

# Biological link connects childhood trauma and risk for chronic fatigue syndrome

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Childhood trauma is a potent risk factor for development of chronic fatigue syndrome (CFS), according to a study by researchers at Emory University School of Medicine and the Centers for Disease Control and Prevention (CDC). The study is published in the Jan. 5, 2009 *Archives of General Psychiatry*.

Results of the study confirm that childhood trauma, particularly emotional maltreatment and sexual abuse, is associated with a six-fold increased risk for CFS. The risk further increases with the presence of posttraumatic stress disorder symptoms.

The study also found that low levels of cortisol, a hallmark biological feature of CFS, are associated with childhood trauma. Cortisol is frequently referred to as the "stress hormone" and is important to regulate the body's response to stress. A lack of cortisol's effects may cause altered or prolonged stress responses.

"The study indicates that low cortisol levels may actually reflect a marker for the risk of developing CFS rather than being a sign of the syndrome itself," said Christine M. Heim, PhD, lead author of the study and associate professor in the Department of Psychiatry and Behavioral Sciences, Emory University School of Medicine.

The population-based study analyzed data from 113 people with CFS, and a control group of 124 people without CFS, drawn from a sample of almost 20,000 Georgians. The results confirm earlier findings from a

2006 study conducted in Wichita, Kan.

Study participants completed a self-reported questionnaire on five different types of childhood trauma including emotional, physical and sexual abuse, and emotional and physical neglect. Researchers also collected saliva samples from participants to record levels of cortisol over one hour after awakening, typically an individual's highest cortisol levels for the day.

"When looking at CFS cases with and without histories of childhood trauma, only those with childhood trauma had the classic low cortisol levels often seen in CFS cases," explains Heim.

"It is important to emphasize that not all patients with CFS have been through childhood trauma," she says. "CFS may be part of a spectrum of disorders associated with childhood adversity, which includes depression and anxiety disorders."

Certain experiences children have while the brain is developing and vulnerable can make a difference in the way the body reacts to stress later in life, and may have long-term health consequences.

"Trauma that occurs at different times in childhood may be linked to different long term changes. It's an area in which more work is needed," says Heim.

Reference: Childhood Trauma and Risk for Chronic Fatigue Syndrome: Association with Neuroendocrine Dysfunction, Archives of General Psychiatry 2009; Vol. 66 (1): 72-80

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