



# BIOKINETIC SPINE REHABILITATION

## Biokinetics exercise programme

A common (and harmful) misconception is that exercise should be avoided when a person is experiencing back pain.

Understandably, many people are reluctant to exercise out of the fear that any exercises or stretching will aggravate their existing back pain.

For most back problems, exercise and movement are the natural stimuli for the healing process. **Controlled, gradual and progressive exercise**, rather than inactivity and bed rest, most often provides the best long-term solution for reducing back pain and preventing future episodes of pain.

Exercise plays the dual role of both treating back pain and helping prevent future episodes of pain.

### **How exercise helps the back**

Engaging in exercise helps keep the back healthy by allowing discs to exchange fluids which is how the disc receives its nutrition. A healthy disc will swell with water and squeeze it out, similar to the action of a sponge. This sponge action distributes nutrients to the disc. In addition, fluid exchange helps to reduce the swelling in the other soft tissues that naturally occurs surrounding injured discs. When there is a lack of exercise, swelling increases and discs become malnourished and degenerated.

Exercising the back reduces stiffness by keeping the connective fibers of ligaments and tendons flexible. Improved mobility through back exercise helps to prevent the connective fibers from tearing under stress, which in turn prevents injury and back pain.

Another important effect of exercise is that it stretches, strengthens and repairs muscles that help to **support the back**. The back and abdominal muscles act as an internal corset supporting the vertebrae discs, facet joints, and ligaments. When back and abdominal muscles are weak they cannot support the back properly. Strengthening exercises help to strengthen these supporting muscles in order to prevent straining soft tissues (e.g. muscles, ligaments and tendons) and provide sufficient support for the structures in the spine.

Additionally, stretching is good for the back. For example, stretching hamstring muscles helps to relieve stress on the low back.

Another benefit of back exercise is that the motion helps lubricate the facet joints, which are synovial joints that require appropriate motion.

## Programme objectives

The initial aims of spine rehabilitation are to:

- Restore strength and mobility and balance of the back, from the neck through lower back and pelvis
- Promote healing and
- Prevent future spinal problems

## Procedure

Assessment

Personalized exercise programme prescription

Individual exercise sessions for a 6 weeks programme (18)