

## Higher activity levels may protect children from stress

March 29 2013



Children with lower levels of daytime physical activity (PA) have higher hypothalamic-pituitary-adrenocortical axis 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*.

(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 HPAA reactivity to stress in a community sample of 8-yearold 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 <u>children</u> by regulating their neuroendocrine reactivity to <u>stress</u>."

## More information: <u>Abstract</u>

Full Text (subscription or payment may be required)

Health News Copyright © 2013 HealthDay. All rights reserved.

Citation: Higher activity levels may protect children from stress (2013, March 29) retrieved 3 May 2024 from <u>https://medicalxpress.com/news/2013-03-higher-children-stress.html</u>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.