

Preventing Backpack Injuries (Caring for Your Child's Back)

Backpacks can be very heavy. Besides heavy books, kids often carry binders, notebook computers, pencils, pens, erasers, craft supplies, lunches, and extra clothes for gym class, all increase the weight of the backpack.

Each school year about 28,000 students have a backpack-related injury in the United States. Help your child prevent a backpack injury by improving their back and abdominal strength.

What causes back pain and injuries?

- Weak stomach, shoulder and leg muscles can lead to muscle imbalances. This can put your child at risk for back injury or pain.
- The spine plays an important role in supporting the weight of the head and the body. Poor posture leads to uneven weight on the spine. It also puts stress on the muscles, ligaments and bones of the back. This makes the spine less able to support weight and absorb shock when your child walks, runs, and plays.



Uneven weight can lead to pain.

Back pain is more common in females. It is more likely to occur if your child is not active, is going through a growth spurt, or if your child spends a lot of time watching TV, working on the computer or playing video games.

Keep your child's size in mind when picking out a backpack. A backpack that is too large will often cause neck, shoulder, and mid-to-low back pain, as well as headaches.

A backpack should be 15 percent of your child's body weight or less. See the Backpack weight chart to find the right size for your child.

If a backpack is too heavy, your child may:

- Start to lean their body and head forward.
- Arch their back to try and stay balanced.



Too much weight can lead to poor posture.

Backpack weight chart.

If child's weight is:	Backpack should weigh no more than:
40 pounds	6 pounds
50 pounds	7.5 pounds
60 pounds	9 pounds

If child's weight is:	Backpack should weigh no more than:
70 pounds	10.5 pounds
80 pounds	12 pounds
90 pounds	13.5 pounds

Backpack weight chart (continued)

100 pounds	15 pounds
110 pounds	16.5 pounds
120 pounds	18 pounds
130 pounds	19.5 pounds
140 pounds	21 pounds

150 pounds	22.5 pounds
160 pounds	24 pounds
170 pounds	25 pounds
175-200	26 pounds

Source: American Physical Therapy Association

Helpful hints

- Choose backpacks with wide, padded, and adjustable straps.
- Put the heaviest items as close to the center of the back as possible.
- Adjust the straps on the backpack. The lowest point of the backpack should be just above the curve in your child's lower back.
- Use the pockets and compartments in the backpack. This can help keep the load more even and keep items from shifting around in the backpack.
- Make sure that your child wears the straps over both shoulders.
- When lifting a backpack have your child face the pack, bend both knees, and lift the backpack off the ground using both hands. **Do not bend at the waist** when picking it up.



Proper fitting.



Proper posture and way to wear backpack.

ALERT: Call your child's doctor, nurse, or the physical therapy department if you have any concerns or if:

- Your child has any pain in the neck, back or shoulders.
- You have concerns about your child's posture.
- Your child has special health care needs not covered by this information.

CHW Physical Therapy department (414) 266-2858

This teaching sheet is meant to help you care for your child. It does not take the place of medical care. Talk with your healthcare provider for diagnosis, treatment, and follow-up.