

Backpacks: Pack It Light, and Wear It Right

Dr. Todd Huffman, for the Eugene *Register-Guard*, 2010

Stand outside any middle or high school on a weekday morning and you'll surely be startled by the number of stooped over bleary-eyed little old ladies and gentlemen making their way into the buildings. Look more closely, and you'll see that these scholars are not so geriatric, but rather children weighed down by their book-crammed backpacks.

Studies are showing that older children and teens typically carry ten to as much as thirty percent of their body weight in their backpacks, which these days can weigh up to 25 to 30 pounds. The American Academy of Orthopedic Surgeons (AAOS) blame these overloaded backpacks in part for the more than 13,000 back injuries in children each year that require medical treatment.

Carrying a heavy backpack will not cause scoliosis, contrary to widely-held belief. Still, beefy backpacks can be a source of chronic, low-level trauma to the shoulder, neck, and back, and may lead to chronic pain in these areas.

It doesn't help that many of today's children and teens are overweight and out of shape, and therefore more susceptible to sprains and strains. Research has even suggested that in many cases, children's soreness and strain may result less from their backpacks and more from a different load being carried – their own weight.

As kids get older, not only do their backpacks get heavier, they generally watch more TV and video games, walk or bike to school less often, and have higher body mass indexes and wider girths. This combination of deconditioning and bulging backpacks has led to a growing number of doctor visits for chronic neck and back pain in children and teens.

It also doesn't help also that many of today's schools do not allow middle- and high-school students enough time to get to their lockers between classes. Much like pack mules, students are forced to carry a full day's burden of supplies from class to class. The final bell does not lighten the load, as multiple textbooks are mandated brought home to complete assignments.

To prevent back pain in children, both the AAOS and the American Academy of Pediatrics recommend that backpack loads not exceed 15% of total body weight, or no more than 15 pounds for a 100 pound child.

Parents are advised to observe if their children are walking bent over forward or sideways to adjust for the heavy load of a backpack. Seeing this should warn parents that their child's backpack exceeds a safe weight limit, or that the child is not wearing the backpack properly.

The size of the backpack should reflect the size of the child. Backpacks have evolved rapidly to include more pockets and partitions to accommodate paraphernalia other than binders and books. Although today's sturdy backpacks can withstand the pressure of added weight, today's children often cannot.

The ideal backpack has wide, padded shoulder straps and a waste belt. It should not be wider than your child's back. Avoid messenger type, single strap bags for your older child to carry his school books and supplies.

Once you have chosen the appropriate backpack for your child, it doesn't matter how great it is if it isn't worn properly. Backpacks are designed to be worn over both shoulders, and high on the back. Discourage your child from slinging their backpack over one shoulder.

Teach your child to pack her backpack so that the larger and heavier items are closest to the back with the smaller items to the outside. The lower part of the backpack should rest comfortably in the small of your child's back, and not fall below the waistline. Ideally, the bottom of the pack should lie one to two inches above the waist.

Lifting and twisting a heavy load increases the potential for back injuries for anyone, especially for a child with a heavy backpack. To avoid this, teach your child to put on a heavy backpack from the table. Place the backpack on the table and back into the straps to put them on.

Don't brush it off if children chronically complain of back, neck, or shoulder pain, or complain of headaches, or numbness and tingling in the arms or hands. Such complaints, if persistent, deserve a medical evaluation. Don't assume that your child's pain is caused solely by the backpack, especially if it is severe or lingers even after you lighten your child's backpack load.

Focusing on getting and keeping children fit and normal weight will definitely help reduce the number of injuries relating to backpacks. Nevertheless, too many children are suffering from low back and neck pain caused by backpacks that are too heavy or not worn properly. This and every school year, remember to pack it light and wear it right.