Exercise Improves Academic Performance

Jul 3, 2010 Jennifer Copley

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Numerous studies have linked higher levels of physical activity with increased test scores in mathematics,

In this era of accountability demands, many schools are reducing time spent on physical education in order to concentrate on increasing standardized test scores in math, reading, and other key subjects. However, this may be the wrong approach, given the growing body of evidence that exercise produces significant cognitive benefits which can translate into improved performance on standardized tests.

Studies Show That Exercise Can Increase Standardized Test Scores

Studies that have linked physical activity levels with academic performance include the following:

- Sigfusdottir (2007) found that body mass index and physical activity were responsible for as much as 24% of the differences in academic achievement.
- Dwyer et al's (2001) evaluation of nearly 1 million students in grades 5 through 9 found that those with higher levels of physical fitness (particularly aerobic capacity) achieved higher scores on standardized tests (this effect was strongest for mathematics tests).
- Shepherd (1997) found that reducing academic class time by 240 minutes per week and replacing it with physical activity increased scores on standardized math tests.

Physical Education Should be Reformed to Produce Academic Benefits

Studies measuring physical fitness or time spent exercising consistently find that exercise improves academic performance. However, increasing time spent in traditional physical education classes will not necessarily produce academic benefits for the following reasons:

- Traditional physical education, with its team sports orientation, often has students standing around or sitting and waiting for much of the time. A study conducted by Coe et al. (2006) found that on average, among a number of physical education classes studied, students participated in just 19 minutes of vigorous physical activity per class.
- Many students dislike team sports or find exercising with others stressful. Those who are not natural athletes are often marginalized by traditional physical education approaches, and being forced to participate can cause some students to develop a lifelong aversion to all physical activity. Many students would be better served by providing opportunities to participate in solitary fitness activities of their choice that they would be willing to engage in on a daily basis.

Ideally, the focus of physical education should be shifted from competition with others to achieving new personal bests, such as least amount of time taken to run a mile. A successful example of such a program is that created by physical education director Phil Lawler at Madison Junior High School (Naperville, Illinois). Students develop personal fitness goals and engage in a broad array of physical activities, some traditional and others more modern, such as rock climbing, playing Dance Dance Revolution, and using high-tech aerobic equipment that provides instant feedback. Participants wear heart monitors while exercising so that they know when they are working within their optimal aerobic zones.

Lawler's program has produced benefits ranging from increased test scores to fewer behavioural problems to reduced rates of obesity (just 3% in Naperville, compared to approximately 33% for children throughout the United States). Thus far about 350 schools have emulated this highly successful program, achieving similar benefits. For example:

- Standardized test scores in Titusville, Pennsylvania, previously on the low side, rose to approximately 17% to 18% higher than the national average in reading and math respectively.
- There was a 67% reduction in suspensions and fewer students were placed on academic probation at Woodland Elementary School (Kansas City, Missouri) .

More Information on the Brain Benefits of Exercise

For information on how exercise improves brain function and, by extension, academic performance, see Exercise Enhances Learning Ability.

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