to provide care and improve activities of daily living and quality of life will be required for these patients for a lifetime. The significant cost associated with completion of these important studies may be minuscule compared with the societal cost of caring for these disabled infants as they age, should better treatment leading to improved outcomes not be achieved.

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References


We Do Not Have to Sacrifice Children’s Health to Achieve Academic Goals

Why is a study of the relation of fitness and body mass index (BMI) to academic performance of interest to pediatricians and other health professionals? Because there appears to be a prevalent myth among education officials that spending time on physical education (PE) and physical activity is an unaffordable luxury for schools being pressured to improve academics. The federal No Child Left Behind law has stimulated most schools to increase time spent on reading and math, and 44% of school districts have achieved this by cutting time spent on “non-core” subjects such as the arts, PE, and recess. Thus, education policy is likely contributing to health problems, including the childhood obesity epidemic.

The article by Roberts et al in this issue of The Journal suggests that reducing physical activity opportunities in schools is a counterproductive strategy. If fit and healthy-weight children perform better on the language and math tests on which schools are evaluated, then cutting PE and recess in an attempt to boost academic performance is ill-advised. The study by Roberts et al adds to a large literature demonstrating that physically active and fit students do better academically and spending more time in PE does not hurt, and may help, academic performance.

The study by Roberts et al extends the overwhelming evidence on beneficial effects of fitness, physical activity, and healthy body weight on academic performance in several areas. First, the key finding in this study was that the associations appeared to generalize across elementary, middle, and high school levels and were not explained by ethnic/racial or socioeconomic factors. One implication of the results is that improving fitness may help all subgroups of youth learn better. Second, the effect sizes were notable. Contrasting the highest and lowest quintiles of both fitness and BMI, the difference in language and math scores was approximately 15 percentile points on the California
Achievement Test 6 standardized test scores. This is a very large difference on a measure of intense interest to educators, suggesting it may be in schools’ best interests to increase commitments to physical activity and obesity prevention programs as central strategies to meet educational goals. A third important contribution was that fitness had the stronger connection to academic performance, though societal and health concerns are focused mainly on obesity. Adjusting for BMI had a small effect on the fitness-academic performance association, but fitness fully accounted for the BMI-academic performance association. This finding provides a strong rationale for an increased emphasis on promoting physical activity as a strategy for enhancing academic achievement.

The report by Roberts et al. provides even more reasons for schools to use effective methods of increasing physical activity and therefore fitness. There are several evidence-based approaches that are being under-used in schools.

The best evidence is for activity-promoting PE programs, which have been found effective in increasing physical activity in rigorous studies conducted in elementary, middle, and high schools. Although some programs are being widely disseminated, most schools are not using evidence-based PE programs. Spending more time in activity-promoting PE does not interfere with academic performance, and reducing time in PE does not improve academic performance.

Physical activity breaks in the classroom have been used to teach academic content, so this strategy makes very efficient use of time. Short activity breaks have been shown to enhance attention and concentration in class, with 1 study demonstrating the strongest effects with the least-attentive students.

Elementary school students with little or no recess were found to perform more poorly in school than students with regular recess. Simple strategies for increasing physical activity in recess include painting game designs on playgrounds and providing activity equipment and supplies.

Youngsters from all species studied, including humans, have a biological imperative to be active. Most children are not able to tolerate long periods of forced sedentariness that are common in schools. They squirm, and their attention wanders. These are not good conditions for learning. Allowing children to be active periodically during the school day, whether through PE, classroom activity breaks, or recess, can simultaneously contribute to improvements in health and academic performance.

How can we use the compelling results from this and other studies to help drive changes in school policies? It is likely school principals, school board members, superintendents, and state and federal education officials are unfamiliar with the consistent findings that active, fit, and lean children do better in school. It is countenatintuitive that spending less time in the classroom and more time in PE might improve learning. Pediatricians could be a powerful voice to bring this message to school officials at local, state, and national levels. Summaries of the evidence have been compiled for policy makers. By informing school officials about the health and educational benefits of physical activity and fitness, pediatricians are likely to have a bigger effect on the health of children in the community than would be possible through brief counseling in the office.

References