

Lighten Up Your Backpack!

A young boy around ten years old is walking to school. Over his left shoulder is a strap supporting a bag large enough to carry all of his clothes and equipment needed for football practice. In his right hand he carries an instrument case three to four feet long (a trombone for sure). On his back he wears a pack (hanging by one strap) filled with books that is so big it looks like he is about to embark on a through hike of the Appalachian Trail.

This may sound made up, but if you have kids, work in a school, or have ever been me in the 5th grade, you know that this is an everyday occurrence. Our children are consistently being put under not only the mental and social stresses experienced while in school, but the longer school year, increased course loads, decreased locker space, and changes in school policy are requiring our children to literally put the "load" of their learning on their backs.



The jury is still out on whether or not long term injury or illness can be attributed to improper backpack use by children. It is clear however that back pain, acute back injuries, postural disorders, and shoulder injuries can be a direct result. In 1999 The American Academy of Orthopedic Surgeons conducted a survey of which 58% of the responding orthopedist reported seeing pediatric patients with back pain or shoulder pain caused by lifting or carrying heavy backpacks.

Although we hope that our schools do everything they can to maintain and support a healthy environment for our children, healthy habits begin at home. The following are some warning signs that may indicate your child's pack is too heavy:

- Change in posture while wearing their backpack
- Difficulty in putting on or taking off the backpack
- Pain while wearing the backpack
- Tingling or numbness resulting from wearing pack (shoulder, arms, hands)
- Red Marks caused by the pack

Back pack companies have advanced school backpack designs to aid in carrying the increasing loads experienced by our children. These packs offer greater support, versatility, and are ergonomically designed to fit children of different shapes and sizes. Just like fitting a backpack for hiking, it is important to make sure that your child's school bag fit them properly. Matt Keedy, owner and operator of Charbon's Outfitters in Athens stated, "Although these packs are a bit more expensive than the bags you or I may have carried in school, in terms of comfort and health the extra money is well spent!!."

Well spent indeed, distractions during class are everywhere, a child that is in pain is going to have more difficulty focusing on his or her studies and paying attention while in class. Not to mention that back pain is second only to the common cold for reasons adults present to healthcare providers. Lifetime adult prevalence is reported to be between 67-80% and children that experience back pain are at an increased risk of experiencing back pain as adults. It is also estimated that **back injuries** cost the U.S. economy approximately \$50 billion dollars annually (healthcare, workers compensation payments, lost time from work etc.).

Even the best pack is useless if your child doesn't use the pack correctly. It is important to stress from an early age the need to wear and lift backpacks properly. Teach your children to follow the following guidelines:

Guidelines for backpack use from the American Academy of Orthopedic Surgeons

- **Don't let your backpack's weight exceed 20% of your body weight (LESS FOR CHILD GENERAL RULE 15%) *****
- **Use a hip strap for heavier weights**
- **Use a backpack with wide, padded straps and a padded back**
- **Use both of the backpack's straps, firmly tightened, to hold pack two inches above your waist.**
- **Engage in exercises to condition you back muscles.**
- **Use correct lifting techniques: Bend with both legs when picking up a back pack, lift with your legs**
- **Place the heaviest items closest to your back**
- **Pack you pack neatly and try to keep items in place**
- **Try to make frequent trips to your locker, between classes, to replace books.**
- **Consider purchasing a backpack with wheels.**
- **Purchase a second set of books for home.**

*****If a child is overweight, % of weight will need to be decreased accordingly**

Source: American Academy of Orthopedic Surgeons, Orthopedics Update Press Conference: October 1999.

Although some back pain in school aged students can be attributed to heavy packs, it is not the only cause. [Poor posture](#) while sitting in class, watching TV, driving, or playing video games can result in muscle imbalances, ligament weakness, and pain. It is important to get your children off the couch, outside of the house, and active. Remember that minor aches and pains can be considered normal for active school aged children but back pain that is severe, constant, long lasting, present only at night, or the result of trauma can be a sign of injury or illness and should be evaluated by a qualified healthcare provider.