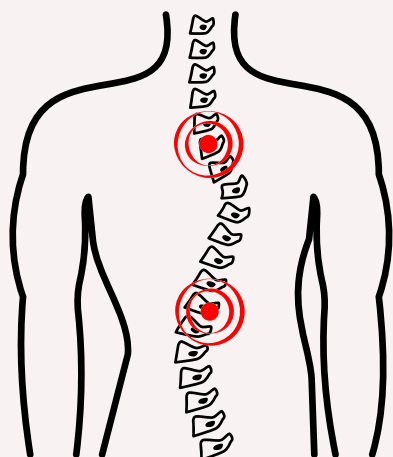


SCOLIOSIS

1 WHAT IS SCOLIOSIS?



Scoliosis is a medical condition in which the spine is curved to one side. It can occur in a student during early adolescence, age 10-12 years for girls and age 12-14 years for boys. It may worsen during the period of rapid growth that occurs just before puberty. Once this growth spurt has stopped, the curve usually becomes stable.

Mild curves are quite common in both girls and boys, but the curves in girls are more likely to become worse during the growth spurt.

2 WHAT CAUSES SCOLIOSIS?



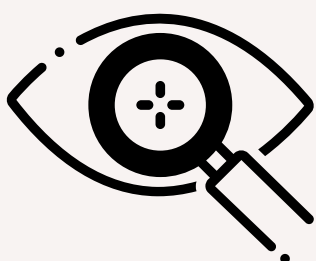
The cause is unknown. 80-90% of scoliosis cases occur in healthy adolescents i.e. Adolescent Idiopathic Scoliosis (AIS). Females are 9 times more likely to be diagnosed with AIS than males.

Scoliosis tends to run in families. Rarely, it may also be due to illnesses acquired before birth, or problems with the nerves, muscles or bones.

Scoliosis is **not** caused by:

- Poor dietary intake
- Carrying heavy things, for example, heavy school bag on one shoulder
- Any particular physical activity
- Poor standing or sleeping posture

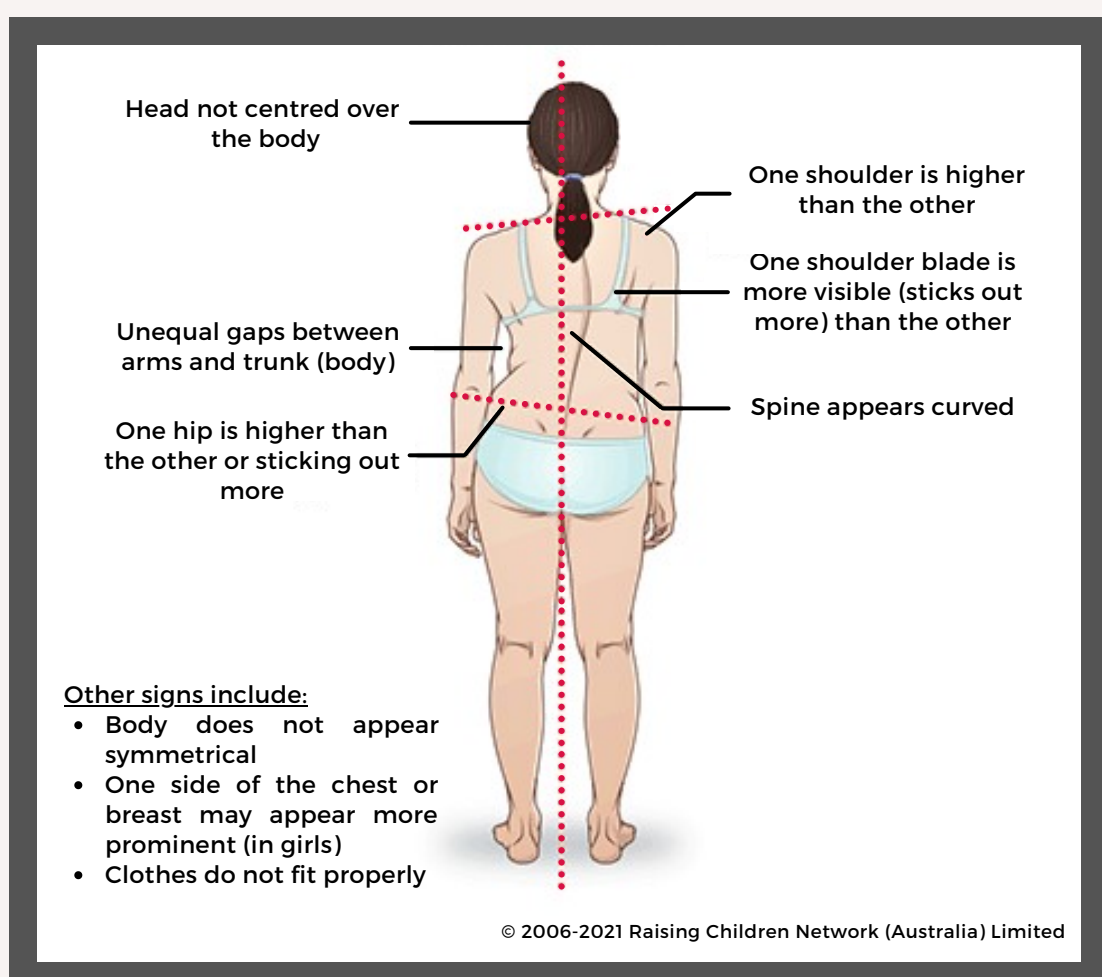
3 WHY SHOULD WE DETECT SCOLIOSIS EARLY?



