Degenerative and de novo Scoliosis

Cause

Sometimes a person can develop scoliosis for the first time as an adult. Scoliosis can happen because the bones get weaker and the discs and ligaments in the spine become worn as a result of age related changes called degeneration.

Degeneration usually happens after the age of 50 and the resulting scoliosis is known as “de novo” or degenerative scoliosis. The word ‘de novo’ means new. Usually, de novo scoliosis happens when discs and facet joints (the hinge joints at the back of the spine) start to age in the lumbar spine (lower part of the spine). When discs and facet joints age the vertebrae can slip out of place, which makes the spine curve.

Patients with childhood scoliosis may find the curve worsens as they enter middle age and that as they age the spine undergoes degenerative changes. Often curves that are 50 degrees or more in size after a person is fully grown may increase by an average of 1 degree per year. Curves of less than 30 degrees rarely get bigger. This is known as the natural history. The term natural history is what happens to the spine if no treatment is ever given.

Diagnosis

An examination and X-ray will show if a patient has degenerative scoliosis. Some curves may be big and very easy to see. Others can be small and hard to spot but still have a big effect on the patient.

Standing X-rays are the main method used to diagnose scoliosis in adults. Degenerative scoliosis may be less easy to spot on an MRI scan because it is done with the patient lying down.

Patients with degenerative scoliosis will often also have back pain and muscle fatigue. Muscle fatigue is when muscles are tired and work less well. People with degenerative scoliosis sometimes have back stiffness and leg symptoms, including pain, numbness, and weakness. They may find their posture gets worse and they might ‘fall forwards’ sometimes, which is called a loss of balance.

Continued overleaf
People with degenerative scoliosis have bones that are fully grown, so the course of action taken by the specialist may be different from when a patient is younger and the spine is still growing.

**Treatment**

Some adults with childhood scoliosis decide to have surgery later in life. However, their curves are often stiffer than in a younger person, which can mean that surgery may be more complicated.

Most patients with degenerative or de novo scoliosis are given non-surgical treatment and do not need surgery. These treatments include anti-inflammatory drugs for pain relief, physiotherapy for improving overall mobility, and exercise to improve strength. If the medications and therapy do not work, steroid or local anaesthetic injections in the muscle, joints, or spinal canal may help with pain.

If these treatments do not work; a scoliosis specialist will talk to the patient about the risks and benefits of surgery. The aim of surgery is to relieve pain and correct the changes in posture or balance that occur.

In adults over the age of 50 recovery happens more slowly than for young people. Recovery often takes many months and complications are common. As adult spines are older and the bones will be weaker it can be harder to predict what the results of surgery will be.

**Prognosis(outcome)**

The pain created by a spinal curve can be treated in lots of different ways. It is always worth going to see a scoliosis specialist who can advise you on a case by case basis.

**Definitions**

**Disc:** Discs are a part of the spine. They are round and flat on the top and bottom and are slightly flexible. They stop your vertebrae from rubbing against one another. They also work like shock absorbers for the spine. Injury to, or degeneration of discs can lead to lower back pain and leg pain and can also cause numbness and weakness.

The discs in your spine are made up of an outer ring of cartilage (a kind of bodily tissue, which is tough and flexible and found in the joints) and a gel-like middle.

As you age, your discs lose water and cells and become less supportive of the spine.

**Degenerative** - This refers to a condition that is part of a natural ageing process often starting in our 30’s and 40’s

**Facet joints** - Small joints between each of the vertebrae in your spine. Joints are the places in the body where two bones meet. The facet joints are the joints in your spine that make your back flexible. They also enable you to bend and twist.

**Lumbar spine** - The lower part of the spine.

**Spinal canal** - This is a passage that contains the spinal cord. It runs down the spine, through little holes at the back of each vertebra.

**Vertebrae** - The small bones that make up the spine. An individual bone is called a vertebra.