# Congenital scoliosis

**Cause**
The term congenital scoliosis refers to spinal curvature caused by vertebrae that are not properly formed. This abnormality occurs very early in development - in the first 6 weeks of embryonic formation. Congenital scoliosis does not seem to run in families. Genetic studies have not yielded much evidence that this condition can be inherited. Although congenital scoliosis is often discovered in infants or toddlers in some children it is not diagnosed until the adolescent years.

**Diagnosis**
Sometimes congenital scoliosis is picked up on a prenatal scan but it can go unrecognised into adulthood. X-rays should be taken to look for abnormal vertebrae. CT and MRI scans may also be taken. Assessment of the congenital spine will also include an appraisal of the kidneys and the heart. Because the kidneys and heart are formed at the same time as the vertebrae, children with congenital scoliosis have a 25% chance of having an anomaly in the urological system (kidneys, bladder) or a 10% chance in the cardiac (heart and its vessels) system. Lung and oesophageal problems also occur in 2-5%.

**Treatment**
If a large curve develops, progresses or becomes symptomatic then surgery might be needed. Sometimes the abnormality can be removed. But more recently, systems that allow growth to continue have been used to indirectly treat the problem and allow the spine to grow before definitive surgery is undertaken.

**Prognosis**
When a child's congenital spine anomaly is first diagnosed, no one will know exactly how much the spine abnormality will progress as the child grows. There are some clues, however. Anomalies in the thoracic spine tend to worsen with growth of the patient. Multiple fully-segmented hemivertebrae on the same side of the spine also tend to progress with growth. A hemivertebra opposite a set of fused vertebrae is the most likely combination to progress as the child grows. Because the most rapid periods of spinal growth are in the first 5 years of life and during adolescence, these are the two times when the congenital curvature should be monitored most closely.

The most troublesome curves are associated with hemivertebra occurring at the junction of the neck and chest or at the junction between the low back and pelvis