

Backpacks and Back Pain

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Now that school is back in session, most students are carrying backpacks that are much too heavy for them causing deleterious effects to the body. Among school aged children, there has been a rise in the incidence of back pack related pain and stiffness affecting the neck, shoulders, back and chest. Backpacks also factor into the increase in non-traumatic back pain in children under the age of 18.

. School aged children are very susceptible to back pack related back pain since they are likely to carry loads that are too heavy in proportion to their body weight. Medical professionals recommend that a child's backpack should be no heavier than 15% of his or her body weight. Unfortunately it is not uncommon for a 90 pound child to be carrying a 30 pound backpack, a third of his or her body weight.

Backpacks when worn correctly, cause less stress on the body than other book bags. Backpacks allow for a more even weight distribution (as long as both shoulder straps are used) than shoulder bags or purses that have the weight on one side of the body. Backpack related injuries are due to the misuse of backpacks. Some symptoms associated with backpack misuse are shoulder, neck, and lower back pain, muscle spasm and numbness and tingling in the hands and fingers.

To avoid risk of injury and postural problems, follow these backpack tips:

- *Scale down the contents to the essentials.* The child should leave as many heavy books in the locker as possible and pack only the most necessary books. Try to bring home handouts and lighter workbooks.

- *Pack appropriately.* The heaviest books should be placed in the center of the back closest to the spine. When the heaviest books are placed on the side or the outermost compartment of the backpack, this results in uneven weight bearing and encourages back arching causing subsequent back pain.
- *Lighten the load.* The backpack should weigh no more than 15% of your child's body weight, 10% is ideal. Too much weight will cause your child to walk bent forward to support the weight on the back.
- *Wear the pack correctly.* The backpack should be centered in the middle of the shoulders and tightened so it sits flush against the spine. The straps of the pack should be tightened so the top of the pack is in line with the tops of the shoulders. Padded straps are very important. Non-padded straps can dig into the muscles causing numbness and tingling in the hands and fingers.
- *Pick up the pack with proper body mechanics.* Instead of stooping over to pick up the pack, the child should squat down by bending the knees and stand up using the legs.
- *Buy the best backpack.* Purchase a pack with multiple compartments in order to place the heaviest books in the compartment closest to the body. Buy a pack with wide padded shoulder straps.

If your child is complaining of back pain from a backpack use a book-carrier on wheels instead. Also, call your pediatric physical therapist to assess any adverse affects from backpack use.