

## INFORMATION FOR PATIENTS, PARENTS, GUARDIANS AND CARERS

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# Back care advice for children and adolescents

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This leaflet aims to provide you with information regarding back pain in children and adolescents, with advice on how to manage this.

### Introduction

Back pain is a very common problem, and most of us will have it at some time in our lives. This 'non-specific' back pain is associated with the muscles of the back rather than a disease process.

Recent research shows that 72% of primary school children and 64% of secondary school children have suffered with back or neck pain in the last year. Often, back pain doesn't have one simple cause and it's important to remember that pain doesn't necessarily mean there's a serious problem. It may be due to one or more of the following:

- Lack of exercise resulting in stiffening of the spine and weak muscles .
- Poor posture.

The key thing is to continue with your everyday life and hobbies. Being active and exercising will not do you any harm and actually helps you to get better quicker.

**72%**

of primary school children have suffered back or neck pain in the last year

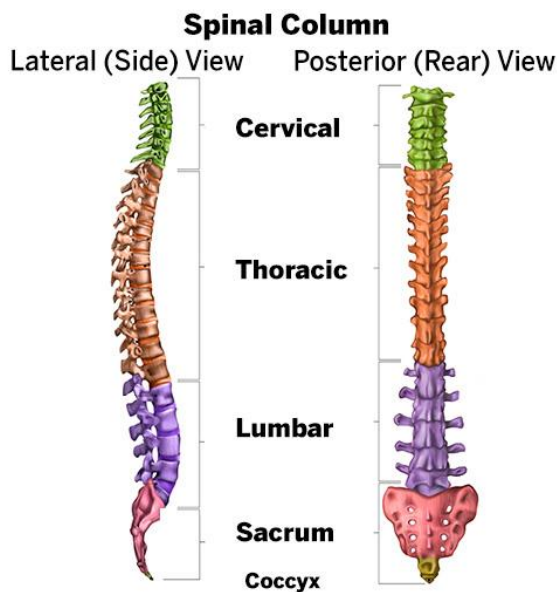
**64%**

of secondary school children have suffered back or neck pain in the last year

Children as young as **15** have shown posture related early arthritic changes on x-rays

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## How is the back structured?



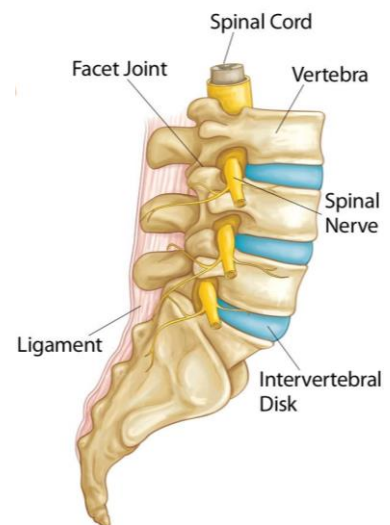
The spine, also known as the backbone, is one of the strongest parts of the body and provides us with a great deal of flexibility. When viewed from the side, it usually follows an “S” shape, with a hollow at the neck and lower back and a gentle convex curve in the middle section.

It is made up of 33 bones known as vertebrae; one sitting on top of the other with discs sitting in between. These discs cushion the bones by acting like shock absorbers. They are mostly (80%) made of water, meaning adequate hydration helps to keep your discs healthy.

Strong ligaments connect the bones, providing support and stability to the spine.

The spine is also surrounded by muscles. The spine has a lot of movement, and is therefore highly reliant on the muscles for support. The muscles need to be strong to help to keep us in an upright posture.

The spinal cord is protected by the bony spinal column. This cluster of nerves connects the brain to the rest of the body through nerves. This can help to explain referred pain from the spine, such as pins and needles, in our arms or legs.



## Risk factors

Children have a general increase in laxity of their ligaments to allow for growth. Due to this increase in flexibility around the spine, it is important to have stronger muscles around the spine to compensate for this.

Problems can occur when a poor posture is adopted, which can impose stress on the spine.

Other risk factors include:



## Management

### 1) Exercise

Physical activity and healthy movement are very important for back health and the development of a healthy spine. Movement is needed to increase blood flow and helps to build up muscle strength, co-ordination, and maintain flexibility. Keeping the muscles around the spine strong will provide more support to the bones and joints and help to ease pressure.

Exercise may make your back feel a bit sore at first, but it doesn't cause any harm, and this should improve as you get stronger. Often people stop exercising once their back pain has settled, but if you stop exercising, then all the improvements you have made will disappear in a few weeks. If you stop being active for a period of time, the muscles in your back can become weaker, which can influence your back pain.



Try to choose a form of exercise you enjoy, as you are more likely to stick to it longer term. Examples include yoga, Pilates, swimming and walking. Your physiotherapist can also develop a specific programme to suit your needs. Following a growth spurt, which has led to your back becoming painful again, it is important to return to your initial level 1 physiotherapy exercises. If you keep working on the higher level exercises, this will continue to aggravate your symptoms. Once your back pain has settled, you can gradually work back through the levels of exercises provided by your physiotherapist.