Very small curves are common and are of no significance. However, approximately 2% of students require medical observation when they mature as a small handful of students will require further treatment. The earlier treatment is instituted, the better the outcomes are in the long run.

4 HOW IS SCOLIOSIS PICKED UP BY THE SCHOOL HEALTH TEAMS?

The doctors and/or nurses in the School Health Teams assess for scoliosis by examining for the **outward signs of scoliosis** as shown in the diagram below and performing the Forward Bending Test (see the next section):

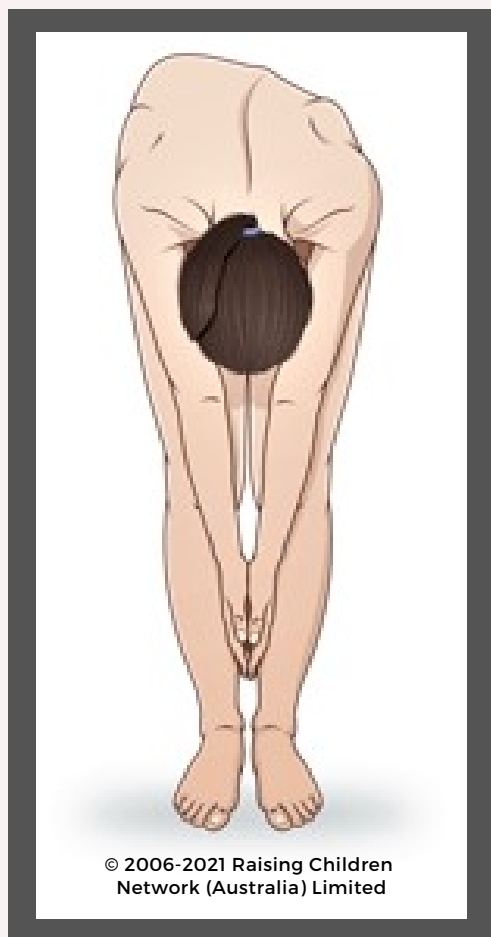


The School Health Team may refer the student to the Student Health Centre (SHC) for further assessment if required.

5

HOW DO DOCTORS ASSESS SCOLIOSIS IN STUDENT HEALTH CENTRE?

Doctors will examine for the **outward signs of scoliosis** (as shown in the diagram above) in a student when he/she is standing and perform the **Forward Bending Test (FBT)** with a **scoliometer**:



The student needs to stand with both feet together and parallel. Then, he/she needs to bend forward as far as possible, keeping the knees straight, palms facing each other and pointing towards the big toes.



When the student bends forward, a rib "hump" may appear. The **scoliometer** is placed on the back to measure the degree of back asymmetry, known as the angle trunk rotation (ATR).

After examination at SHC, the doctor may recommend a spinal X-ray if required for further assessment. If the student does not require further tests, he/she will be monitored closely in SHC for the development of scoliosis.

6

WHAT FURTHER TESTS ARE DONE?



An X-ray of the spine can help doctors to confirm the diagnosis of scoliosis, measure the degree of the spinal curve and ascertain the maturity of the child's skeleton. The degree of the spinal curve will determine the severity of scoliosis: mild, moderate or severe scoliosis.

7

HOW IS SCOLIOSIS TREATED?

The management of scoliosis will depend on the student's age, maturity of bones, severity of curve and how fast the curve is progressing. Scoliosis management include one or a combination of the following:

MONITORING



For mild scoliosis, we monitor regularly to look for progression of the curve.

BRACING



For moderate scoliosis, bracing may be offered to prevent the curve from worsening.

SURGERY



For severe scoliosis, surgery may be offered to correct the spinal curve.

Once the student has reached his/her adult height, it is likely that the underlying curve will not progress and the student can be discharged from follow-up.