# What is the disc?

The spine consists of 24 moveable bones named vertebrae. The vertebrae form three distinct sections of the spine: the cervical spine or neck, the thoracic spine or mid back, and the lumbar spine or low back.

The spine can resist compression and still be flexible partly due to discs which sit between the vertebrae. The Inter vertebral discs also provide space between the bones of the spine allowing exiting nerves from the spinal cord.

Discs are really tough, so how can they also be flexible? This is due to two outer types of collagen and an inner contained semifluid. The outer disc is mostly tough collagen; its role is resisting stretch. The inner disc contains collagen to resist compression. In the centre of the disc is a semi fluid which acts as a shock absorber, distributing the forces from compression equally in all directions to the surrounding outer fibres.

In the neck the discs are smaller to allow more movement; in the low back where load bearing is more important than movement the discs are much larger. Most of the spine has discs between the vertebrae.

Over time stress and strain can fatigue the disc's collagen causing a locking of the joint, swelling and pain, and possible discal injury. Because there is less collagen at the back of the disc, this is where most problems occur.

Did you know at the end of the day you are about 1-2 cm shorter? This is because during the day water slowly seeps out of the disk decreasing its height. When you sleep the height of the disc is restored as the disc re-imbibes water. Prolonged weight bearing such as sitting is probably one of the worst things for the disc, as this literally squashes the fluid out.

Note that disc lesions are most common in the lumbar spine. Ninety five percent occur at L4/5 or L5/S1 level. In the neck disc lesions are not so common but do occur, usually at C4/5 and C5/6 levels. Disc lesions in the thoracic spine are rare.