

[IMAGE]

## Understanding Golf Injuries and How to Prevent Them

By Robert Lucarelli, LMT

The majority of injuries that occur in golf result from unusual demands put on bones, muscles, tendons, ligaments and nerves, especially if you haven't been active for a period of time and/or if you don't know how to properly swing a golf club. Common golf-related injuries in professional golfers involve the wrist, followed by the back, hand, shoulder, and knee; while for amateur golfers, the most common injuries involve the lower back, followed by the elbow, wrist, shoulder, and knee.

Needless to say that's a considerable amount of potential injuries from an activity that doesn't involve any contact with another player! The good news is that by understanding the proper (and improper) way to swing an golf club and which exercises can prepare your body for injury-free golf, you can enjoy one of America's favorite leisure-time activities day after day, year after year.

### The Golf Swing: Exercises for Injury Prevention

Let's analyze the golf swing for a minute. There are actually three phases to the golf swing, each of which can cause injury if executed incorrectly. Additionally, there are specific exercises you can perform to help reduce your risk of hurting yourself during that particular swing phase.

Golf swing - take away - Copyright © Stock Photo / Register Mark *Phase 1: Take-Away*. The take-away consists of the set-up movement to the top of the back swing. During this phase, the most common potential injuries involve the thumb and wrist, particularly on the lead hand. Here is an effective workout for the muscles of the wrist, hand and forearm. To begin, stand with your feet shoulder-width apart holding a 5-pound dumbbell in your right hand. Keeping your arm to your side and using only your wrist, raise the dumbbell as high as you can and lower it as far as you can. Do two sets of 25 reps. Next, do another two sets of 25 reps, but while moving your wrist from side to side as far as you can. Repeat this entire workout with the dumbbell in your left hand.

An advanced workout for your wrists would be to take a barbell/dumbbells with a weight you can handle, anywhere from 10-45 pounds, and do three exercises (known as a "tri-set") back to back to back without rest. Start with your feet shoulder width apart and grab the weight with your hands facing down,

shoulder-width apart, held with each thumb. Reverse curl the weight up toward your body, flexing the forearm as you finish the movement at the top. Do 10 reps.

Next, hold the weight behind you, palms facing up and even with your gluteus maximus (your buttocks). The back of your hand should be touching the top of your buttocks. Raise the weight as high as you can without moving your arms; use your wrist only for 10 reps.

Golf swing - impact - Copyright © Stock Photo / Register Mark Finally, sit down on the bench and rest your forearms on your thighs. Do not allow your wrists to rest on your knees. Hold the weight with your palms up and move only your wrist vertically for 10 reps. Do not rest and perform another tri-set, but this time do 12 reps, and then finish the last set with 15 reps. Another option is to pyramid: increase the amount of weight while decreasing the number of repetitions. For example: 10 pounds for 15 reps, 12 pounds for 12 reps, and 15 pounds for 10 reps. There is an inverse relationship at play here: As you add more weight, you do less reps.

*Phase 2: Impact.* The next phase of the swing is the impact, which consists of the downswing and impact with the ball. The most common injuries during this phase are attributable to stress on the back knee and compression forces acting on both wrists. Additionally, the lead elbow and hand/wrist are often hurt during impact.

Golf swing - follow through - Copyright © Stock Photo / Register Mark In terms of exercises that can help prevent these injuries, leg extensions/leg curls and abduction/adduction exercises (almost all fitness clubs have equipment for these types of exercises), along with regular stretching and massage, are extremely effective for the legs. Triceps pushdowns using a reverse grip with the hands up is an excellent exercise for the triceps and will help to prevent injury to the elbows. High-intensity training (one set to muscle exhaustion for each exercise, using slow, deliberate movements) works well and is a safe method of training for all the exercises above. For the legs, do 15-20 reps; for the triceps/elbows, do 8-12 reps.

