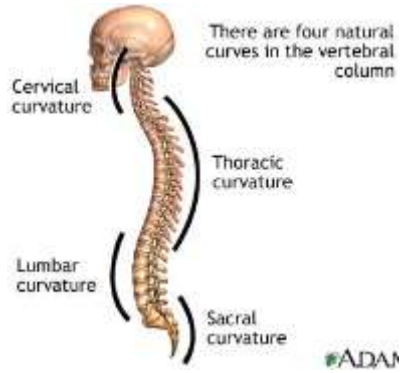
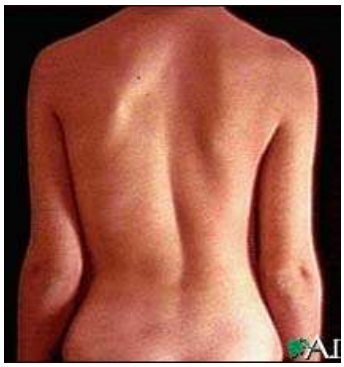
WHAT IS SCOLIOSIS?

(lateral or sideways curvature of the spine)





Definition:
Scoliosis is the term given to a lateral (away from the middle) or sideways curvature of the spine.

Who gets Scoliosis? Scoliosis has a rate of 2:1 girls to boys. The statistics suggest a rate of about 3-5 out of 1,000 people are affected. Scoliosis usually occurs in those older than 10 years, but the condition has been diagnosed in infants.

Predisposing Factors: In most cases (85%), the cause of scoliosis is unknown (what doctors call idiopathic). The other 15% of cases fall into 2 groups:

Non-structural (functional): This type of scoliosis is a temporary condition when the spine is otherwise normal. The curvature occurs as the result of another problem. Examples include 1 leg being shorter than another, from muscle spasm, or from appendicitis. Also activities that require prolonged amounts of time sitting or standing can induce scoliosis.

Structural: In this type of scoliosis, the spine is not normal. The curvature is caused by another disease process such as birth defect, muscular dystrophy, metabolic diseases, connective tissue disorders or Marfan's syndrome.

Progression: Pain will become persistent if irritation of ligaments results. The greater the initial curve of the spine, the greater the chance for progression of the condition after growth is complete. Severe scoliosis (curves in the spine greater than 100 degrees) may cause breathing (respiratory) problems.

Probable Outcomes: With early screening and detection, most children with scoliosis can be treated to prevent more curvature. They can lead normal lives and have the same life span as other healthy people. The prognosis depends more on why the scoliosis occurred. If the scoliosis has occurred as a result of an infection by another disease, then the prognosis would be based upon this infection, not the scoliosis.

How is Scoliosis diagnosed? The physical examination will include a forward bending test that will help the practitioner define the curve. There will also be a thorough neurologic exam to look for any change in strength, sensation or reflexes.

How is Scoliosis treated? The treatment is determined by the cause of the scoliosis, the size and location of the curve, and the stage of bone growth (how close to maturation). Most cases of adolescent idiopathic scoliosis require no treatment (less than 20 degrees) but should be checked by a doctor at regular intervals (often every 6 months). As curves progress above 25 to 30 degrees in a child who is still growing, bracing is usually recommended to help slow curve progression. There are many different kinds of braces used which have names such as the Boston Brace, Wilmington Brace, Milwaukee Brace and Charleston Brace, named after the centre which developed them. Each has a different appearance and there are different ways of using each type properly. The selection of brace and the manner in which it is used is determined by many factors, including the specific characteristics of your curve, and will be decided on following consultation between you and your doctor. A back brace will not reverse the scoliosis; rather the spine is straightened by the brace from asymmetric pressure, and can be adjusted as the patient grows. Bracing is not effective in the cases of congenital or neuromuscular scoliosis and is less effective in infantile and juvenile idiopathic scoliosis. Curves of 40 degrees or greater usually require surgery because curves this large have a high risk of progressing even after bone growth stops. Surgical correction involves correcting the curve (although not all the way) and fusing the bones in the curve together. The bones are hold in place with one or two metal rods held down with hooks and screws until the bone heals together. Sometimes surgery is performed through an incision in the back and sometimes through an incision on the abdomen or beneath the ribs. A brace may be required after surgery to stabilize the spine. The limitations imposed by the treatments are often emotionally difficult and may threaten self-image, especially of teenagers. Emotional support is important for adjustment to the limitations of treatment. Physiotherapists and orthotists (orthopaedic appliance specialists) can be helpful in explaining the treatments and ensuring a comfortable fit of the brace to increase the compliance with the treatment plan.