

Quotes:

“Cutting off physical exercise – the very activity most likely to promote cognitive performance – to do better on a test score is like trying to gain weight by starving yourself.”

Dr. John Medina – a developmental molecular biologist / professor of bioengineering @ the University of Washington School of Medicine / Director of the Brain Center for Applied Learning Research @ Seattle Pacific University

“I hear and I forget. I see and I remember. I do and I understand.” Confucius

“The brain is only as healthy as the body that carries it.” Jean Blaydes Madigan

SACRAMENTO — State Superintendent of Public Instruction Delaine Eastin today announced that the results of a recent study conducted by the California Department of Education (CDE) show a distinct relationship between academic achievement and the physical fitness of California’s public school students.

"This statewide study provides compelling evidence that the physical well-being of students has a direct impact on their ability to achieve academically," said Eastin. "We now have the proof we've been looking for: students achieve best when they are physically fit. Thousands of years ago, the Greeks understood the importance of improving spirit, mind, and body. The research presented here validates their philosophic approach with scientific validation."

“The Physical Education Study Group Report (State of Maryland) supports the following statements:

- Regular physical activity promotes health and improved academic performance.
- Exercise and challenging sensory motor experiences contribute to cognitive development.
- Physical education programs must be restructured to focus on the scientific concepts of human movement rather than sport. Students may then apply these concepts to a variety of physical activities to promote physically active lifestyles.

The research and evidence included in this report has been replicated and has convinced us to redefine both physical education and the role of physical education in the academic mission of the school. By restructuring

physical education, we have within our reach a way to improve the health and academic success of all of our students.”

The Maryland Physical Education Group (2001) p7

Why should exercise need to be aerobic to affect the brain? "It appears that various growth factors must be carried from the periphery of the body into the brain to start a molecular cascade there," creating new neurons and brain connections, says Henriette van Praag, an investigator in the Laboratory of Neurosciences at the National Institute on Aging. For that to happen, "you need a fairly dramatic change in blood flow," like the one that occurs when you run or cycle or swim. Weight lifting, on the other hand, stimulates the production of "growth factors in the muscles that stay in the muscles and aren't transported to the brain," van Praag says.

“Obesity appears to lessen life expectancy markedly, especially among younger adults.

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Researchers *James Pollatschek and Frank Hagen* says, "**Children engaged in daily physical education show superior motor fitness, academic performance and attitude toward school as compared to their counterparts who do not participate in daily physical education**" (1996, p. 2)

Howell Wechsler, director of the Division of Adolescent and School Health for the Centers for Disease Control and Prevention, says some children don't have as many opportunities outside school to be as active as children in previous generations.

"Today there is so much more competition for their time with all the attractive options to be sedentary, from hundreds of cable stations to video games and computer games," Wechsler says. "This makes it even more important to have physical education programs and other opportunities for physical activity at school."

