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For Immediate Release

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Strenuous Physical Play May Improve Academic Performance and Reduce Childhood Obesity According to Review in *American Journal of Play*

Rochester, NY—Physically strenuous play instituted in schools may increase students' academic performance and decrease the incidence of childhood obesity and its related health risks according to a scientific review in the Winter 2009 issue of the *American Journal of Play*, the interdisciplinary, scholarly journal of Strong National Museum of Play® in Rochester, New York.

Jacob Sattelmair and John J. Ratey of Harvard University* cite numerous studies about physical activity involving both animals and humans that indicate growing evidence to support the benefits of strenuous exercise for brain development as well as academic achievement. Similarly, they point to emerging theories about play, suggesting that it, too, can have a positive effect on cognitive abilities, facilitating frontal lobe maturation and possibly alleviating some Attention Deficit Hyperactive Disorder (ADHD) symptoms.

However, the authors emphasize that the *quality* of physical education is vitally important to academic outcomes: "Physical activity predicts higher academic performance, but physical education with insufficient levels of activity does not. . . . Animal and human research primarily supports the importance of *aerobic* activity to enhance cognitive function. Those physical education classes that fail to encourage sufficient duration and intensity of aerobic activity are unlikely to make notable improvements in fitness, health, weight control, or academic achievement."

Budget restrictions and pressure to increase class time for improving standardized test scores has led many schools to reduce or eliminate physical education requirements. In addition, note the authors, traditional physical education emphasizes competitive sports versus physical activity and marginalizes non-athletic students, failing to provide adequate opportunities for all students to exercise aerobically.

Rather than advocating a return to traditional physical education, the authors strongly advocate a program of physical education integral to our educational systems that emphasizes cognitively, socially, and aerobically demanding activity on a daily basis and that focuses on life-long fitness; a program that encourages modes of physically strenuous play engaging, challenging, and enjoyable to students.

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2—Physically Active Play

The authors offer as a model a fitness program implemented in Madison Junior High School in Naperville, Illinois (PE4life) that aims to establish behavioral patterns students need to lead physically active lives and achieve life-long fitness. The program uses traditional and novel forms of play, such as climbing rock walls, dancing in *Dance Dance Revolution*, and riding video game-like interactive bikes. Students wear heart monitors to achieve optimal aerobic zones. This model, they report, is spreading around the country and has been successful where implemented in increasing levels of fitness, reducing obesity, lowering incidents of disciplinary action, and improving academic achievement.

“There is abundant evidence that regular physical activity benefits the brains and bodies of school-aged children,” the authors conclude. “Whether the evidence will lead to quality education in U.S. schools is more than an academic worry.”

(Note: Members of the media may receive a full copy of this study by contacting

strien@museumofplay.org)

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* **Jacob Sattelmair** is a doctoral student in epidemiology at the Harvard School of Public Health and one of the first three recipients of fellowships from the school’s \$5 million Donald and Sue Pritzker Nutrition and Fitness Initiative. Previously, Sattelmair studied the science and medicine of athletic performance at the University of Oxford in England. **John J. Ratey** is Associate Clinical Professor of Psychiatry at Harvard Medical School. His numerous publications include *Spark: The Revolutionary New Science of Exercise and the Brain* and *A User’s Guide to the Brain: Perception, Attention, and the Four Theaters of the Brain*, plus co-written works such as *Delivered from Distraction: Getting the Most Out of Life with Attention Deficit Disorder*. In 2006, Ratey received the Excellence in Advocacy award from the non-profit group PE4Life, in recognition of his efforts supporting the adoption of regular, aerobic-based physical education.

About the *American Journal of Play* (a publication of Strong National Museum of Play in Rochester, New York) Peer-reviewed and written in a clear, straightforward style, the *American Journal of Play* is the first interdisciplinary journal dedicated solely to the study of play. Providing thought-provoking content from some of the most prominent national researchers and writers in the field, each issue is filled with articles, essays interviews, and book reviews that explore the critical role of play in learning and human development. To view the most current issue’s table of contents, visit: www.americanjournalofplay.org

About Strong National Museum of Play: Home to the Brian Sutton-Smith Archives of Play, Strong National Museum of Play houses the world’s most comprehensive collection of dolls, toys, games, and play-related artifacts and is the only collections-based museum anywhere devoted solely to the critical role of play in learning and human development and the ways in which play illuminates American cultural history. The museum is also home to the *National Toy Hall of Fame*[®] and dynamic, innovative exhibitions combining artifacts and interactivity. For more information, visit www.museumofplay.org