Back Injuries in Golfers: A Simple Preventive Program

Golf is a recreational and professional sport enjoyed by millions of people around the world. The people who play golf vary from the sedentary and overweight to the extremely active and physically fit.

One of many nice things about golf is that it can be played throughout the lifespan. According to 1991 statistics from the National Golf Foundation (1993), the growth in golf participation was greatest among persons in their 50s, and the aging U.S. population indicates that this trend will continue.

Despite the relatively slow pace and relaxed nature of golf, there is a fairly high risk of injury. For amateur and professional golfers alike, back injuries are the most prevalent—and most limiting—of all injuries (McCarroll & Gioe, 1982). Nearly half of all injuries reported by amateur golfers are in the low back while 90% of all injuries suffered by touring golf professionals involve the back (Batt, 1993; Duda, 1989).

Golf injuries to the back may be related to poor physical conditioning, improper swing mechanics, overuse, preexisting back conditions, or any combination of these. Tissues commonly involved in golf injuries to the back include muscle, tendon, and ligament attachment sites, as well as the discs.

Recreational golfers are more susceptible to back injuries because they tend to be in poorer physical condition, play sporadically, neglect to warm up, and may have faulty swing mechanics. The senior golfer is also at increased risk due to age related declines in strength, flexibility, and coordination as well as increased body fat.

This article outlines a simple program for golfers who hope to prevent back injuries. The guidelines and exercises are easy to follow, require little time, and are relevant for both the touring professional and the recreational golfer.

**Flexibility**

Most golfers will agree that trunk rotation is important to performance. It has been shown that golf professionals have significantly more trunk rotation than amateurs (Jobe & Moynes, 1986). Improved trunk flexibility will increase trunk rotation, allowing the golfer to create greater club head speed and achieve greater distance for the ball.

Trunk flexibility is also crucial for preventing back injuries. Muscle tightness has been asso-
associated with higher injury rates in athletes, but a regular stretching routine has been shown to increase muscle length and reduce the frequency of strains (Bixler & Jones, 1992; Krivickas & Feinberg, 1996).

Flexible soft tissue structures in the back allow for greater ease and range of motion, are more adaptable to sudden and unusual movements, and do not reach their point of strain as quickly.

It is advised that trunk flexibility exercises be preceded by a 5- to 15-minute warm-up which may include walking, cycling, or easy jogging to help circulate blood to the muscles and prepare them for stretching.

Flexibility exercises should be performed at least 3 or 4 times a week, or every day if possible. Hold stretches at a point of slight tension for 20 to 30 seconds and repeat 2 or 3 times. Execute the stretches in a slow, controlled manner without forcing any stretch into a painful position. Careful attention should be given to proper form and technique. Breathe naturally and avoid bouncing.

The program outlined below focuses on 5 key exercises for back flexibility: cat stretch; knee-to-chest sequence; prayer stretch; spinal rotation; and hamstring stretches.

**Key Exercises**

1. **Cat Stretch**

   The cat stretch is a gentle way to practice pelvic rotation. It provides a non-weight-bearing flexion/extension stretch to the lumbar and thoracic areas. The cat stretch begins in a quadruped position with the pelvis in a neutral position. Next, the individual slowly alternates between an arched and a depressed back position with the pelvis rotating backward and forward (Figures 1a–c).

2. **Knee-to-Chest Stretch**

   The knee-to-chest stretches are designed to stretch the lumbar paraspinal and hip extensor muscles. During the single-knee-to-chest exercise, the individual keeps one leg out straight while grasping the other leg behind the knee and gently pulling it toward the chest (Figure 2a). For the double-knee-to-chest exercise, both knees are pulled toward the chest at the same time (Figure 2b). Optimal stretching is achieved by curling the head and shoulders toward the knee(s) during the stretch.

3. **Prayer Stretch**

   The prayer stretch may be used as an alternative or adjunct to the knee-to-chest exercise. Starting in a quadruped position with the back held flat, the individual sits back slowly onto the heels and lowers the chest as close to the knees as is comfortable with arms outstretched above the head (Figures 3a–c).

4. **Spinal Rotation Exercises**

   Spinal rotation exercises are designed to stretch and improve flexibility of the lumbar spine. In general, the farther the hips and spine are flexed, the higher the stretch will be felt in the lumbar or thoracolumbar area. The first spinal rotation exercise is performed while supine with knees bent. Both knees are rolled slowly to one side, as close to the floor as is comfortable. Repeat, rolling both knees to the other side (Figure 4a).

   The second spinal rotation exercise is executed in a supine position with both legs straight.