

# Biological links found between childhood abuse and adolescent depression

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Queen's University professor Kate Harkness has found that a history of physical, sexual or emotional abuse in childhood substantially increases the risk of depression in adolescence by altering a person's neuroendocrine response to stress.

Adolescents with a history of [maltreatment](#) and a mild level of depression were found to release much more of the [stress](#) hormone cortisol than is normal in response to psychological stressors such as giving a speech or solving a difficult arithmetic test.

"This kind of reaction is a problem because cortisol kills cells in areas of the brain that control memory and [emotion regulation](#)," explains Dr. Harkness, a professor in the Department of Psychology and an expert in the role of stress and trauma in adolescent depression. "Over time cortisol levels can build up and increase a person's risk for more severe endocrine impairment and more [severe depression](#)."

At severe levels of depression, Dr. Harkness' team saw that the youths with a history of maltreatment had a total blunting of the endocrine response to stress. These findings suggest that the normal operation of the stress response system can breakdown in severely depressed adolescents.

These results are important because they show that environmental stress in childhood changes the function of the brain in ways that may cause and/or maintain severe psychiatric disorders such as [depression](#).

Dr. Harkness recently presented her findings at the International Society for Affective Disorders Conference in Toronto. The research was funded by the Ontario Mental Health Foundation and conducted in collaboration with Queen's researcher Jeremy Stuart and Kathy Wynne-Edwards from the University of Calgary.

Provided by Queen's University

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