Congenital scoliosis is a type of scoliosis that you are born with. Scoliosis is when the spine curves or twists to the side, instead of being straight. This can result in a C or S shaped curve.

**Cause**

Congenital scoliosis happens because the vertebrae do not form as they should while a baby is growing in the womb. Vertebrae are the small bones that make up the spine, they are similar to a tower of building blocks. Some of these small bones might be missing, or some of them might not have formed fully, which can cause the spine to curve as it grows.

This can start to happen in the first 6 weeks of pregnancy, but why it happens is not fully understood. Most causes of congenital scoliosis do not seem to run in families.

**Diagnosis**

It is now quite common for women to have ultrasound scans during pregnancy, this may show that a baby has congenital scoliosis. However, if the scoliosis is only slight, it may not be spotted until the baby is born or until the child is older. In some children, congenital scoliosis might not be obvious until they approach their teens.

**What happens next?**

If the scoliosis is noticed while the baby is still in the womb, then an obstetrician (a specialist in childbirth) will discuss whether anything different from normal needs to arranged for the birth.

Arrangements will also be made for further investigation and treatment with a specialist once the baby is born. Investigations may include one or more of the following:

- An X-ray which should show which parts of the child’s spine have not formed fully
- A CT scan (computed tomography scan) which produces detailed images of many structures inside the body, including the internal organs, blood vessels and bones
- An MRI scan (Magnetic resonance imaging) which uses strong magnetic fields and radio waves to produce more detailed pictures of the spine. This helps check that there are no problems with the spinal cord and the development of the nerves.

The hospital team may use these tests to check the kidneys and heart. When a child is in the womb the kidneys and heart form at the same time as the spine. As the curvature of the spine could put pressure on organs, a problem with the spine might also affect these organs. 4 out of 25 children with scoliosis have...
a problem with their kidneys or bladder. 1 in 10 have a problem that affects their heart.

**Treatment**

**Monitoring**

First the specialist will usually monitor a child to see if the curve is getting bigger. Some children will have a curve that does not get bigger. Other children will have a curve that keeps growing.

The specialist will probably want to see your child every few months. Normally there will be new X-rays each time. The specialist will compare the different X-rays to see how the curve is growing.

Some children will not need treatment because the curve straightens itself naturally. In this case, the child will be monitored by a scoliosis specialist until the curve is straight.

**Casting**

Many children will need their spine to be guided into its normal position as they grow, which can be done by putting them in a cast. The cast starts from the underarms and covers the top half of the body.

The cast is made of light materials. It cannot be removed but is changed regularly as the child grows and the shape of the back starts to change. Casts need to be made and fitted in a special way. They have a hole in the chest area, which allow the lungs to expand so that the child can breathe properly.

In children under 2 years old, the cast will be changed every 2-3 months with the aim of making the spine straight.

Many parents find it easier for their child to wear a cast instead of having the problem of getting them to wear a brace each day.

**Bracing**

If the curve is getting bigger, and the child is still growing, the specialist may want to put the child in a brace.

A brace when applied properly helps to reduce the size of the curve. The aim of bracing is to stop the curve getting bigger. Wearing a brace can mean that the child can keep growing for longer before a more permanent treatment, such as surgery.

Braces should usually be worn for 23 hours a day. As the child grows, new braces will need to be made.

**Prognosis (the outcome)**

When your child’s congenital scoliosis is first diagnosed, no one will know exactly how much the spinal curve will change as your child grows. Every curve is different. Some will increase in size more than others. Some will grow more quickly than others.

Because the spine grows most quickly in the first 5 years of life and then during adolescence, these are times when the curve must be monitored most closely by a scoliosis specialist.