## 2) Posture



It is important that we raise children's and parent's awareness of the importance of good posture both at school and home. A good posture refers to the safest and most efficient positions of the joints and limbs of a person's body for movement and function; they are generally associated with minimal tension on joints, muscles and other surrounding soft tissues and optimum circulation and efficient functioning of the body's systems.

The human body is at its strongest in a good posture. Awkward postures can accelerate feelings of tiredness, which, for a child, may affect ability to learn, concentrate and focus. Changing positions regularly can help this.

## 3) Lifting correctly

Children should be reminded to bend their knees and NOT their backs when picking things up and putting them down. Encourage them to get close to the object, get a good grip and avoid twisting and stooping as over time, this will make their backs very unhappy. Bending at the knees is the natural way to lift, but children are influenced by their role models and develop bad habits.



## 4) Diet and nutrition



There are no special diets that have been shown to help or prevent back pain. A well-balanced, healthy diet is recommended. A healthy 'weight to body mass index' limits stress on the joints and muscles of the spine and promotes better back health.

Adequate hydration is encouraged; the shock-absorbing discs of the spine are 80% water, therefore adequate hydration is essential for optimum back health.

## 5) Painkillers, heat and ice

Painkillers may help to reduce your pain and allow you to continue with your everyday activities along with exercise. If you have any questions or concerns about what medications you can take and the appropriate dosage, talk to your child's doctor or pharmacist.

Applying a heat pack to the affected area can help to ease pain and stiffness. A warm bath or hot shower can have a similar effect. Some people find that ice packs can also be helpful or alternating between heat and ice therapy. Make sure that you protect your skin from direct contact to both heat and ice, such as a tea towel, to avoid burns or skin irritation. Applying heat or ice for 15-20 minutes at a time is normally enough.



## Top 10 back care tips for kids

- 1** Physical activity is essential to good health. Keep active.
- 2** Bend your knees when lifting and putting things down. Don't twist or stoop.
- 3** Never carry more than 10% of your body weight. Don't carry anything unnecessary.
- 4** Carry your school bag safely and correctly adjusted. Aim for a backpack to distribute the weight evenly.
- 5** Keep your bag balanced with heaviest items closest to your spine.
- 6** Be aware of your posture every day. Think "tall" when sitting, standing and walking.
- 7** Tell a teacher or parent if you have back pain. See your GP if pain lasts for more than 2 weeks.
- 8** Remember to get up and move around if you have been sitting for more than 30 minutes.
- 9** Arrange your workstation so you are comfortable before you begin.
- 10** Eat a healthy, balanced diet and stay hydrated.



## Advice about school bags

School bags are an important part of every child's school life. It is important that school bags are one of two types; 'cross-body' with a wide padded adjustable strap or a rucksack/backpack with two wide padded adjustable straps and ideally with a waist strap to take some of the load. The straps should be tight enough to hold the bag close to the body and the bag should be appropriate to your child's size. If using a single strap bag across the body, try to regularly alternate which shoulder you are carrying it on.

The most important consideration for a school bag is weight. Children should aim to carry a maximum of 10% of their body weight as research has shown weights above this can cause spinal damage in young, growing spines.

$$\frac{\text{Child's weight wearing bag (kg)}}{\text{Child's weight (kg)}} \times 10 = \text{Weight of bag as a \% of child's body weight}$$

Warning signs that a backpack is too heavy include a change in posture when wearing the backpack, struggling when putting on or removing, pain when wearing the backpack, and red marks on the shoulders.

Don't keep your bag on your back if you don't need to.

Don't swing your bag around.

Bend your knees when picking your bag up/putting it down and keep it close to your body.

Wear your bag correctly.

Don't slouch when wearing your bag.

Only carry what you need. Use a locker if available.

Pack the heaviest item first to keep your bag balanced.

Keep Active! 1 hour of physical activity a day is recommended.

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## Contact details

Therapy Services Department  
Clinic 10  
King's Mill Hospital  
Mansfield Road  
Sutton in Ashfield  
Notts  
NG17 4JL

Telephone: 01623 672384, or 01623 622515 and dial extension 4157, or 07787273070.

## Further sources of information

NHS Choices: [www.nhs.uk/conditions](http://www.nhs.uk/conditions)

Our website: [www.sfh-tr.nhs.uk](http://www.sfh-tr.nhs.uk)

### Patient Experience Team (PET)

PET is available to help with any of your compliments, concerns or complaints, and will ensure a prompt and efficient service.

**King's Mill Hospital:** 01623 672222

**Newark Hospital:** 01636 685692

**Email:** [sfh-tr.PET@nhs.net](mailto:sfh-tr.PET@nhs.net)

If you would like this information in an alternative format, for example large print or easy read, or if you need help with communicating with us, for example because you use British Sign Language, please let us know. You can call the Patient Experience Team on 01623 672222 or email [sfh-tr.PET@nhs.net](mailto:sfh-tr.PET@nhs.net).

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If you require a full list of references for this leaflet (if relevant) please email [sfh-tr.patientinformation@nhs.net](mailto:sfh-tr.patientinformation@nhs.net) or telephone 01623 622515, extension 6927.

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