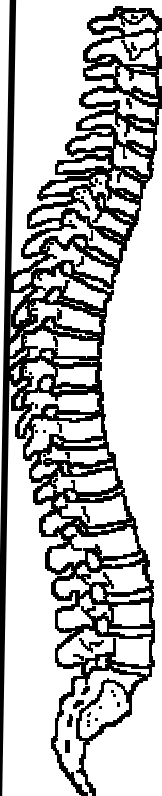




# YourSpine

## The Backbone...your network for good health



Posture may be the first thing you think of when considering what the spine does for the body. It's interconnected bones form the curves in our back, allow us to sit up straight and also allow for movement.

The bones that make up the spine are called vertebrae. The only part of the vertebrae that is readily accessible for you to feel is what's called the spinous process, a bony protuberance. When you touch the middle of your back you will feel the bumpy track that goes up and down the middle. These are the spinous processes of each vertebrae in your back.



View from side



View from top

Your spine is made up of 26 vertebrae (more if you consider the sacrum and coccyx separately). Cartilagenous discs are located between the body of each one to provide support, help to bear weight and protect the bones from wearing on each other. It is these discs that are the culprit when you hear of a "herniated disc".

If you look at the "top view" photo you will see a hole. This is where all the nerves from your brain that form the spinal cord travel through. Nerves then exit from the side of the bone in order to innervate specific organs and muscles.

## Injuries...pathological,direct trauma,car accidents,etc.

Just like any other area of the body the spine and individual vertebrae are susceptible to injury and disease.

Car accidents cause the cervical spine (bones in neck) to be forcefully thrown forward and backward in such a way that the joint of the spine become compressed, muscles become strained and ligaments are overstretched.

Some pathological diseases such as os-

teoarthritis , osteoporosis or degenerative disc disease affect the spines make-up and can render the entire structure weaker and less stable.

Due to the sensitive nature of nerves that travel within the spinal cord and exit from between each vertebrae, trauma to this area can be especially irritating and painful. Nerve pain is typically describes as sharp, shooting, burning and intense.

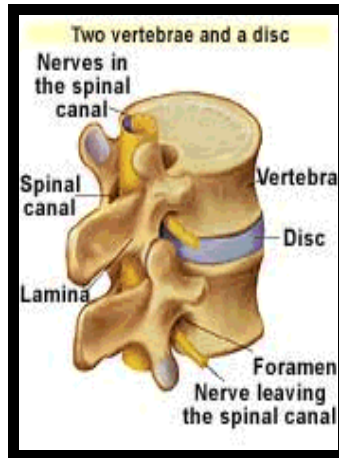
### Special points of interest:

- Your cervical spine provides the largest amount of flexion (looking towards your toes) while your midback allows for the most rotation.
- Walking adds a 15 % increase of pressure on our discs...lifting a 20 kg weight with your knees straight adds 169%. Bend those knees!

## Degenerative Disc Disease

The intervertebral discs in between each vertebrae provide cushioning and support of the spine. Structurally they are made of strong collage connective tissue and water which help to resist against the compressive forces that are involved in our daily life. Trauma, infection, injury or aging sometimes cause the discs to dry out, stiffen or even rupture, resulting in pain as the nerves in the spinal column are exposed or compressed by the discs. The condition is called degenerative disc disease (DDD).

With age and progression the facet joints of the vertebrae (which allow for movement) become



involved as they are forced closer together by compression. Wear and tear is inevitable, pain and discomfort may follow.

If you are suffering from low back pain, especially in the low back or up in your neck and you are over the age of 40 you may want to talk to your doctor about having x-rays.

The degenerative process itself cannot be reversed however both massage and chiropractic can help maintain the alignment of the bones and the strength of the muscles in order to maintain joint mobility and stability.

## Subluxations

Is this term familiar to you at all? Has your chiropractor ever used this word to explain what is happening to your bones or joints? Don't worry. Although subluxations can be the cause of much discomfort they are definitely treatable!

Subluxations are what you might think of as a partial dislocation. The bones in the body all articulate (come in contact) at joint. Sometimes due to injury, or trauma, the bones get misaligned and it's impossible for them to simply move back on their own. When the bones are abnormally misplaced they affect all the structures that surround them, mainly muscles,

ligaments and nerves. Each of these structures carries it's own pain pathway and therefore can contribute to chronic pain if the source of the problem is not dealt with.

Chiropractic treatment is a safe and effective way to realign spinal subluxations and reduce the stress that they cause on the rest of the body.

**Subluxations can cause nerve irritation, suppress the immune system and illicit pain.**

## Massage

We all know that having our backs massaged feels good. But what specifically is done that can help the actual vertebrae?

In many past issues the importance of the relationship between bones and muscles has been stressed. This relationship is no different when it comes to discussing the spine. In fact, due to the specialized nature of the nerves within the spinal cord, protection by the muscles and ligament becomes even more pertinent. The muscles around each joint help to move the vertebrae during extension, flexion, rotation and side-bending. When instability within the joints exist then the muscles take on a protective role and LIMIT movement of the spine so that no more injury may result. The most common and

extreme protective mechanism is a muscles spasm and it occurs in very small muscles that attach to different areas of the vertebrae. Muscles spasms can then transfer and affect nearby soft tissues of the body.

Once the need for protection has passed it's not always easy to relax those hardworking muscles. Massage can help to reduce the tone that has developed which in turn can improve flexibility and range of motion.

Some people like to have their adjustments after a massage treatment because the muscles are more relaxed and it tends to facilitate the movement of the joints back into proper alignment.