What is scoliosis?
Scoliosis is a lateral or sideways curve of the spine. The spine also rotates on its long axis as it curves. The age range when scoliosis first appears can be different for girls and boys because boys tend to start their adolescent growth spurt a bit later. It usually develops during early adolescence (age 10-12 years for girls, or 12-14 years for boys) when growth is most rapid.

What is the cause of scoliosis?
The cause is unknown, but 80-90% of cases occur in otherwise healthy adolescents. This is called adolescent idiopathic (cause unknown) scoliosis (AIS). 90% of patients are females but this can occur infrequently in males.

We know that scoliosis is NOT contagious and NOT caused by bad posture, a soft mattress, carrying a heavy school bag or eating junk food.

Why is early detection important?
While very small curves are common and of no significance, about 2% of girls have a curve which warrants medical observation during the growth period. Three girls per 1,000 will require treatment during the growth phase. Any boys with scoliosis need review by a medical specialist.

If treatment is required, the earlier it is undertaken, the better the long-term result. This is the basis for screening since in the early stages scoliosis produces no symptoms.

The best way to detect scoliosis is to look for it!

Self-detection for scoliosis
This information is designed to make adolescents and their parents aware of the outward signs of scoliosis.

If after reading this Fact Sheet you or your parents think you may have this condition, please consult your family doctor.

It would be helpful if you could show this Fact Sheet to your school and request them to consider downloading it from the Scoliosis Australia website at www.scoliosis-australia.org and distributing it to students aged 10 and 12 years, or linking to the Fact Sheet in their school newsletter.

What are the outward signs of scoliosis?

- Head not centred over body
- One shoulder higher
- One shoulder blade higher and possibly more prominent
- Unusual gaps between arms and trunk
- Spine obviously curved
- One hip more prominent

Outward signs of adolescent idiopathic scoliosis in a girl with a right thoracolumbar scoliosis
How scoliosis is detected

Apart from the outward signs with a teenager standing as illustrated, the reliable **Forward Bend Test** is used in the diagnosis of scoliosis. This simple visual examination requires the teenager to stand with the feet together and parallel and bending forward as far as she/he can go with the hands, palms facing each other, pointed between the two big toes.

**In scoliosis**, one side of the upper chest (thoracic) region or the lower back (lumbar) region will be **more than 1cm higher** than the other. The prominence is most often on the right side in the thoracic region.

If the difference between the two sides is less, it is highly unlikely that a significant curvature is present and the difference is simply due to asymmetrical growth of the two sides of the body. This is torso asymmetry and is of no significance.

There is no scientific evidence that physical therapy (exercise programs) and spinal manipulation (chiropractic adjustments) will either correct a significant scoliosis or halt its progression.

What will happen if scoliosis is not treated?

The curve may increase unnoticed during the growing years. Moderate and severe curves may also increase in adult life, on average 15 to 30 degrees.

Some curves may increase with pregnancy. Severe pain, physical deformity and wear and tear arthritis may occur during middle life. Early detection is important for a healthy future.

How do you detect scoliosis?

Simply look for it! It only takes 30 seconds.

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What about brothers and sisters?  
Scoliosis tends to run in families. When a curve is detected in one member of the family, other children should also be examined by the family doctor. If there is a history of a blood relative, especially a female cousin, having been treated for scoliosis by brace wearing or surgery, then this strengthens the case for spinal examination as a regular health check between 10 and 13 years of age.

Scoliosis which requires treatment is far less common in boys than in girls. The ratio of boys to girls requiring treatment is about 1 to 10.

Is treatment successful?  
Yes, modern methods produce excellent results when a curve is detected early. In most cases an inconspicuous spinal brace is worn. Surgery is needed in only one out of three cases which require treatment.