## Backpack Facts: What's All the Flap About?



National School Backpack Awareness Day is an annual event held on the third Wednesday of every September. Across the country, backpack events educate parents, students, educators and school administrators, and communities about the serious health effects that backpacks that are too heavy or worn improperly have on children. Backpack Day is also a time to promote the full range of occupational therapy benefits and services

- More than 79 million students in the United States carry school backpacks.<sup>1</sup>
- More than 2,000 backpack-related injuries were treated at hospital emergency rooms, doctor's offices, and clinics in 2007.<sup>2</sup>
- It is recommended that a loaded backpack should never weight more than 10% of the student's total body weight (for a student weighing 100 pounds, this means that the backpack should weight no more than 10 pounds).<sup>3</sup>
- About 55% of students carry a backpack that is heavier than the recommended guideline of 10% of the student's total body weight.<sup>4</sup>
- In one study with American students ages 11 to 15 years, 64% reported back pain related to heavy backpacks. Twenty one percent reported the pain lasting more than 6 months.<sup>5</sup>
- In a study on the effect of backpack education on student behavior and health, nearly 8 out of 10 middle school students who changed how they loaded and wore their backpacks reported less pain and strain in their backs, necks, and shoulders.<sup>6</sup>
- According to a study by Boston University, approximately 85% of university students self-report a discomfort and pain associated with backpack usage.<sup>7</sup>
- The way backpacks are worn affects your health. The height of the backpack should extend from approximately 2 inches below the shoulder blades to waist level or slightly above the waist. It is recommended that individuals always wear the backpack on both shoulders so the weight is evenly distributed.<sup>8</sup>

## Sources

- 1. American Community Survey. 2007 American Community Survey 1-Year Estimates [Data file]. Retrieved May 14, 2009, from http://factfinder.census.gov/servlet/DTTable?\_bm=y&-geo\_id=01000US&-ds\_name=ACS\_2007\_1YR\_G00\_&-SubjectID=15258038&-\_lang=en&-mt\_name=ACS\_2007\_1YR\_G2000\_B14001&-format=&-CONTEXT=dt
- 2. U.S. Consumer Product Safety Commission National Electronic Injury Surveillance System (NEISS) Database (2007). Numbers quoted are the estimated figures.
- 3. Hu, J., Jacobs, K., & Pencina, M. (Submitted for publication). Backpack usage and self-reported musculoskeletal discomfort in university students.
- 4. Graduate Program in Physical Therapy, Simmons College. (2001, February 12). *Children's Backpacks Are Too Heavy, New Study Shows* [Press Release]. Retrieved May 14, 2009, from http://www.simmmons.edu/shs/about/news/pt/2003/back.shtml
- 5. UC Newsroom, University of California. (2004, August 26). *Back to school; heavy packs endanger kids' health, study shows* [Press Release]. Retrieved May 14, 2009, from http://www.universityofcalifornia.edu/news/article/6575
- 6. Feingold, A. J., & Jacobs, K. The effect of education on backpack wearing and posture in a middle school population. *Work*, 18, 287–294.
- 7. Hu, J., Jacobs, K., & Pencina, M. (Submitted for publication). Backpack usage and self-reported musculoskeletal discomfort in university students.
- 8. Berghaus, R. (2008, August). Take a load off. *BU Today*. Retrieved May 14, 2009, from http://www.bu.edu/today/2008/09/16/take-load

