

# School Backpack Awareness



# Backpack Facts: What's All the Flap About?

**N**ational School Backpack Awareness Day is an annual event held on the third Wednesday of every September. Across the country, backpack events educate parents, students, educators and school administrators, and communities about the serious health effects that backpacks that are too heavy or worn improperly have on children. Backpack Day is also a time to promote the full range of occupational therapy benefits and services

- More than 79 million students in the United States carry school backpacks.<sup>1</sup>
- More than 23,000 backpack-related injuries were treated at hospital emergency rooms, doctor's offices, and clinics in 2007.<sup>2</sup>
- It is recommended that a loaded backpack should never weight more than 15% of the student's total body weight (for a student weighing 100 pounds, this means that the backpack should weight no more than 15 pounds).<sup>3</sup>
- About 55% of students carry a backpack that is heavier than the recommended guideline of 15% of the student's total body weight.<sup>4</sup>
- In one study with American students ages 11 to 15 years, 64% reported back pain related to heavy backpacks. Twenty one percent reported the pain lasting more than 6 months.<sup>5</sup>
- In a study on the effect of backpack education on student behavior and health, nearly 8 out of 10 middle school students who changed how they loaded and wore their backpacks reported less pain and strain in their backs, necks, and shoulders.<sup>6</sup>
- According to a study by Boston University, approximately 85% of university students self-report a discomfort and pain associated with backpack usage.<sup>7</sup>
- The way backpacks are worn affects your health. The height of the backpack should extend from approximately 2 inches below the shoulder blades to waist level or slightly above the waist. It is recommended that individuals always wear the backpack on both shoulders so the weight is evenly distributed.<sup>8</sup>

## Sources

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3. Hu, J., Jacobs, K., & Pencina, M. (Submitted for publication). Backpack usage and self-reported musculoskeletal discomfort in university students.
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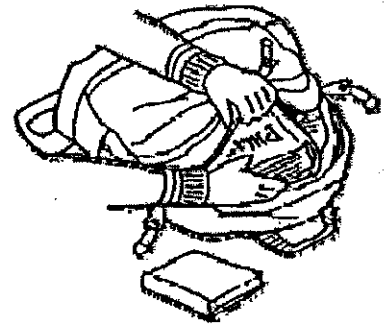
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# Backpack Strategies for Parents and Students

**A**ching backs and shoulders? Tingling arms? Weakened muscles? Stooped posture? Does your child have these symptoms after wearing a heavy school backpack? Carrying too much weight in a pack or wearing it the wrong way can lead to pain and strain. Parents can take steps to help children load and wear backpacks the correct way to avoid health problems.

## Loading a Pack

- A child's backpack should weigh no more than about 15% of his or her body weight. This means a student weighing 100 pounds shouldn't wear a loaded school backpack heavier than about 15 pounds.
- Load heaviest items closest to the child's back (the back of the pack).
- Arrange books and materials so they won't slide around in the backpack.
- Check what your child carries to school and brings home. Make sure the items are necessary for the day's activities.
- If the backpack is too heavy or tightly packed, your child can hand carry a book or other item outside the pack.
- If the backpack is too heavy on a regular basis, consider using a book bag on wheels if your child's school allows it.

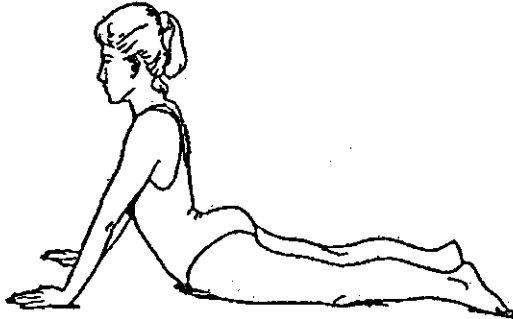


## Wearing a Pack

- Distribute weight evenly by using both straps. Wearing a pack slung over one shoulder can cause a child to lean to one side, curving the spine and causing pain or discomfort.
- Select a pack with well-padded shoulder straps. Shoulders and necks have many blood vessels and nerves that can cause pain and tingling in the neck, arms, and hands when too much pressure is applied.
- Adjust the shoulder straps so that the pack fits snugly on the child's back. A pack that hangs loosely from the back can pull the child backwards and strain muscles.
- Wear the waist belt if the backpack has one. This helps distribute the pack's weight more evenly.
- The bottom of the pack should rest in the curve of the lower back. It should never rest more than four inches below the child's waistline.
- School backpacks come in different sizes for different ages. Choose the right size pack for your child as well as one with enough room for necessary school items.

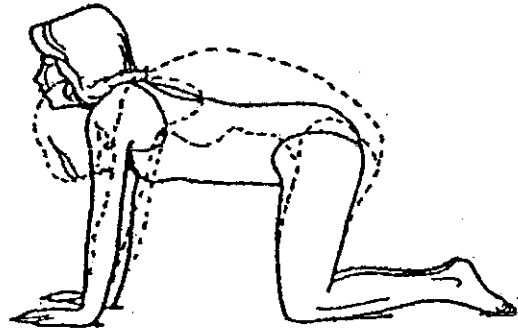


### Prone Press Up



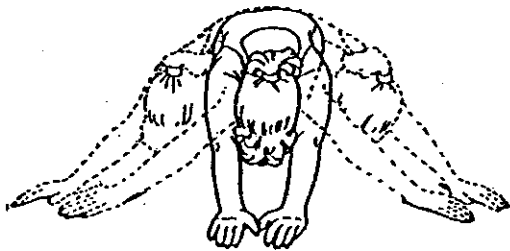
- Press upper body upward into position shown
- Keep hips in contact with the floor
- Use all arms and keep low back and buttocks relaxed
- Hold 2-3 seconds, Repeat 10 times
- On the 10<sup>th</sup> and final press up, take a deep breath, release the air while maintaining the position above and allow your back to "sag" out.
- Ultimate goal should be for you to achieve a position with elbows extended

### Cat - Camel



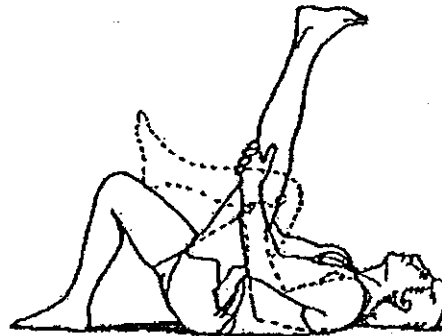
- Arch your back up like an angry cat and hold 2-3 seconds
- Then let your back sag like a camel and hold 2-3 seconds
- When arching your back, focus on rounding out the entire spine including the lower back
- Repeat 10 times within a comfortable range

### Prayer Stretch



- Arch your back up like an angry cat to round out your back
- Keep your back rounded and drop your rear to your heels
- Reach out with your hands
- Reach to a side to specify the stretch
- Hold 30 seconds and repeat twice, alternating sides

### Nerve Glides



- This is a gentle exercise to glide (floss) the sciatic nerve from your back to your foot.
- Extend the involved leg so there is some gentle tension on the muscle as if you were going to complete a ham string stretch.
- Gently pump your ankle back and forth 10 times (like the gas pedal on your automobile)
- You may feel a gentle pull along the posterior aspect of the involved leg
- Do not force the activity
- A Nerve Slider is a progression of the above with the addition of lifting your head off the floor (surface) when you point your toes.