

School is in Session; Is Your Child's BACKPACK Making the Grade?

The Wisconsin Physical Therapy Association Addresses the Benefits and Dangers of Backpacks

While a backpack is still one of the best ways to bear a burden, a too-heavy or improperly worn backpack may harm joints and muscles, especially young ones, according to the **American Physical Therapy Association (APTA)**. In time for the start of the school season, physical therapists are offering some advice on how to properly wear a backpack and avoid injury.

In the hierarchy of bags, a backpack is a better way to carry life's necessities than a briefcase or shoulder bag, especially for longer periods of time. Properly worn, a backpack is supported by the strongest muscles in the body: the back and abdominal muscles, which work together to stabilize the trunk and hold our body in postural alignment. "But improper backpack use can also present some real dangers, especially to young, still growing joints and muscles," APTA Phil Witt, PT, PhD stated. Here are some rules of thumb to follow:

- **Wear both straps.** Slinging a backpack over one shoulder causes a person to lean to one side to compensate for the uneven weight, curving the spine. Over time, this can cause lower and upper back pain, strained shoulders and neck, and even functional scoliosis, or curvature of the spine. Teenage girls are especially susceptible to scoliosis.
- **Make sure the backpack is not too heavy.** Students of all ages seem to carry heavier loads, often toting a full day's worth of textbooks and a change of clothing for after-school athletics or extra-curricular activities. "A backpack can range anywhere from 20 to 50 pounds-more added weight than the average pregnant woman may have to carry," Witt stated. Even when worn properly with both straps, leaning forward to compensate for this extra weight can affect the natural curve in the lumbar, or lower back, region. Extra weight may cause a rounding of the shoulders and an increased curve in the thoracic, or upper back, region. As a result, the student may experience back, shoulder and neck pain. "A good rule to follow is to carry no more than 15-20% of one's body weight," Witt said.
- **Pay attention to the type of backpack.** Look for backpacks with wide straps. "Narrow straps dig painfully into shoulders," Witt said, "and our nerves are very close to the surface in our clavicle, or collarbone, region." Narrow straps can also hinder circulation, causing numbness or tingling in the arms, which over time may cause weakness in the hands. Also look for a backpack with a waist belt. Tightening the belt helps distribute the weight of the backpack more evenly. It is also wise to consider the weight of the backpack when empty. For example, a canvas bag will be lighter than leather.

"To remain injury-free, have your kids use both straps and make frequent stops at their locker throughout the day to avoid carrying all their books at once, and leave non-essentials at home. Above all, urge your children to tell you if they are in pain or have discomfort before a problem becomes serious."

For more information, contact the Wisconsin Physical Therapy Association at (608)-221-9191.