Chronic Stress and BioPsychoSocial Intervention Strategies

Posted by Michael Cornwall PhD LLC

In order to provide comprehensive treatment, emotional wellness must be addressed from a *bio-psycho-social perspective*. By considering both the *biological, emotional* and *social factors* that are supportive of such things as chronic stress we may lessen or even eliminate the factors that contribute to this debilitating disease state.

The adrenal glands, which sit atop each kidney, secrete hormones which help regulate metabolism, aid in maintaining the body's chemical stability and produce health-sustaining hormones such as estrogen, progesterone, steroids, cortisol and cortisone. The adrenal glands also produce epinephrine (adrenalin), nor-epinephrine and dopamine. Over-production of these hormones, when prompted by such things as chronic stress, can result in the break down of the body's immune system and it's ability to fight disease. Chronic stress for example influences energy levels, nutrition, vitamin and mineral absorption and can damage major organs such as the heart, kidneys and liver.

The adrenals work in conjunction with the kidneys to optimize the stress response. As you can imagine, because of their close proximity, chronic stress places added demand on both the kidneys and the adrenal glands. When the body is experiencing stress, the adrenals are stimulated to produce the chemicals necessary to sustain the fight-flight-or-freeze response – epinephrine, nor-epinephrine and dopamine. The kidneys will respond to the added hormonal demand by encouraging urination. Of course, bladder function is not hormone dependent; but the fight-or-flight response is, resulting in increased blood pressure and heart rate, drawing blood away from the bladder, resulting in urination. From a practical point of view, fighting or running with an empty bladder has its survival advantages.

When the stress response is chronic, habituated, fluids pass out of one's system so quickly that nutrient absorption and other necessary functions of the kidneys are impeded. A person may eat appropriate foods, but fail to extract the nutrient value of the foods due to frequent urination. Besides losing a rich source of nutrition, chronic stress can be exacerbated by chronic joint pain, muscle deterioration and malnutrition – all a result of prematurely expelling nutrients that support such functions.

The kidneys maintain the body's chemical balance of potassium, acids and proteins. They remove waste, but also determine which substances the body will maintain for balance. Potassium is one the substances the body needs for normal heart and muscle function. If the kidneys are not working properly, potassium may build up in the blood and effect muscle function. A person may feel pains, aches and other weakness of the musculoskeletal structure as a result of depleted potassium levels. Too much potassium, on the other hand, can affect the function of the heart. The kidneys also help the body maintain a healthy balance of acid. If too much acid builds up in the body, the kidneys respond by adding a buffer to normalize the balance. If the kidneys are not working normally, the acid balance cannot be controlled, which can result in disease.

As a society, we would customarily focus our treatment of chronic stress on the pathophysiological properties of the illness. I, however, emphasize a more comprehensive approach, concentrating more on the contributions made to illness by such things as ones psychological frame of reference, problem-solving skills and the social structure from which the individual's current coping skills are derived.

The biopsychosocial model prescribes a systematic approach to understanding and treating the biological, psychological and social factors inherent in any human disease state. While the biomedical approach takes the reductionistic view that all phenomena of human illness are best understood at the lowest level of natural systems (e.g., cellular or molecular), the biopsychosocial approach recognizes that clinical issues may be better understood from a variety perspectives. For example, if we were to treat the patient who shows symptoms of chronic stress with medications, alone, we would be minimizing or eliminating the contributions made to that disease through psychological and social factors. If the patient is experiencing stress, s/he is instigating this process by thinking in a way that is self-destructive. We cannot treat the physical (biological) condition effectively if we don't discover the psychological corollary of the disease and intervene at that level. We cannot, from this same frame of reference, prescribe an effective biological-psychological intervention plan if we don't consider the individual's home and community life in the logic of that treatment plan.

Stress can kill, so treating it requires a working knowledge of human anatomy. Intervening on only one premise of human functioning may result in causing additional harm to the patient.

Interfering with the stress response from a biopsychosocial perspective will not only bring emotional wellness but is likely to also translate into better physical health.