

Watch that Backpack Load

When your child acts as if she's carrying the weight of the world on her shoulders, maybe you should check her backpack. Overloaded or poor-fitting backpacks can hurt girls and boys.

"If the child is straining or slouching, that is a sign the pack's too heavy," says Dallas orthopedic surgeon Kevin Gill, M.D. "You can often lighten the load by ensuring that kids don't carry anything in their packs that isn't necessary."

Children can hurt themselves by using poor postures—arching the back, bending forward, twisting, or leaning to one side—while hefting a heavy backpack. Such postures can skew the spine's alignment so its disks can't absorb shocks as they should.

Overloaded backpacks also place stress on muscles and soft tissues. That causes fatigue and strain, increasing the risk of neck, shoulder, and back injuries and even nerve damage.

Experts offer these tips for parents and children:

- Pick a lightweight backpack with two wide, padded shoulder straps, a padded back, and a waist strap, which can help spread the load.
- Use both straps to spread the weight and promote good posture. Using one strap means one side of the body bears most of the weight.
- Take care when putting on and taking off backpacks. Avoid twisting too much. When bending to pick up a heavy backpack, bend with both knees, not at the waist.
- Position the backpack evenly in the middle of the back, near the body's center of gravity. The backpack should sit 2 inches above the waist.
- Adjust the shoulder straps so the backpack can be put on and taken off with no trouble. The straps should permit free arm movement without being too loose.
- Limit the load to 10 to 15 percent or less of the child's body weight.
- Load the heaviest items closest to the child's back. Use all the compartments to spread the weight.
- Make frequent school locker stops to remove items that aren't needed right away.

"You may want to consider a rolling backpack or luggage cart," Dr. Gill says. Remember that rolling backpacks must be carried up stairs.

Source: Acute backpack injuries in children. Wiersema BM, et al. *Pediatrics*, January 2003, vol. 111, no. 1, pp. 163-6.

Source: Association of relative backpack weight with reported pain, pain sites, medical utilization, and lost school time in children and adolescents. Moore MJ, et al. *Journal of School Health*, May 2007, vol. 77, no. 5, pp. 232-9.

Source: Back pain and backpacks in school children. Skaggs DL, et al. *Journal of Pediatric Orthopedics*, May-June 2006, vol. 26, no. 3, pp. 358-63.

Source: Starting Out Healthy/Summer 2008