

Scheuermann's kyphosis

Scheuermann's kyphosis is a condition in which the front sections of the vertebrae (small bones that make up the spine) grow more slowly than the back sections during childhood. This difference in growth means the vertebrae grow into the shape of a wedge, when they should grow into the shape of a rectangle. These wedge-shaped bones don't stack up in a straight line. As a result the spine develops a forward angle as it grows. The forward bend of the spine is called kyphosis.

Cause

The cause of Scheuermann's disease is unknown. Research shows that there are probably a lot of factors responsible but that it may run in some families.

Diagnosis

Scheuermann's kyphosis usually appears in adolescents when they are around 10-16 years old. Patients with Scheuermann's kyphosis often have back pain, especially during the early teenage years.

Pain is often the most noticeable symptom for adult patients. Other signs are tightness of the pectoral muscles (chest muscles), hamstrings (strong bands of tissue at the back of the thighs), and hip flexors

(inner hip muscles). About a third of people with Scheuermann's disease also have mild or moderate scoliosis. It can often take a while for Scheuermann's kyphosis to be diagnosed because the symptoms (signs of the condition) can be blamed on poor posture.

The curve caused by kyphosis often stays mild. Usually patients will only need X-rays to check that it is not getting bigger.

There is little information about the natural history of Scheuermann's kyphosis. Natural history means what happens to the spine if no treatment is ever given. Many patients have no serious problems or disability and the symptoms settle once the spine is fully grown. However, people with severe kyphosis (a curve that is bigger than 80 degrees) when the patient is fully grown can continue to get bigger, which can cause a large curve and severe back pain.

Treatment

Whether treatment is needed will depend on: the size and progression (worsening) of the curve, the patient's age, and how much growing they have left to do, whether the patient is in pain, the effect of the curve on the patient's appearance, and (in rare cases) the risk of cardiopulmonary (heart and lung) or neurological (nervous system) problems.

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Bracing

If the curve is quite large (60-80 degrees) and the patient has not yet finished growing the most common course of treatment is for a back brace to be fitted. An exercise programme is usually set to go along with this.

The brace is worn full-time until the patient has finished growing to try to reduce the risk of the curve getting bigger. The fit of the brace needs to be regularly checked for best results. The patient is usually asked to wear the brace for at least 18 months and often longer.

The exercise programme includes exercise and strengthening of the back and stomach muscles and stretching of the hamstrings and pectoral muscles. On their own the exercises will probably help with back pain but will not affect the chance of the curve getting bigger. Exercises are often used along with brace treatment.

Not all specialists agree that bracing works as a treatment. Some say that there is a high risk a patient's curve will continue to get bigger after they stop wearing the brace. Also, that wearing a brace as a teenager can cause distress and low self-esteem.

For more information on bracing please see our bracing questions and answers sheet www.sauk.org.uk/scoliosis-treatment/bracing

Surgery

Surgery may be an option if the curve continues to progress (get bigger) to more than 70 degrees and causes pain or is very noticeable. Also an operation might be offered if there is a risk of neurological issues (problems with the nervous system). However, surgery will only be suggested if other treatments

such as bracing and physiotherapy have not worked after 6 months.

The operation to correct kyphosis can be difficult and sometimes there is the risk of major complications. The risks should be talked through in detail with the patients and their families. They need to weigh the risks against the difficulties the patient has because of the curve. They should also think about how the surgery could improve the patient's quality of life. Surgical complications are much more common in adults (21 in 100 people) than in adolescent patients (11 in 100 people).

These days modern techniques allow better correction of the kyphosis. With the right surgical treatment excellent results can be achieved with low complication rates and high patient satisfaction.

Prognosis

Patients with Scheuermann's kyphosis often have poor posture and back pain at first. Back pain is most common during the early teens and will usually decrease as the patient gets closer to adulthood. For most people the pain is rarely bad enough to affect daily activity or working life. However, those with bigger curves can have more severe pain that does not go away when they are adults. If the pain is bad; patients can speak to their specialist about possible treatments. SAUK also has information about pain management that may be of help www.sauk.org.uk/coping-with-scoliosis/pain-management

Please get in touch for a large print copy of this information sheet.
Please get in touch for our feedback questionnaire, available online or in paper form.



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The Information Standard



Edition number: 3

Reviewed: December 2015

Planned date of review: December 2018

Last updated: January 2016

The advice that surgery might be needed can come as a shock for the child and the family. This can make it difficult to think clearly when you are in the consultation room with the specialist. Sometimes unanswered questions come to mind after the consultation. The best thing to do is to write down these questions. This helps you to remember to discuss them the next time you see the specialist.

Families can also call SAUK as it can sometimes help to talk things through. We can direct you to information and resources that may help. You may find it useful to talk to members who have gone through surgery and discuss their experiences.

Patients and their families should have as full an understanding as possible of what is involved, both before and after surgery. Being prepared for what will happen can greatly reduce anxiety and stress

For further information on AIS surgery, how to prepare and what to expect from your stay in hospital visit the AIS surgery section of our website www.sauk.org.uk/...

Prognosis (outcome)

Techniques for the treatment of adolescent idiopathic scoliosis have advanced a lot in recent years. How well a treatment works for each patient depends mainly on the size and nature of the curve. Sometimes when a curve is very large and stiff the main aim of surgery is to stop the curve from getting bigger. This means that the changes to body shape might not be as much as expected. For smaller and more flexible curves the difference might be more noticeable. On the whole most patients are pleased with the outcome of surgery.

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