

Serious Injuries in Physical Education Class

What Was the Question?

Given the rising prevalence of and emphasis on childhood obesity and its relationship to regular participation in physical education and physical activity, Nelson et al. (2009) examined physical education-related injuries treated in emergency rooms in the United States between 1997 and 2007.

What Was Done?

Data were retrieved from the National Electronic Injury Surveillance System (NEISS) for injuries that occurred, during physical education, to children ages five to 18. The researchers used a stratified probability sample acquired from approximately 100 hospital emergency rooms in the United States and used sample weights provided by the NEISS to calculate national estimates of physical education-related injuries. The data were analyzed based on gender, age (5-10 years, 11-14 years, and 15-18 years), types of injuries (lacerations, soft-tissue injuries, fractures, concussions, sprains/strains, other), body region injured (head, upper extremities, lower extremities, trunk, other), how the injury occurred (contact with another person/playing surface/equipment/structure, acute noncontact, overuse or activity-related illness), and type of activity during which the injury occurred (group/team or individual/paired). National estimates were based on weighted data from 11,989 individuals who were treated in the

surveyed emergency rooms for injuries that took place in physical education class between January 1, 1997 and December 31, 2007.

What Was Found?

Based on the data, an estimated 405,305 students across the nation were treated in emergency rooms during this 11-year period for injuries related to physical education. Children ages 11 to 14 (middle school) represented 52 percent of all cases, and boys accounted for 54 percent of the injuries. Seventy percent of all injuries occurred in six activities: running, basketball, football, volleyball, gymnastics, and soccer (listed here from most prevalent to least). Males were more likely to be injured during group activities, whereas females were more often injured during individual activities. The incidence of injuries per year increased 150 percent during this study period.

What Does the Study Mean?

Researchers proffered two possible explanations for this increase in injuries over the 11 years of the study: (1) the paradigm shift to highly active individual and life-long fitness activities over more traditional physical education classes centered on team sports, and (2) increased class size and a reduction in teachers' effectiveness as classroom managers. The presence of appropriately trained personnel (physical education specialists and school nurses) may reduce the incidence of children being sent to the emergency room. Having certified physical education teachers may reduce the number of injuries due to mismanagement of classroom behavior and activities, and school nurses, to whom injured children can be sent when an injury occurs, may also help to reduce the number of students who end up having to go to the emergency room.

Therefore, adequate funding for staffing, facilities, and equipment is critical for the well-being of all children in the physical education environment. Because of a number of limitations within this study, further investigation is needed to gain a more accurate assessment of injury prevalence in physical education settings. Having a better understanding of how and what types of injuries occur should lead to the implementation of strategies that will reduce injuries, make classes safer, and allow for more productive participation in quality physical education.

Reference

Nelson, N. G., Alhadj, M., Yard, E., Comstock, D., & McKenzie, L. B. (2009). Physical education class injuries treated in emergency departments in the US in 1997–2007. *Pediatrics*, *124*(3), 918-925.

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