

OPTIMAL HEALTH UNIVERSITY™

Presented by Dr. Michael Corey

Is Emotional Stress Endangering Your Health?

Dr. Corey knows that there is an undeniable connection between emotional and physical health. Consequently, our chiropractic office focuses on teaching patients to consider the emotional as well as physical triggers of disease.

This includes teaching patients about the health-ravaging effects of emotional stress, and encouraging patients to incorporate stress reduction techniques into their daily lives. Read on to learn about the close link between stress and several common maladies.



Look to the Spine

It's no surprise to Dr. Corey that research shows that emotional strain leads to disorders associated with spinal dysfunction, such as back pain, neck pain and headache. In fact, many researchers believe that these conditions be re-named "biopsychosocial pain syndrome," because psychological factors may play an integral role in their development (*Eur Spine J* 2008;17:421-7).

Why are these spine-related disorders so closely linked with stress? Stress may lead to a condition called **vertebral subluxation**. Vertebral subluxations are regions in the spine where movement is restricted or bones (vertebrae) are out of alignment. Dr. Corey corrects vertebral subluxations with gentle and effective maneuvers called **chiropractic adjustments**.

Inflammation & Immune Response

Many people tend to come down with a cold or other infection during particularly stressful times, such as dur-



ing holidays, school exams, work deadlines, moves, or family conflicts. This is no coincidence, say psychologist Janice K. Kiecolt-Glaser from the Ohio State University College of Medicine. Dr. Kiecolt-Glaser is an expert in the emerging field of psychoneuroimmunology (PNI), the study of how stress and negative emotions affect health.

In a report published in the Association for Psychological Science journal *Perspectives on Psychological Science*, Dr. Kiecolt-Glaser illustrates that inflammation is the key to how emotional stress hinders the immune response (*Perspect Psychol Sci* 2009;4: Epub).

Dr. Kiecolt-Glaser explains that inflammation is the body's way of removing harmful stimuli. It also starts the process of healing, via release of a variety of chemicals known as proin-

flammatory cytokines (e.g., interleukin-6). However, too much inflammation can be damaging and has been implicated in the development of many age-related diseases, including Alzheimer's disease, Parkinson's disease, arthritis and Type II diabetes. Negative emotions and psychological stressors increase the production of proinflammatory cytokines.

For instance, one study revealed that men and women who serve as caregivers to spouses with dementia (and thus are under constant stress) have a four times larger annual rate of increase in serum interleukin-6 levels compared to individuals without care giving responsibilities.

Disorders Linked With Excessive Emotional Stress

Following is a partial list of health issues, which scientific research shows may be triggered by emotional stress:

Fibromyalgia • Back pain • Neck pain • Headache • Cardiovascular disease • Diabetes • Infertility • Asthma • Allergy • Insomnia • Depression • Anxiety • Low birth-weight • Alzheimer's disease • Cognitive problems • Obesity • Parkinson's disease • Autoimmune diseases • Hypertension • Skin problems • Gastrointestinal dysfunction

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What's more, the changes in interleukin-6 levels among former caregivers did not differ from current caregivers, even following the death of the impaired spouse, indicating that chronic stress may cause the immune system to age quickly. Dr. Kiecolt-Glaser notes, "These stress-related changes in inflammation provide evidence of one mechanism through which stressors may accelerate risk of a host of age-related diseases."

Weight Gain

Stressing out can lead to weight gain and obesity, according to a Harvard University study appearing in the *American Journal of Epidemiology*, which tracked 1,355 men and women for more than nine years. Consequently stress may instigate the myriad of disease processes associated with excessive body weight, such as cardiovascular disease, diabetes, infertility, cancer, Alzheimer's disease and chronic pain syndromes.

"Today's economy is stressing people out, and stress has been linked to a number of illnesses — such as heart disease, high blood pressure and increased risk for cancer. This study shows that stress is also linked to weight gain," according to study lead Jason Block, MD, MPH.

According to the findings, women's waistlines are affected by more types of stress. In addition to weight gain associated with financial problems or a difficult job, women also added pounds when grappling with strained family relationships and feeling limited by life's circumstances.

For men, the numbers on the scale did not go up when facing difficult family relationships or feeling constrained by life circumstances. Among men, lack of decision authority at work and lack of skill discretion was associated with greater weight gain. Skill discretion can be defined as the ability to learn new skills on the job and to perform interesting job duties (*Am J Epidemiol* 2009;170:181-92).

Overall, this study found that people who reported increased psychological stress gained more weight if they al-

ready had higher body mass indexes (BMI). A similar weight-gain pattern was not found among lower-weight people who were dealing with the same types of stress.

"This is one of the first studies to explore the relationship between stress and weight gain in a US population," Dr. Block notes. "Our findings show that stress should be recognized as a threat to the well-being of American adults, especially those who are already overweight." (*Am J Epidemiol* 2009;170:181-92.)

Neck & Back Pain

A wealth of research links stress with neck, back and head pain.

For instance, an analysis of 53 office workers in Australia found that high psychological stress is a significant predictor of neck pain (*Eur Spine J* 2009;18: Epub).

One analysis in Norway included 1,152 individuals, who ranged in age from 20 to 55. The study participants completed a health questionnaire, interview and stress measurement. Researchers then followed up 12 years later.

Individuals who initially reported earlier episodes of low-back pain (LBP) and emotional stress were the most likely to develop a low-back disability. More than 11 percent (131 people) experienced disabling pain 12 years later.

The authors conclude that "persons with emotional distress but no earlier episodes of LBP had no increased risk for low back disability. Emotional distress is a predictor for low back disability in persons with earlier LBP, but not in persons without. To prevent low back disability, emotional distress should be considered and treated in persons with LBP." (*Spine* 2007;32:269-74.)

Another investigation, which included 2,556 individuals and spanned almost seven years, found that stress at work was a chief risk factor for LBP. On-the-job stressors related to LBP differed for men and women.

"After adjustment for individual and physical risks, including occasional back pain at baseline, the prevalence rate of LBP in men is significantly related to baseline low decision latitude and low social support at work, and nonsignificantly to high job strain, low wage and job satisfaction, feeling stressed at work, and feeling depressed. High job insecurity, feeling stressed at work, and feeling depressed nonsignificantly increase the relative risks for LBP in women." (*Spine* 2007;32:262-8.)

And, "psychological distress more than doubles later risk of low back pain," according to British researchers who reviewed the health records of 5,781 people born in 1958. All of the 571 people who suffered from LBP between the ages of 32 and 33 had suffered some form of emotional stress in their early 20s (*Am J Public Health* 2001;91:1671-8).

When researchers in Russia conducted physical and psychological tests on 337 patients suffering from back pain — and compared the results with 40 pain-free subjects — they discovered that those with back pain had a higher frequency of emotional tension than those not in pain (*Zh Nevrol Psikiatr Im S S Korsakova* 2002;102:3-9).



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