



FITforeGOLF™

Better Golf through Better Health

Education Series

LOWER BACK PAIN IN GOLF

Causes and Cures

Understanding how to manage and prevent golf related low back pain.

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FITforeGOLF™

LOWER BACK

PAIN IN GOLF

About this Brochure

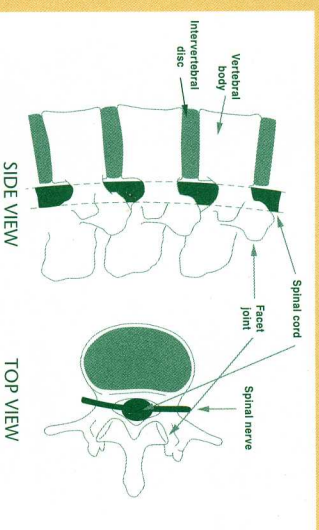
The purpose of this brochure is to educate golfers on how to avoid golf-related lower back pain. The brochure is divided into 3 parts. The first explains how the golf swing creates stress on the lower back. This is followed by special tips for minimizing stress on your lower back when not swinging a club (e.g. bending over, transporting your clubs, etc.). The final part of the brochure outlines other important tips and drills designed by golf professionals, physical therapists and research scientists to improve your swing while decreasing stress on your spine. A golf specific exercise program to improve the stomach and back muscles can be found in the POWER UP Your Golf Game brochure (ask your local FITforeGOLF™ Affiliate for details).

Low back pain is the #1 problem among recreational and professional golfers.

Stress to the Lower Back

Injuries to the low back account for the largest proportion of golf ailments, especially amongst male players. The development of low back pain (LBP) in recreational golfers has been attributed to poor swing mechanics, excessive practice, and poor physical conditioning.

The bending and twisting nature of the golf swing creates considerable stress on the lower back. In fact some of the forces produced on the low back during the golf swing motion are **DOUBLE** the safety standards set by occupational health experts for industrial workers. Recent research has shown that the trail side (right side of a right handed player) of the lower back is more likely to be injured. The main structures affected are the intervertebral disc and facet joints. Injury to these structures can result in pressure on the very sensitive spinal nerves.



Anatomy of the Spinal column

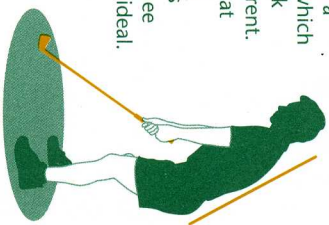
SET-UP FOR POWER

An athletic set-up not only increases the efficiency that key golf muscles, such as the abdominals and hip muscles, are able to be used, but also reduces the risk of injury to the lower back.

Increased low back stress can occur if the hip joints are not used properly during the swing. The hip joints are very large and strong joints while the spinal joints are smaller and more prone to injury. In order for the hips to powerfully rotate through the backswing and follow-through, BOTH feet need to be turned out 25-30 degrees at set-up.

Most of us know the importance of bending the knees when lifting a heavy object. The golf swing, which also involves very powerful back muscle contractions, is no different. Keeping the knees too straight at set-up forces the trunk to bend forward more than normal thus increasing low back stress. A knee bend of about 25-30 degree is ideal.

Good set-up posture is critical for minimizing lower back stress



USING THE RIGHT MUSCLES

The abdominals are some of the strongest muscles in the body. In addition to rotating the trunk, contracting the abdominals helps brace the spine thus protecting it from injury. The POWER and PROTECTION offered by the abdominal muscles makes them **the most important golf muscles in the body**. Learning to use these muscles more effectively is very important for optimal performance and injury prevention.

Using your Abdominal muscles in your swing

- A very simple way of increasing the amount of abdominal muscle activity during the golf swing is to GENTLY tighten your abdominal muscles just before starting your backswing.
- To do this correctly, address the ball with good posture then lightly draw in your belly button about 1 cm (1/2 an inch). You should feel your stomach muscles tense as you do this. The low back and pelvis SHOULD NOT MOVE when the stomach muscles contract.
- This gentle contraction protects your lower back and prepares the abdominal muscles to contract on the downswing and follow-through thus creating powerful trunk rotation. Your swing may never be the same!

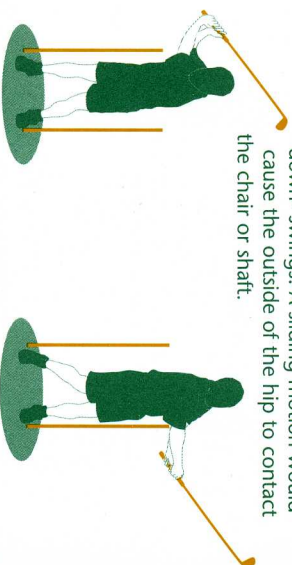
The abdominals are the most important golf muscles in the body.

MINIMIZE HIP SLIDE

During the downswing, the hips typically slide towards the target causing the lower back to side bend or tilt to the right (right handed golfer). It is this side bend motion that is believed to be a *prime cause of back pain amongst golfers*.

Golfers using a **steep swing plane** and those who finish with their backs **excessively arched** (reverse "C") tend to use a high amount of hip slide at impact.

