

Higher activity levels may protect children from stress

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(HealthDay)—Children with lower levels of daytime physical activity (PA) have higher hypothalamic-pituitary-adrenocortical axis (HPAA) activity in response to psychosocial stress, suggesting that PA may help children cope with stressful situations, according to research published online March 7 in the *Journal of Clinical Endocrinology & Metabolism*.

Silja Martikainen, of the University of Helsinki, and colleagues conducted a cross-sectional study of 258 8-year-old children to evaluate whether PA levels affected HPAA activity and HPAA response to

psychosocial stress. PA was measured using a wrist accelerometer. Stressors included doing arithmetic and being assigned to tell a story.

The researchers found that, after exposure to everyday stressors, children with the highest levels of PA or vigorous PA showed very little, if any, increase in salivary cortisol levels when compared to more sedentary children in the lowest and intermediate PA groups.

"Our study shows that increased levels of PA are associated with decreased HPA reactivity to stress in a community sample of 8-year-old children," the authors write. "Although children with different levels of PA show similar diurnal patterns of salivary cortisol, the children with the lowest activity levels are more responsive to psychosocial stress. Consequently, PA may contribute to the psychological well-being of [children](#) by regulating their neuroendocrine reactivity to [stress](#)."

More information: [Abstract](#)

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