*Phase 3: Follow-Through.* Finally, there is the follow-through after impact. During this phase there is abdominal torque and risk of spinal injury. I recommend training the oblique muscles (essentially the sides of the abdomen) using a trunk rotation machine, twisting slowly in a circular fashion for 20-25 reps, and a lower back extension machine for 15-20 reps. Do not use heavy weights for these exercises and make sure to do them slowly and eliminate momentum. These exercises will help strengthen the core muscles and help prevent back injuries.

## **Other Ways to Reduce Injury Risk: Stretching and Cooldown**

Stretching and massage techniques can also help prevent injury. Always warm up before stretching to bring blood flow to the area. The analogy I like to use involves noodles: When you take noodles out of a package, the noodles are stiff and breakable; but place them in boiling water and they become flexible. A good way to warm up before a round of golf is to take a brisk walk and/or get a quick massage that includes techniques and stretches to increase range of motion. [Chiropractic flexion/extension and other techniques can also increase blood flow and improve range of motion, and many chiropractors now have massage therapists on staff.]

The right way to stretch: If you, as the golfer, prefer to do the warm-up and then stretch, you can begin with three sets of 10-15 deep knee bends [squats] and then walk a quarter of a mile. Next, perform a series of stretches. *Reciprocal inhibition* stretches, performed by stretching to a level at which your body innately says stop, is effective for increasing range of motion without overstretching and injuring yourself. When you reach the point at which your body says stop, contract the opposite muscle [antagonist muscle] and hold the contraction for several seconds; then release. There should be an increase in range of motion. Now hold the new position for at least 30 seconds, then move on to your next stretch.

Golf clubs home - Copyright © Stock Photo / Register Mark You can also go to the end of the stretch without pulling the muscle, just like reciprocal inhibition, but instead of contracting the opposite muscle, you contract the muscle you are stretching (known as the synergist muscle), hold for several seconds, and then drop down further into the stretch and hold for 30 seconds.

I recommend toe-touch stretches and side stretches. When doing the toe-touch stretch, you must keep a flat back. Do not round your back. When you drop down into the stretch, contract your gluteus maximus and hold the contraction for 6-7 seconds, then breathe and release and you will find yourself falling deeper into the stretch. Note: It is important to never hold your breath even during an Isometric contraction and always feel your breath releasing in and out of your nose, not your mouth. You should also breathe deeply through your diaphragm. The toe-touch stretch will increase flexibility in the hamstrings. Place one arm over your head and bend to the side to do the side stretch. Do this stretch in increments. Example: Go as far as possible without pulling the muscle, then contract the gluteus maximus muscle for several seconds; then release and drop into the stretch, holding for 30 seconds. Repeat 2-3 times on each side.

Cooling down after playing: It is imperative to do some simple breathing and stretching exercises after golfing. Example: Lie flat on your back and tuck your knees to your chest and breathe; hold for 30 seconds. Extend your arm in the supine position [palm up], grab your finger tips and pull your hand down; again, hold for 30 seconds. Next, extend your arm in the prone position (palm down) and grab your fingertips and pull toward you from the bottom position. Hold for 30 seconds. These simple exercises are essential to injury prevention following each round of golf, practice session, etc.

Injuries can happen at any time in any sport, but following these suggestions can certainly help you avoid severe and permanent injuries whenever you're golfing. Always consult your doctor before beginning any exercise program, and check with a golf professional to ensure your swing mechanics aren't putting you at risk for injury. After all, if you're going to golf, why not stay healthy enough to enjoy it?

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### **A Recipe for Disaster**

Why are so many golfers are injured every year - 27 million injuries annually, according to some estimates? Here's what Jeff Blanchard, DC, a chiropractor and golf professional who specializes in preventing and treating golf injuries, has to say on the subject: "The average [amateur] has no warm-up or stretching protocols for golf. They are swinging the club with violent, intermittent effort. If ever there were a recipe for injury, this would be it. In addition to intermittent "grip it and rip it" golf swings, many have varied amounts of pre-existing postural dysfunction and poor flexibility. When you add it all up, it's no wonder so many amateur golfers become injured. They are suffering from repetitive strain injuries due to lack of flexibility, postural instability and poor swing mechanics."

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