A good drill for controlling hip slide while allowing the hips and trunk to rotate through impact is to place a golf club shaft or back of a chair immediately to the outside of each hip. The purpose of this drill is to concentrate on rotating rather than sliding the hips during the back and down-swings. A sliding motion would cause the outside of the hip to contact the chair or shaft.



Keep the hips inside the shafts throughout the swing.

FLATTEN THE SWING PLANE

Swing plane refers to the path the club is moved through on the back and down-swing. A steep swing plane tends to push the hips laterally during the downswing causing an exaggerated hip slide at impact.

An overly steep swing plane can be caused by a slouched set-up posture, and increased separation between the trailing (i.e. right) elbow and the trail side of the body as the backswing progresses.



Flat swing plane



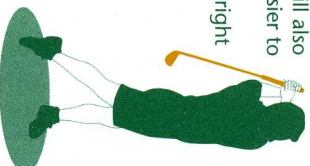
Steep swing plane

A drill that can be used to flatten the swing plane is to practice taking a full backswing while keeping a head cover tucked under your trail side under arm. If the swing plane gets too steep, the head cover will fall to the ground. Another way to flatten the swing plane is to set-up with about 25-30 degrees of knee bend (see Set-Up For Power).

UPRIGHT FINISH POSITION

Finishing the golf swing with a relaxed upright posture is very important for reducing lower back stress. An arched (reverse "C") position puts excessive stress on the facet joints of the low back. An arched finish is usually caused by an excessive hip slide on the downswing.

There are several ways in which to avoid the reverse "C" finish position. One method involves "stepping through" on the follow-through. By allowing the trailing foot (right) to step forward after impact, the spine does not have to arch backwards to maintain balance. Reducing hip slide, swinging with relaxed arms and ensuring the front foot is turned out 25 - 30 degrees will also make it easier to finish in a relaxed upright posture.



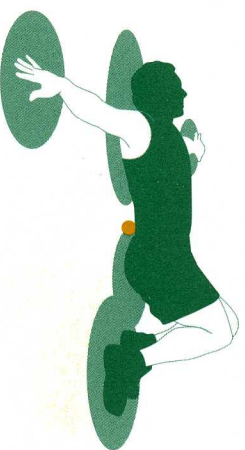
Proper finish position



Reverse "C" finish position

RACQUET BALL SELF MASSAGE

The following exercise is an excellent way to massage and loosen the lower back. Lie on your back with your knees bent. Place a pair of racquet balls (or old tennis balls) under your spine at about the belt line. The balls should be about 3-4 inches apart. While keeping your shoulders in contact with the floor, rock your knees slowly from side to side for 1-2 minutes (shown). Return to the start position. Now slowly bring one knee up towards your chest (not shown). Use your hands to help pull your knee close to your chest. Slowly lower the leg back down. Repeat several times on each leg. The pressure of the balls should be slightly uncomfortable but NEVER painful.



Consult your physician or physical therapist if your back pain is intense or prolonged.

OTHER PRECAUTIONS

In addition to the stresses caused by the swing, there are other movements or situations that may irritate your back during a round of golf.

PUSHING VERSUS PULLING YOUR CLUBS

One of the best methods for reducing stress on your back while golfing is to transport your clubs using a cart that rolls on wheels. **Golfers with LBP should push rather than pull their clubs (see exception for downhill terrain).** When pushing, the resistance provided by the cart can be kept closer to the body. It is also easier to keep this resistance directly in front of the body rather than to one side. Pulling the golf cart causes the body to twist slightly as the cart tends to track more to the side. **NOTE:** On downhill sections, it is safer to keep the cart behind rather than in front of the body.

CARRYING YOUR GOLF CLUBS

Carrying clubs has been shown to cause the spine to shrink slightly during a round of golf. Golfers with LBP should therefore be careful when choosing this method to transport their clubs. If you are going to carry, use a light-weight bag with a double shoulder strap to evenly distribute the weight. Also, lighten the load as much as possible by removing objects from your bag you rarely use (e.g. that 2-iron!).

IMPORTANT - READ THIS!

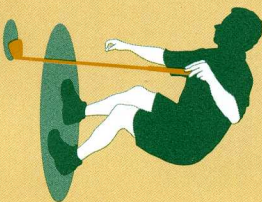
RIDING IN MOTORIZED GOLF CARTS

Golfers with LBP should be careful when riding in a motorized golf cart. Sitting is one of the worst positions for your spine, especially while driving over rough terrain, as it dramatically increases pressure on the discs in the lower back. Another problem with riding is that you don't get the warm-up and calorie burning benefits that come with walking. If you must ride, it is a good idea to be the driver as holding on to the steering wheel will give your back some support, plus you can pick the smoothest path and better anticipate the bumps.

BENDING OVER

When bending over to place or retrieve your golf ball, it is important to:

- Stand with one foot forward of the other.
- Use your golf club to support the weight of your upper body.
- Gently tighten your abdominal muscles.
- Bend from the knees and hips. **Never** bend over at the waist with straight legs.



Proper technique when bending over

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FTYforeGOLF™ delivers a multifaceted program designed to help keep you injury free and add years to your game. *The better the body the better the performance!*

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