Vigorous physical activity associated with reduced cardiometabolic risk factors in youth

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A study of Canadian youth suggests that vigorous physical activity was associated with reduced cardiometabolic risk factors, such as body mass index z score (BMI-z), waist circumference, systolic blood pressure and increased cardiorespiratory fitness, according to a report published Online First by *Archives of Pediatrics & Adolescent Medicine*.

Physical activity (PA) is widely accepted to provide significant health benefits for children and adults, although the association between PA and cardiometabolic risk factors in youth may be more complex than previously thought, according to the study background.

Jacqueline Hay, B.Sc., of the Manitoba Institute of Child Health, Canada, and colleagues examined the association between PA intensities and cardiometabolic risk factors in youth in a cross-sectional study that used data from the 2008 Healthy Hearts Prospective Cohort Study of Physical Activity and Cardiometabolic Health in Youth. The study included 605 youth (average age 12.1 years) of whom 248 (41 percent) were boys and 157 were overweight or obese (26 percent).

"These findings provide novel insight into the value of vigorous PA as a determinant of cardiometabolic risk in adolescents. These data strongly support the importance of including vigorous PA targets within current PA guidelines for youth," the authors note.

BMI-z score, waist circumference and systolic blood pressure decreased and VO 2max (cardiorespiratory fitness, maximal oxygen consumption)

increased with vigorous PA. No significant differences in cardiometabolic risk factors were seen with moderate or light PA. Performing more than seven minutes of vigorous PA daily was associated with reduced odds of overweight status (0.56) and elevated systolic blood pressure (0.36), the study results indicate.

"In conclusion, vigorous PA is superior to light and moderate PA for attenuating cardiometabolic risk factors in youth. These data support the concept that vigorous types of PA should be encouraged to reduce cardiometabolic risk factors in youth," the authors conclude. "The current targets for PA in youth may need to be reexamined, and the inclusion of specific targets for vigorous PA emphasized."

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