

Exercise might boost kids' academic ability

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Pretest 'warm-ups' boosted test scores in study of Italian schoolchildren.

(HealthDay) -- Promoting physical activity among young school kids can end up improving their academic performance, a new study suggests.

Italian researchers tracked 138 children aged 8 through 11 who took mental acuity tests under a series of conditions that sometimes involved [physical activity](#) and sometimes did not.

"Schoolteachers frequently claim that students lose attention and [concentration](#) with prolonged periods of academic instruction," first study author Maria Chiara Gallotta, at the University of Rome, said in a news release. "The key elements of learning, particularly important during development, are attention and concentration. Our study examined the relationship between exertion and the attention and [concentration levels](#) of [schoolchildren](#)."

The findings appear in the March issue of *Medicine & Science in Sports & Exercise*.

Over a three-week period, the children sat for three exam sessions of 50 minutes each. Before the first test they had all engaged in some form of physical exertion. Before the second test they had only engaged in academic exercises. And the third time they had participated in both physical and academic activity. All the tests were structured to gauge concentration skills as well as the speed with which the kids responded and the quality of their answers.

The children performed best following either physical activity *or* academic activity, but less well when both were combined before testing.

Processing speed went up by 9 percent after engaging in some form of mental "exercise" and 10 percent after physical activity. But after a combined physical and mental exertion, testing scores went up by just 4 percent.

Similarly, in terms of concentration skills, pretesting mental activity boosted scores by 13 percent, while physical activity sent scores rising by 10 percent. When both were combined, testing results went up by just 2 percent.

The authors said the lower scores could be due to a rise in stress associated with asking children to exercise both their brains and their bodies in the same time span.

"Our findings," Gallotta said, "suggest that varying types of exertion have different beneficial influences on school children's immediate cognitive performance. While more research is needed, we believe this provides helpful justification for increasing physical activity opportunities in the academic setting."

More information: For more on exercise and mental health, visit the [UK Mental Health Foundation](#).

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