

# GOLF RELATED LOW BACK PAIN

BY  
**Dr Michael Oei**

**Sports and Musculoskeletal Physician @  
Musculoskeletal and Golf injury Clinic, Mosman  
[www.musculoskeletalgolfing.com.au](http://www.musculoskeletalgolfing.com.au)**

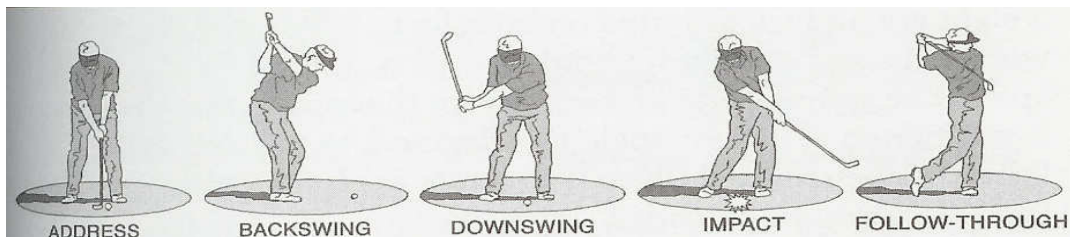


## INTRODUCTION TO GOLF INJURIES

- The act of swinging a golf club, regardless how far or straight the ball goes is an extremely demanding sports activity.
- This simple swinging action places significant stresses on the body in order to develop club head speed that exceeds 100 k/hr in less than 0.2 sec.
- The combination of poor conditioning, lack of core stability, overuse (excessive play), inadequate warm up and poor swing technique are factors that contribute to injuries, in particular back pain.

## THE GOLF SWING AND INJURY

- The Golf swing is divided into 5 phases



**The phases of the golf swing can be divided into the address, the backswing, the downswing, the impact and follow-through phases.**

### **Injury mechanism during the swing:**

- Lower back pain or injuries most commonly occur during the back swing, the down swing and the follow through phases.
- During the downswing phase, the weight is shifted to the left foot while the knees, hips and trunk rotate together to the left. A left sided uncoiling

occurs due to vigorous contraction of the abdominal muscles and the spinal muscles (the core muscles). These muscles are working 3–4 times harder during the downswing phase than during the backswing. Hence, Lower back pain or injuries occur more frequently during the downswing phase.

- During the follow-through phase, the spine hyperextends and therefore spinal hyperextension injury occurs during this phase.

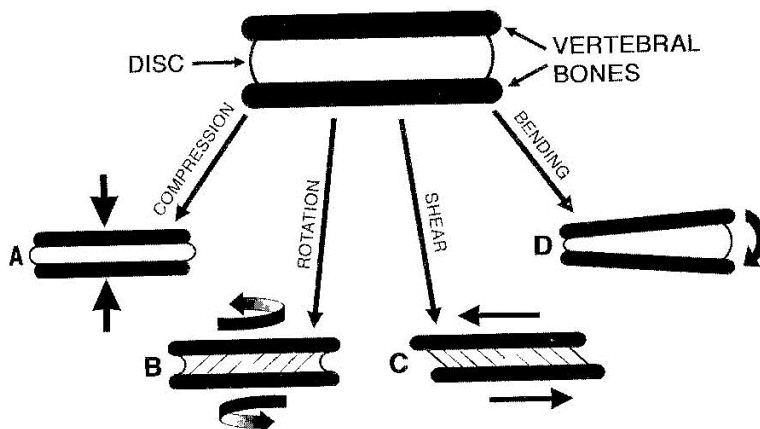
### Anatomy of the Spine

- The human spine is a complicated structure that is made up of 7 cervical (neck), 12 thoracic (chest) and 5 lumbar (lower back) vertebral bones, the sacrum and the coccyx (tail bone) at the lower end of the spine. Most of the injuries or pain occurs in the lumbar region. These vertebral bones interlock with one another through the facet joints and discs and are stabilised by ligaments and complex layers of muscles.
- The discs are tough, durable structures that act as cushions between the vertebral bones. As one ages, the water content of the discs decreases, and the discs lose their pliability and resilience.

### The Back and the Golf Swing

- During a golf swing the discs and ligaments of the spine are subjected to tremendous stresses, including:

- Compression
- Rotation
- Shear
- Side bending



- All those stresses that I have discussed before may lead to the different types of low back pain. Some of the more common types of LBP include:
  1. Mechanical low back pain, due to injury to the ligaments and muscles, leading to a common condition called Myofascial pain syndrome.
  2. Discogenic low back pain, originating from the disc.
  3. Arthritic low back pain. Repeated spine hyperextension during the follow-through phase can lead to degeneration and arthritis of the facet joints, causing stiffness of these joints.
  4. Stress fractures of the lower back, due to shear stress and repeated hyperextension.

## **MANAGEMENT OF LOW BACK PAIN**

- The management of the different types of low back pain vary a great deal. It is paramount that a proper evaluation/examination of the patient is done by a qualified musculoskeletal physician/physiotherapist.
- Having had a detailed examination, further investigations can be done to confirm the initial diagnosis and not to make the diagnosis.
- The physician needs to have a clear understanding of which investigations are the most appropriate for the different types of LBP.

## **TREATMENT OF L.B.P.**

- Reassurance, rest and medication in the acute period.
- Physical therapy modalities, when appropriate, comprising of Muscle Energy/PNF stretching or acupuncture.
- Oral steroids, cortisone or trigger point injections.
- Prolotherapy injections have also been shown to be effective in chronic back pain.
- Surgery is indicated in discogenic low back pain that has not responded to all/any of the above measures.
- Golf fitness programme, comprising of stretching for flexibility, core stabilisation and strengthening of the important golf muscles.
- Using the proper back mechanics to avoid further stresses on the back.
- Lessons from a golf pro to improve/correct your golf swing.