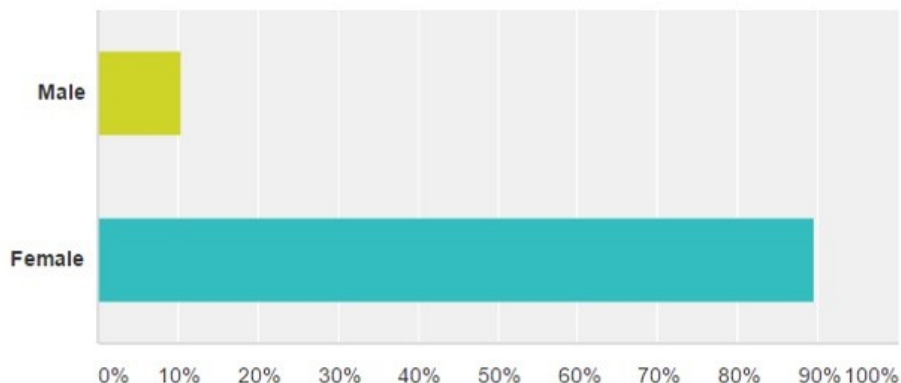


# What Causes Scoliosis

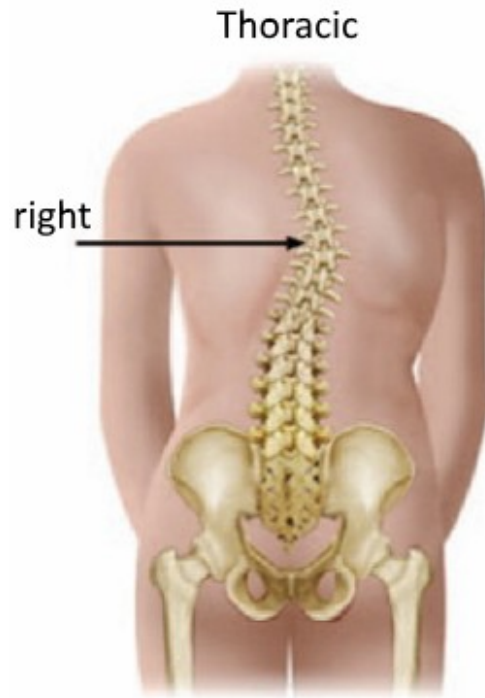
In most cases, the cause of scoliosis is not known. This is called idiopathic (from the Greek idios “one's own” and pathos “suffering” scoliosis) and is often referred to as spontaneous scoliosis. It develops mostly in children and teens (near puberty and before the maturity of the skeleton when spinal growth is complete; from 10-25 years). It appears to be related to several things, including genetics, as it often runs in families - 30% have a family member with scoliosis. Most of you on the course will likely have this type of scoliosis. Therefore one in three of you, should know someone in your family with scoliosis. My niece has scoliosis.

The spontaneous scoliosis affects females 9:1 and is usually a right thoracic curvature. Females usually have a more slender spine that matures much faster than males and this is likely the reason for the higher incidence in females.

## Are you male or female?



My pre-course survey suggests 90% of you are women



Most common scoliosis

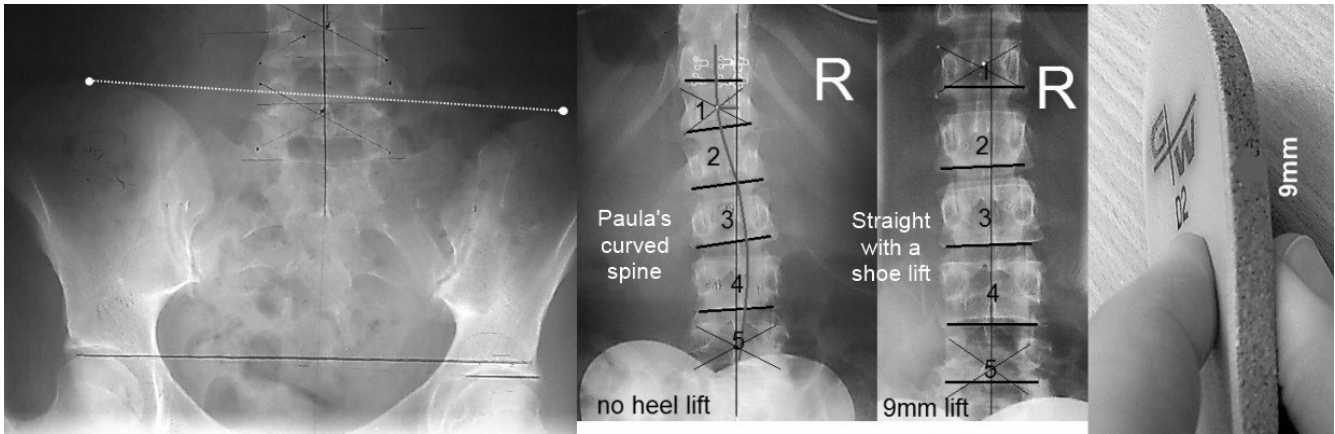
## Types Of Scoliosis

There are two main types of scoliosis: structural and non-structural (also called functional). Non-structural scoliosis involves a curve in the spine that is reversible and is often caused by:

