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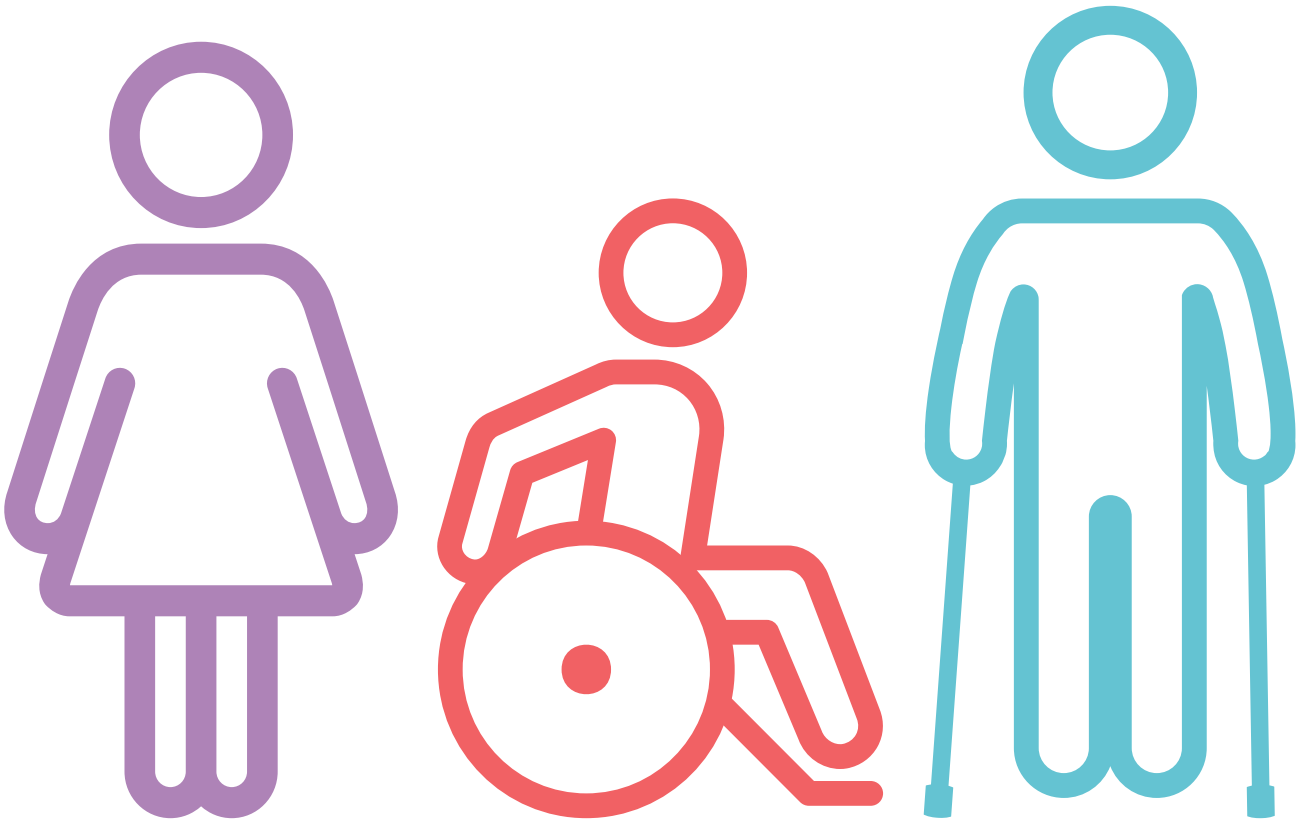
Spina Bifida
Hydrocephalus
Scotland

Scoliosis in Spina Bifida



What is scoliosis?

Scoliosis is not a disease – it describes a "twist" or curvature in the spine. All spines have curves and some curvature is normal as we all need this to help the upper body maintain proper balance and alignment over the pelvis. However when there are abnormal side-to-side curves in the spinal column, it is referred to as scoliosis. Because the sideward twist to the spine upsets balance there are particular problems in individuals who have no mobility and are wheelchair users. All the body weight is on one buttock which causes a risk of pressure sores developing. Walking with elbow crutches or a Rolator is made more difficult and even when sitting, the arms are not free for other activities.

What causes it?

Scoliosis occurs because, as well as spina bifida, there are other abnormalities in the spine which make it twist. When scoliosis is present at birth it is caused by the bones of the spine being the wrong shape.

How is it diagnosed?

When a baby is born with spina bifida, an assessment will be carried out to check for any abnormal curvature of the spine and this assessment will continue throughout the child's life and into adulthood. This assessment will include X rays, and measurements of the trunk and if a curve is found, depending on the extent and development, various methods of treatment will be considered. An assessment will also include observation of the individual in a standing position, if possible, and looks to see if the shoulder blades, hips and ribs are at the same level on both sides of the body.

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What treatment is available?

Decisions on treatment are based on the degree of curvature, the likelihood of significant progression and the presence of pain, if any. An increasing awareness of the problem means that scoliosis starting later in childhood is now recognized at an early stage and steps can often be taken to prevent it becoming worse.

Observation
This is appropriate for curves less than 20 degrees and this type of curvature is not usually treated, except by regular follow-up for children who are still growing.

Seating support
In individuals who spend most of their time in a wheelchair, a specialised type of moulded support may be an effective option. These inserts, by supporting the whole trunk, greatly improve balance and distribute the pressure evenly over the skin. They provide added support to the hips and thighs providing excellent sitting stability.

Bracing
The aim of a brace is to try and keep the curve in the spine from progressing. If the curve is about 25 to 40 degrees and the child is still growing a brace can be useful in preventing the curve from becoming worse as the child continues to grow. Because bracing is designed to halt the progression of the curve, it is generally not recommended for treating scoliosis in young people who have stopped growing. Once skeletal growth has reached a certain point, or if the curve has become too severe, (typically more than 40-50 degrees) bracing is generally not as effective.

There are two different categories of braces, those designed for wearing nearly 24 hours per day and those designed for night use. The full-time braces are designed to hold the spine in a vertical position, while the night use braces are designed to bend the spine in the direction opposite the curve. Bracing is usually not recommended for treating adult scoliosis and corrective surgery - spinal fusion - may be recommended.

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Spinal fusion

This is the surgical procedure for scoliosis and the goal is to straighten the spine as much as possible and then to fuse the vertebrae together to prevent further curvature. To maintain the proper spinal posture before fusion occurs, metal rods are inserted alongside the spine and are attached to the vertebrae by hooks, screws or wires. The metal rods are no longer required once fusion is complete but are rarely removed unless their presence leads to complications. Spinal fusion leaves a portion of the affected spine permanently stiff and inflexible. While this leads to some loss of movement and flexibility, most functional activities are not strongly affected unless the very lowest part of the spine (the lumbar region) is fused. However if self catheterization is being carried out, then there may be some difficulty with this following fusion as there may not be the same degree of flexibility. Other methods of catheterization such as Mitrofanoff should not be affected, however a full discussion about the child or adult's lifestyle, care needs and the long term effects of this surgery should take place with the Consultant prior to a decision being made about spinal fusion being carried out.

Complications of spinal surgery include disruption of the catheter of a shunt system.

If you have questions or would like further information, please call the **SBH Scotland Helpline** on **03455 211 300** or email **support@sbhscotland.org.uk**
For general enquiries call **03455 211 811** or visit **www.sbhscotland.org.uk**

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