appears to improve the ability of the body to adapt to stress. Further research is planned to gain additional insights into mechanisms that will ultimately lead to improved clinical outcomes.
The study involving Camgen, Inc., of Victoria, B.C., Canada; Chiropractic Leadership Alliance in Mahwah, New Jersey; Biomedical Diagnostic Research, LLC, in Chesterland, Ohio; and the Department of Cell and Molecular Biology of Tumor Immunology, University of Lund, Sweden.
A related pilot of study to asses the feasability of evaluating paraspinal skin temperatures, paraspinal SEMG potentials, and serum thiol levels in patients attending a private chiropractir practice was conducted. Serum thiol levels were measured in a convenience sample of 11 patients who had been under chiropractic care for periods ranging from 99 to 550 weeks. The findings of these examinations were compared to the results of the paraspinal, thermal, and SEMG scans.
In a population of long-term chiropractic patients, where paraspinal, thermal, and SEMG scans were used as criteria for subluxation-centered care, serum thiol levels were higher than those found in populations with active disease processes, and compared favorably with the serum thiol levels in healthy subjects.
The study concluded thay it is feasible to evaluate paraspinal skin temperatures, paraspinal SEG potentials, and serum thiol levels in patients in a private chiropractic practice.
A prospective study, tracking changes in these parameters throughout a course of chiropractic care, should be undertaken.
Research into basic cellular processes common to human adaptive mechanisms and chiropractic care are immensely rich with clinical promise. Such studies hold the potential of explaining the neurobiological basis for the favourable effects of chiropractic care on specific health issues and general well-being.

Come to the Stress and Gut Health Talk!

Monday November 27th, 2017 at 7:15pm