



**ONTARIO CHIROPRACTIC ASSOCIATION
ASSOCIATION CHIROPATIQUE DE L'ONTARIO**

**BACKPACK TIPS
BACKGROUND**

You need only watch how students struggle while they walk with an overloaded backpack to understand the potential health risks to their backs and spines. Hauling heavy backpacks on a continual basis can cause stress to the growing spinal column, which could lead to a lifetime of pain and health problems.

To prevent back and neck pain from an overloaded backpack it is important to recognize the correct way to choose, pack, lift, and carry a backpack.

CHOOSING A BACKPACK

1. Choose a backpack that is proportionate to body size and not larger than what is needed. The top of the backpack should not extend higher than the top of the shoulder, and the bottom should not fall below the top of the hipbone.
2. Select a backpack made of lightweight material (vinyl or canvas instead of leather).
3. The shoulder straps should be at least two inches wide, adjustable, and padded. Ensure that they do not cut into or fit too snugly around the arms and arm pits. Poorly designed shoulder straps can dig deep into the muscles and put strain on the nerves.
4. A backpack should have a padded back for added protection and comfort.
5. A hip strap or waist belt helps to effectively redistribute as much as 50 to 70 per cent of the weight off the shoulders and spine onto the pelvis, equalizing the strain on the bones, joints, and muscles.
6. Choose a backpack that has several individual pockets instead of one large compartment, this will help to distribute the weight evenly and keep contents from shifting.
7. Explore other backpack options such as one with wheels and a pull handle for easy rolling.

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BACKPACK TIPS.../2

PACKING A BACKPACK

1. Backpacks should never exceed 15 per cent of a child's body weight (i.e.: a 90-pound child should not carry more than 14 pounds in a backpack). For elementary school children try to keep the weight in their packs below 10 per cent of their body weight.
2. Ensure the weight is evenly distributed in the backpack.
3. Pack the heaviest items closest to the body, this reduces the strain as the weight is closer to the body's own centre of gravity.
4. Don't overload the backpack; only carry the items that are needed.
5. Pack the odd-shaped items on the outside, so they don't dig into the back.
6. Remember to always "Pack it light, wear it right!"

Determining the Ideal Load

	If your child weighs		Load shouldn't exceed	
	lb.	(kg)	lb.	(kg)
Elementary School Students 10% rule applies	50	(22)	5	(2.2)
	60	(27)	6	(2.7)
	70	(32)	7	(3)
	80	(36)	8	(3.6)
Secondary School Students 15% rule applies	90	(41)	14	(6)
	100	(45)	15	(6.8)
	115	(52)	17	(7.8)
	130	(59)	20	(9)

Weights and Measures

Following are the average weights of various items:

Large Textbook	2.7 kg	6 lb.
Small Textbook	0.9 kg	2 lb.
Laptop Computer	2.7 kg	6 lb.
Sneakers	0.9 kg	2 lb.
20-ounce water bottle	0.68 kg	1.25 lb.
Large paperback	0.45 kg	1.00 lb.
Notebook (100 pages)	0.35 kg	.75 lb.
Game Boy	0.25 kg	.5 lb.
Large apple	0.25 kg	.5 lb.

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BACKPACK TIPS.../3

LIFTING A BACKPACK

1. If no one is available to give a helping hand, squat or kneel to pick up the backpack and place it on a counter, chair or table at waist height, before slipping it on.
2. Avoid twisting when lifting.
3. Use both hands to check the weight of the backpack.
4. Lift with the legs, bending at the knees and put on one shoulder strap at a time.
5. Adjust straps to fit the body.

CARRYING A BACKPACK

1. Slings the backpack on one side can cause the spine to lean towards the opposite side placing stress on the joints and muscles in the mid- and lower- back. This may increase the likelihood of back problems later in life.
2. Wear both straps and adjust them so that the pack fits snugly to the body and it doesn't dangle loosely to the side. You should be able to slide your hand between the backpack and your back. This positioning will reduce strain on your back, shoulders, and neck.
3. By using the waist strap it reduces the strain on your back and transfers some of the load to your hips.
4. A backpack that is too heavy or too low will cause you to lean forward and carry the full weight on the upper back.

-30-

FOR FURTHER INFORMATION PLEASE CONTACT:

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