

Physical activity helps curb low-grade inflammation in children

March 23 2021



Physically more active children who had a healthier inflammatory profile than children who were physically less active in a recent Finnish study. Credit: University of Jyväskylä.

According to a recent Finnish study, accumulating more brisk and

vigorous physical activity can curb adiposity-induced low-grade inflammation. The study also reported that diet quality had no independent association with low-grade inflammation. The findings, based on the ongoing Physical Activity and Nutrition in Children (PANIC) Study conducted at the University of Eastern Finland, were published in the *European Journal of Sport Science*.

The study was made in collaboration among researchers from the University of Jyväskylä, the University of Eastern Finland, the Norwegian School of Sport Sciences, and the University of Cambridge.

Low-grade inflammation is linked to many chronic diseases, but exercise can curb it

Long-lasting low-grade inflammation increases the risk for type 2 diabetes and cardiovascular diseases. Being overweight and obese contribute to low-grade inflammation, but little is still known about the role of lifestyle in curbing low-grade inflammation since childhood.

"Our study showed that children who were physically more active and less sedentary had a healthier inflammatory profile than children who were physically less active," explains Dr. Eero Haapala from the Faculty of Sport and Health Sciences at the University of Jyväskylä. "However, our results suggest that the positive effects of high levels of [vigorous physical activity](#) and low levels of [sedentary time](#) on low-grade inflammation are partly explained by their positive effects on body composition."

Low physical activity, unhealthy diet quality, and being overweight is the most unfavorable combination

Researchers found unhealthier inflammatory profile particularly in children with the lowest levels of physical activity, poorest diet quality

and the highest body fat percentage.

"The key message of our results is that increasing physical activity and reducing sedentary time are key in preventing low-grade inflammation since childhood," says Haapala. "They would be particularly important for overweight children."

The study looked at the associations between [physical activity](#), sedentary time, [diet quality](#), body fat content, and low-grade inflammation in 390 [children](#) aged 6 to 8 years. Physical activity and sedentary time were measured by a combined heart rate and movement sensor and body composition with a DXA device. Low-grade inflammation was assessed using biomarkers measured from blood samples.

More information: Eero A. Haapala et al, Associations of physical activity, sedentary time, and diet quality with biomarkers of inflammation in children, *European Journal of Sport Science* (2021). [DOI: 10.1080/17461391.2021.1892830](https://doi.org/10.1080/17461391.2021.1892830)

Provided by University of Jyväskylä

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