

# AGEING OF THE SPINE



SUPPORTS

LOCAL CHARITIES

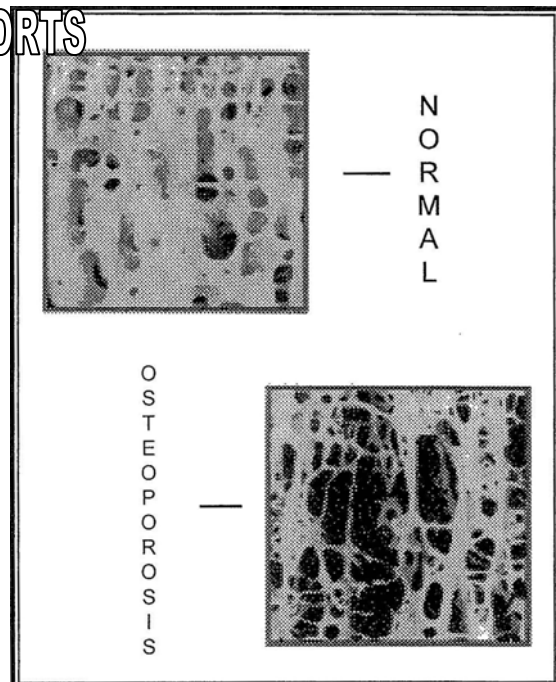
During our lifetime, our spines **SUPPORTS** required to withstand considerable weight bearing stresses resulting from activities of daily living. As a result of these stresses, 'wear and tear' or degeneration occurs in all parts of the vertebral column. Degeneration which occurs in the spine as a consequence of daily living is considered part of the normal ageing process.

## The Spine

The spine or vertebral column is made up of 25 bones (vertebrae) which are separated by tough fibroelastic cushions (intervertebral discs or IVD). The spine is also divided into three different regions, the cervical spine in the neck, the thoracic spine in the upper back and the lumbar spine in the lower back. The lumbar spine is also connected to the tailbone, which is made up of the sacrum and coccyx. Differences in size and shape of the bony vertebrae and discs from region to region produce the characteristic alternating spinal curves from the neck to the low back when viewing a person from the side. As well, there are differences in size and shape of the vertebral column from person to person. Even though there is a wide range of what is considered 'normal' in the human spine, as we age our spines undergo similar, but characteristic changes.

## What Happens to my Spine as I Age

The intervertebral discs (IVD'S) are the first to undergo changes, usually around the age of 40, followed later by the spinal joints and bony vertebrae, from the ages of 50-60 onwards



Normal degeneration is usually well established by the age of 70.

Characteristically, the IVD will lose its ability to absorb fluid as the chemical makeup and internal architecture of the disc changes in response to repetitive stresses. As a result, the normally resilient disc will become tougher, more fibrous and less able to respond to weight bearing load. The ageing of the discs puts greater stress on the spinal joints as well as the bony vertebrae.

In an attempt to withstand the increased pressure, spinal joints and vertebrae form new bone around their edges. The new bone increases the size of the joints and vertebrae, creating a larger area to withstand weight and increasing the overall stability of the spine. The new bone, called osteophytes, forms in the shape of spurs around the edges of the joints and vertebrae.

## **How Severe will the Degradation Be?**

Most of our spines will exhibit only moderate signs of degeneration. However, just like any other part of our body, the, better we take care of our spine during our lifetime; the less degeneration is likely to occur. Attention to a healthy lifestyle, moderate physical exercise and good nutrition from an early age can help to reduce the effects of 'wear and tear' on our vertebral column. As well, current evidence suggests that the amount of degeneration does not necessarily lead to greater levels of pain and disability.

In terms of lifestyle, smoking and heavy alcohol intake affect the nutrition of the disc and loss of calcium in the spine, respectively. Smokers are more likely to suffer from disc disease and heavy alcohol intake may lead to weakened bone, interrupted blood supply to bone and fractures.

Physically demanding work and exercise have also been shown to predispose to more severe degenerative changes in the spine. Lifting of excessive weight, repetitive lifting and improper lifting all predispose to earlier as well as greater degree of 'wear and tear'.

There is a particular need for females to acquire proper nutrition and physical exercise to ensure adequate mineralization and hence bone strength. This is because 50% of the bone mineral content of the spine occurs before the first menstrual period. Osteoporosis or 'brittle bone disease' is a considerable problem which affects females more than males because female spines have less bone mineral content to begin with. The process of osteoporosis is a subtle process which takes many years to occur but is extremely difficult to reverse.

Foods rich in calcium, vitamins and minerals, such as fresh fruits and vegetables, dairy produce and fresh fish are important. There is no substitute for fresh, basic food products as foods altered by processing have very little nutritional value and are usually high in fats, salts and sugars.

There is now overwhelming evidence that moderate exercise over a lifetime is essential to overall health as well as good spinal health. Both aerobic exercise (walking, cycling, jogging, stair climbing and exercise classes) and resistance training (weight training) for a minimum of 30 minutes 3-4 times a week can help to improve strength and balance, increase muscle mass and reduce the effects of osteoporosis over time. A combination of aerobic and resistance training is recommended for optimal health.

**How long you decide to benefit from Chiropractic care is, of course, always up to you, but for effective long term results, always follow the Chiropractor's recommendations.**

For proper long term health of the spine, careful attention to a healthy lifestyle, a diet rich in vitamins and minerals (particularly calcium), from fresh wholesome food, along with moderate physical activity are essential throughout our entire life. Regardless of the degree of degeneration, it is never too late to take proper care of our spine and to help reduce the effects of ageing.

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if you think Chiropractic may help them.**

**Have them call us on 01276 21637**