

# Low socioeconomic status affects cortisol levels in children over time

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It's no surprise that children from low socioeconomic backgrounds may be at risk for numerous health problems in the future. Scientists speculate that these health problems, including increased risk for depression, anxiety and substance abuse, arise from the physiological toll that the environment has on the children's bodies.

Previous research demonstrates a clear link between low socioeconomic status (SES) and body systems that regulate stress, specifically the HPA-axis, which produces the hormone cortisol. Overtime, higher and more prolonged levels of cortisol can lead to a number of [psychiatric disorders](#) and physical ailments, including, but not limited to, depression, PTSD, diabetes, and [obesity](#).

Given the importance of identifying risk factors for such diseases early in life, a new study in [Psychological Science](#), a journal of the Association for Psychological Science, looked at the relationship between low SES and cortisol in [children](#) over a 2-year period. The researchers hypothesized that living in a low SES environment would increase cortisol trajectories over time.

Edith Chen from the University of British Columbia and colleagues measured cortisol in a group of children every 6 months for 2 years. They found that cortisol levels nearly doubled in low-SES compared with high-SES children over 2 years. "To the extent that cortisol plays a role in psychiatric and physical illnesses, these findings suggest a biological explanation for why low-SES children may be more

vulnerable to developing these conditions later in life," says Chen. Furthermore, the researchers found that the associations between SES and cortisol trajectories were most pronounced in postpubertal children as well as in girls.

Why would a child's [socioeconomic status](#) affect his or her cortisol profile over time? The researchers explain two psychosocial factors that account for the SES-biology links: Children from lower-SES backgrounds reported greater perceptions of threat and more family chaos, both of which may raise [cortisol](#) levels.

This study provides some of the first evidence demonstrating that low SES can alter biological profiles among children in a persistent fashion over time. Taken together, these findings may help explain and provide some first steps toward ameliorating low SES children's vulnerability to mental and physical illnesses in later life. "Health disparities are a pressing reality of our society. To begin to attempt to reduce SES disparities in health, we need to better understand the reasons why they exist," concludes Chen.

Provided by Association for Psychological Science

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