- extreme muscle spasm (from a herniated disc)
- extreme muscle spasm (from pelvic joint dysfunction)
- a difference in leg lengths (this is the type of scoliosis I have)



Sacro-iliac joint (SIJ) dysfunction leading to temporary scoliosis



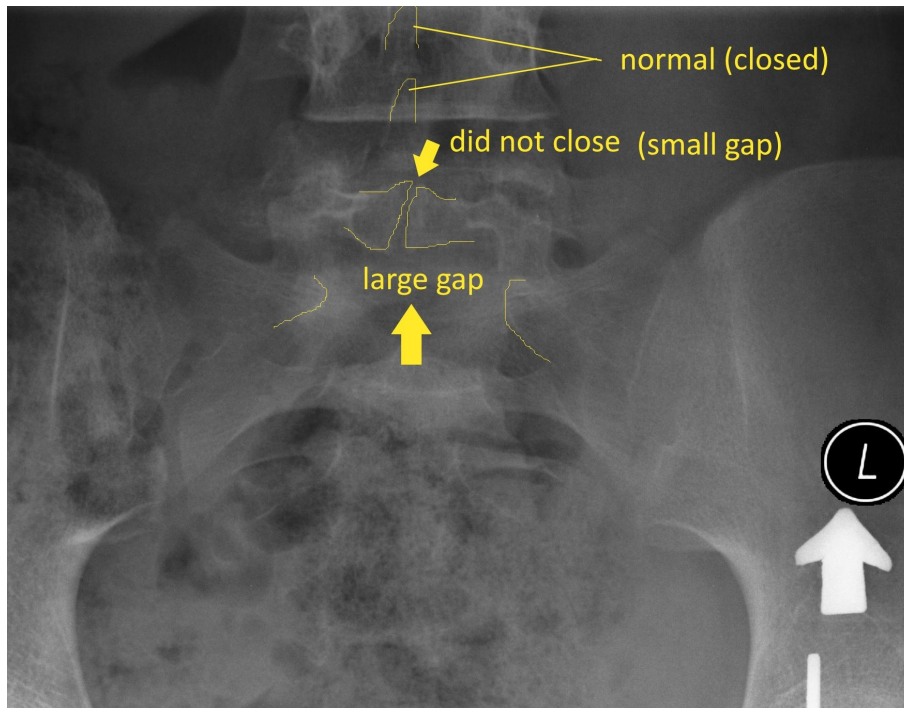
Paula's short leg (with nonstructural scoliosis)

A non-structural scoliosis corrects (straightens out) when you bend forward or to the side and a structural scoliosis does not.

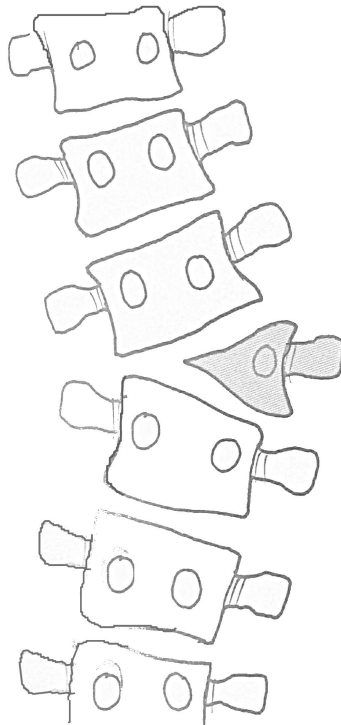
### Structural Scoliosis

Structural scoliosis involves a curve in the spine, that is irreversible and does not straighten out with bending. It is usually idiopathic (cause unknown) or from a disease or condition such as:

Congenital – a condition existing at or before birth. Examples include spina bifida when the spinal canal does not fully close; or disorders that affect the way spinal bones form. These curves are hard to improve or correct.



Paula's niece (Spina Bifida - fairly common)



Hemi-vertebra

**Nerve & Muscle Disorders** – nerve or muscle diseases like cerebral palsy, hypermobile syndrome, muscular dystrophy, motor neuron disease and polio – generally, the curve travels toward the weak side.

#### Other Causes

- Infection & Tumors - cause bony destruction
- Radiation treatment - cause bony destruction
- Injuries and Trauma (e.g. fracture) - alter spinal alignment
- Osteoarthritis - degrade bony structure leading to altered spinal curves. This is called a degenerative scoliosis.