Childhood trauma associated with chronic fatigue syndrome

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Individuals who experience trauma during childhood appear more likely to develop chronic fatigue syndrome as adults, according to a report in the January issue of *Archives of General Psychiatry*, one of the *JAMA/Archives* journals. In addition, neuroendocrine dysfunction—or abnormalities in the interaction between the nervous system and endocrine system—appears to be associated with childhood trauma in those with chronic fatigue syndrome, suggesting a biological pathway by which early experiences influence adult vulnerability to illness.

Chronic fatigue syndrome affects as many as 2.5 percent of U.S. adults, according to background information in the article. Little is known about the causes and development of the condition. Risk factors include female sex, genetic predisposition, certain personality traits and physical and emotional stress. "Stress in interaction with other risk factors likely triggers chronic fatigue syndrome symptoms through its effects on central nervous, neuroendocrine and immune systems, resulting in functional changes that lead to fatigue and associated symptoms such as sleep disruption, cognitive impairment and pain," the authors write. "However, obviously not every individual exposed to a stressor goes on to develop chronic fatigue syndrome, and it is therefore of critical importance to understand sources of individual differences in vulnerability to the pathogenic effects of stress."

Christine Heim, Ph.D., of Emory University School of Medicine, Atlanta, and colleagues studied 113 patients with chronic fatigue syndrome and 124 healthy individuals who served as controls.

Participants—who were drawn from a general sample of 19,381 adults residents of Georgia—reported whether they had experienced childhood trauma, including sexual, physical and emotional abuse or emotional and physical neglect. They also underwent screening for depression, anxiety and post-traumatic stress disorder and were tested for levels of the hormone cortisol in their saliva. Low levels may indicate decreased function of the body's main neuroendocrine stress response system, the authors note.

Individuals with chronic fatigue syndrome reported higher levels of childhood trauma—exposure to trauma was associated with a six-fold increase in the risk of having the condition. Sexual abuse, emotional abuse and emotional neglect were most closely associated with chronic fatigue syndrome. Patients with the syndrome also were more likely than controls to have depression, anxiety and post-traumatic stress disorder.

Cortisol levels were decreased in patients with chronic fatigue syndrome who experienced childhood trauma, but not in those with chronic fatigue syndrome who had not been subjected to trauma. Therefore, stress early in life may cause a biological susceptibility to chronic fatigue syndrome, the authors note.

"Our results confirm childhood trauma as an important risk factor of chronic fatigue syndrome," they write. "In addition, neuroendocrine dysfunction, a hallmark feature of chronic fatigue syndrome, appears to be associated with childhood trauma. This possibly reflects a biological correlate of vulnerability due to early developmental insults. Our findings are critical to inform pathophysiological research and to devise targets for the prevention of chronic fatigue syndrome."

Source: JAMA and Archives Journals