

## Stabilisation

Evidence shows that low back stabilisation training can positively affect recovery from low back pain. Use of the mediBall® encourages active sitting postures, offering a highly functional opportunity to reinforce active stabilisation. This encourages integration of a variety of sensory stimuli - from your joints, muscles, inner ear and eyes, which allow your body to operate at its functional best. This is not possible with conventional seating and it is now known to be essential in long term rehabilitation.

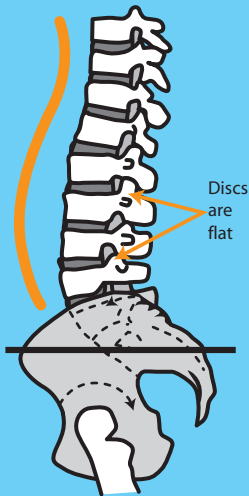


## Posture

A major problem in achieving good posture is the difficulty of avoiding habituated postures such as in conventional sitting. We all tend towards habituated postures when our attention is distracted by functional tasks such as computer work or typing.

The mediBall® encourages an 'S' shape in your lower back, both to centre your body mass over the ball and to provide a stable pelvis on which to balance your upper body. Slumping is discouraged by sitting on the mediBall®, as this posture increases the ball's instability.

The static loading of passive lumbar spine structures may be a cause of low back pain, such as in the McKenzie Postural Syndrome. The continual gentle postural correction required whilst sitting on the mediBall® reduces this static loading and reduces both pain and tiredness.



**BALANCED PELVIS**  
**NEUTRAL LORDOSIS**  
*Strongest position for the back*

## A Comparison

mediBall®  
Pro

### ACTIVE SITTING - mediball® PRO



- Lordotic posture
- Adjustable sitting height to suit height and weight
- Active posture promotes stabilisation & reduces static loading
- Encourages gentle mid-range pain inhibitory movements
- Nourishes inter-vertebral discs
- Assists lymphatic flow

### STATIC SITTING - CHAIR



- Slump posture
- Static loading of spine stresses muscles, bones & ligaments
- Prolonged static postures habituates poor sitting behaviour
- Reduces blood flow to spine
- Reduces vitality & productivity
- Increases probability of disc bulging from lumbar flexion over extended periods
- Inhibits co-ordination of abdominal/lumbar relationships

## Ball Selection

Only use high quality balls that are tested for burst resistance, are the correct size and have been inflated correctly for the users. If you are unsure visit our web site [www.aokhealth.com](http://www.aokhealth.com)

**AOK™**  
*The Power of Balance!*

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*Please contact your local dealer*

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# Sitting

## The Forgotten Health Risk



**A Real Breakthrough**

[www.aokhealth.com](http://www.aokhealth.com)

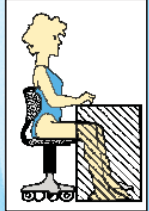
# Low Back Pain

Low back pain has been described as the 'flu' of the musculo-skeletal system. It causes more time-off-work than any other condition. Most episodes settle within 6 weeks, there is, however, a 60-80% recurrence rate. There is mounting evidence to suggest that posture, impaired reflexes or movement and stabilisation patterns that are generally not treated under traditional rehabilitation programs are the cause of this. Using a mediBall® to replace a conventional chair may help alleviate symptoms and promote stabilisation.



# Conventional Sitting

Most chairs in common use today are designed for ease of manufacture rather than the needs of you - the user! The conventional sitting position is very hard to maintain for more than a couple of minutes. Whenever a person tries to hold this position, the lower back straightens out - causing the back to hunch and the head to move forward.



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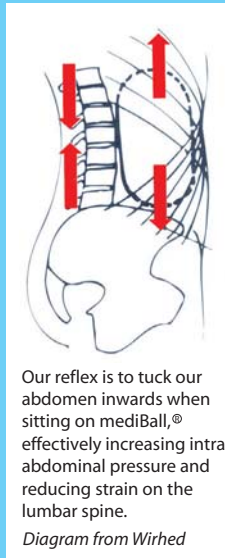
This forward position can cause fatigue of the neck muscles, musculo-skeletal disorders and chronic pain in the neck, upper and lower back. When sitting in conventional chairs the hamstring muscles are tensed. In order to relieve this tension you unconsciously slide forwards away from the backrest, thus allowing the pelvis to tip backwards and straightening the lumbar lordosis. The body's sensory mechanisms are unable to correct these forces. Conventional sitting is a corrosive activity and will damage your spine.

**References**

Garlick	The Lost Sixth Sense: a Medical Scientist looks at the Alexander Technique. University of NSW, 1990
McGill, Stuart	Low Back Disorders, Human Kinetics 2002
Hyman & Liebensoon	Spinal Stabilisation Exercise Program. Spinal Rehabilitation: A Manual of Active Care Procedures, Liebensoon, Williams & Watkins, 1996
Richardson et al	Therapeutic Exercise for Spinal Segmental Stabilisation in Low Back Pain 1999
Wirhead	Athletic Ability & the Anatomy of Motion. 2nd Ed. Mosby.

# Pain Management

Movement in a pain-free range of motion stimulates receptors, exploiting a natural role of pain inhibition. The instability of the mediBall® requires continual small postural corrections while sitting. For most people these corrections reduce pain. For people who are reluctant to move their lower back following a painful episode, sitting on the mediBall® encourages mobilisation of the body in a gentle and controlled manner. This may also reduce the pain associated with disc protrusion caused by the small levels of lumbar flexion associated with sitting at desks on conventional chairs.



mediBall® PRO is manufactured by AOK Health in Australia using Duralon. The ball is extremely safe - being burst resistant under a 500kg load - even if punctured. AOK Health offers a lifetime money back guarantee for any manufacturing faults. mediBall® PRO is tested at the University of Newcastle and is the safest therapy ball in the world.



# Dynamic Sitting with Swopper

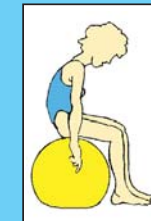
Swopper was developed in Germany to meet their strict OH&S guidelines. It offers the same dynamic capacity as mediBall® yet looks like a conventional stool. A high quality and well engineered seating option.



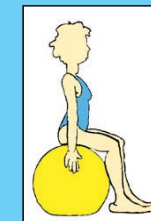
# Dynamic Sitting

Sitting on a mediBall® corrects this problem found in all conventional seating. The surface tension and curve of mediBall® adjusts to your body weight and tilts the pelvis gently forward. The advantage is that the angle between the thighs and trunk is wider thus reducing the hamstring muscles tendency to tip the pelvis backwards.

The slight instability of mediBall® stimulates the sensory reflexes, tends to tighten the abdominal muscles and activate the extensor muscles of the back. It is easier to maintain normal back posture (lumbar lordosis) as the muscles of the trunk are constantly activated and relaxed to compensate these small movements and keep the back in its balanced position and in shape.



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The body easily learns a new behaviour pattern - dynamic sitting. The development of body awareness is critical to protection of the lumbar spine and general well being. Using mediBall® allows the body to adopt better posture through thousands of small and often repeated corrections. This encourages reflex responses to correct posture - dynamic sitting stimulates both muscles and sensory receptors. Combined with therapy treatment and advice this is a potent tool in the long term management & prevention of back pain.