

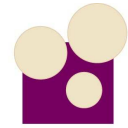
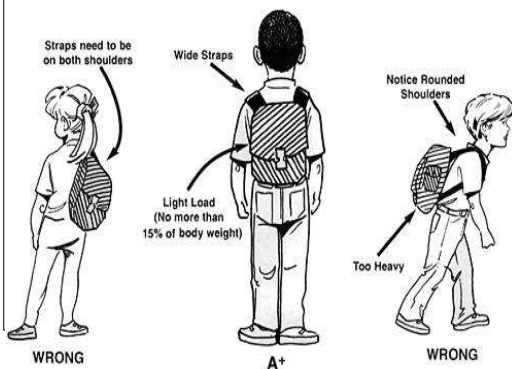
## What is Chiropractic:

Chiropractic is a health care profession that focuses on disorders of the musculoskeletal system and the nervous system, and the effects of these disorders on general health.

Chiropractic care is used most often to treat neuro-musculoskeletal complaints, including but not limited to back pain, neck pain, pain in the joints of the arms or legs, and headaches. It focuses on the source of pain, not just the symptoms.

Chiropractors have long recognised that carrying a heavy book, bag or backpack is a spinal health hazard. One that leads to altered posture. Effects can be cumulative over time. Chiropractors play an important role in providing preventative education and early detection as well as providing chiropractic care in the treatment of Backpack related injuries.

### Is Your Child's Backpack Making The Grade?



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backpack making  
the grade?*



FITZWILLIAM  
HEALTH CLINIC

19 Fitzwilliam Square  
Dublin 2

[www.fitzwilliamhealth.ie](http://www.fitzwilliamhealth.ie)

Phone: 01 6618949/52

Email: [info@fitzwilliamhealth.ie](mailto:info@fitzwilliamhealth.ie)

## How backpacks can affect your child's health

While a backpack is still one of the best ways to carry homework, an overloaded or improperly worn backpack gets a failing grade!

Improper backpack use can cause injury, especially to children with young, growing muscles and joints. If the heavy load is unevenly or improperly distributed it can result in poor posture and even distort the spinal column, throwing it out of alignment. This can cause muscle strain, headaches, back, neck and arm pain and even nerve damage.



Injury can occur when a child, is trying to adapt to a heavy load, uses harmful postures such as arching the back, leaning forward or, if only one strap is used, leaning to one side.

These postural adaptations can cause spinal compression and/or improper alignment, and may hamper the proper functioning of the disks between the vertebrae that provide shock absorption. A too-heavy load also causes muscles and soft tissues of the back to work harder, leading to strain and fatigue. This leaves the back more vulnerable to injury. A heavy load may also cause stress or compression to the shoulders and arms. When nerves are compressed, the child may experience tingling or numbness in the arms.

## Warning signs a backpack is too heavy:

- **Change in posture when wearing the backpack**
- **Struggling when putting on or taking off the backpack**
- **Pain when wearing the Backpack**
- **Tingling or numbness**
- **Red marks**

Worn correctly and not overloaded, a backpack is supported by some of the strongest muscles in the body: the back and abdominal muscles. These muscle groups work together to stabilize the trunk and hold the body in proper postural alignment.

## Tips for Safe backpack use:

### Lighten the Load:

Make sure your child's pack contains only what is needed for that day, and that the weight is evenly distributed. The total weight of the filled pack should be no more than 10-15% of the wearer's own body weight. When organizing the contents of the backpack, place the heaviest items closest to the back to reduce kinetic forces that cause postural mal-alignment and overwork muscles.

### Putting the backpack on:

When putting the backpack on place on a flat surface at waist height.. Slip on the pack, one shoulder at a time. Then adjust the straps to fit comfortably.

Make sure to use BOTH straps as use of one strap shifts the weight to one side, causing

muscle spasms and low back pain. By wearing two shoulder straps, the weight of the backpack is better distributed, and a well-aligned symmetrical posture is promoted.

REMEMBER: when lifting a backpack or anything to lift using the arms and legs and to bend at the knees.

## How to Choose a backpack:

- The Backpack should have a padded back, which protects against sharp edges on objects inside the pack and increases comfort.
- Choose a backpack with Multiple compartments to better distribute the weight in the backpack, keep items secure, and ease access to the contents
- Choose backpacks with wide, padded shoulder straps. Narrow straps can dig into shoulders resulting in pain and restricted circulation.
- It is better if a backpack has compression straps on the sides or bottom of the backpack that, when tightened, compress the contents of the backpack and stabilize the contents.

