



Backpack Safety



Back to School Paints a Picture of Pain for Backpack-Laden Students

The problem, according to Dr. Marvin T. Arnsdorff is the overloaded and improperly carried backpacks shouldered by children as they trudge their way to and from school.

How widespread is the problem? The Consumer Products Safety Commission estimates that 4,928 emergency room visits each year result from injuries related to book bags and back carriers. These can lead into longer-term problems, as carrying a backpack alters the mobility of the spine and leads to restricted movement, a risk factor for back pain.

But you don't need to be a scientist to understand the effect of backpacks on young spines; watch children in any schoolyard struggle to walk while bent sideways under the weight of an overloaded backpack on one shoulder. You'll quickly realize the potential danger of this commonplace item.

If a child carries a backpack weighing just 12 pounds (a very conservative figure for most students) and lifts it 10 times per day for a 180-day school year, he will have lifted and carried 21,600 pounds. That's nearly 11 tons a child will lift and carry in one school year, the equivalent of six mid-sized automobiles.

"Right now there's nobody saying that it's cool and smart to carry a backpack correctly," Dr. Arnsdorff said. "We need to tell children at a very early age that it's cool and smart to take care of themselves. It could eliminate a lot of pain and grief later in life. Billions of dollars in workers compensation are lost every year due to back, neck and repetitive stress injuries. Most of those are because of bad habits learned in childhood, habits than can be prevented by education at an early age."



Basic backpack safety tips:

- **Make sure the backpack is sturdy and appropriately sized.** Some manufacturers offer special child-sized versions for children ages 5 to 10. These packs weigh less than a pound and have shorter back lengths and widths so they do not slip around.
- **Consider more than looks when choosing a backpack.** You want to have padded shoulder straps to avoid pressure on the nerves around the armpits. Some backpacks have waist straps designed to stabilize the load.
- **The proper maximum weight for loaded backpacks should not exceed 15 percent of the child's body weight.** If the pack forces the carrier to bend forward, it is overloaded.
- **Prioritizing the pack's content is very important.** Avoid loading unnecessary items. It is important to balance the contents or the body will shift into unnatural postures to compensate.
- **Often ignored is the act of lifting and positioning the backpack.** Follow these simple steps: **1)** Face the backpack before you lift it. **2)** Bend at the knees. **3)** Using both hands, check the weight of the pack. **4)** Lift with your legs, not your back. **5)** Carefully put one shoulder strap on at a time; never sling the pack onto one shoulder.
- **Use both shoulder straps.** Make them snug but not too tight. Use the stabilizing strap around the waist.

Get Out of Line

Hauling a heavy backpack over one shoulder may provoke serious postural misalignments. These imbalances often trigger vertebral subluxation which are dysfunctional areas in the spine where movement is restricted or bones are out of alignment. This disorder predisposes patients to a number of ailments, such as neck and back pain, headaches and osteoarthritis.

A recent experiment found that carrying a a backpack alters the mobility of spinal bones, leading to restricted movement – a risk factor for pain. Another study used magnetic resonance imaging (MRI) to examine the effect of backpacks on the intervertebral disc of the spine, the fluid-filled "pillows" between spinal bones. According to the report, backpacks alter the fluid content of these discs, a risk factor for disc herniation ("slipped" disc) and osteoarthritis.

Source: www.backpacksafe.com



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