Golf Warm-Up

Golf has the highest participation rate among the few sports that older adults regularly engage in, and more are predicted to play in the next 10 years than ever before. Unfortunately, survey studies also show a surprising overall musculoskeletal injury rate among higher handicappers between 1.2 and 2.1 incidents per season, and 3.1 injuries per season for professional and lower-handicappers. For each of these injuries, there is a corresponding average 1-3 weeks of "down time". Part of the explanation for these surprising injury rates stem from the ballistic nature of forces invoked during the full golf swing, sometimes in combination with repetitive strain problems arising from extensive practice and improper swing form. Because of higher than normal injury rates, there is a clear injury prevention rationale for a proper warm-up prior to playing.

The golf swing with the body set-up in an "athletic" and stable upright postural stance, with a slight flex at the hips and knees with arms hanging down freely without tension in the shoulders is difficult for many individuals to assume due to limited flexibility, pain in hips, lower back, shoulders or knees. Skillful swing biomechanics requires additional flexibility, strength and balance to be successful. The violent nature of the golf swing allows some players to generate clubhead speeds in excess of 125 mph in less than 0.2 seconds while maintaining proper postural stability. This is no easy task even for the most fit golfer. Recreational golfers often lose balance with an incomplete follow through. Additionally, the full swing at maximum speed generates compression loads on the lower spine up to 7-8 times body weight. This level of lower back stress is comparable to forces produced
in sports such as rowing and weight lifting. No wonder low back pain is the most common golf injury!

**The golf swing itself is the most common cause of injury, especially for the recreational golfer!**

Several golf research studies suggest that adequate warm up— as opposed to the first shot of the match— is the ideal time to enhance swing mechanics and performance.

Almost every golf magazine emphasize the importance of warm-up. Differences in warm-up times range from 4 to 45 minutes. To not warm-up is believed to increase stress-induced injuries and reduce performance. One of the more engaging videos, released in 2001, shows professional golfer Miguel Jimenez’s unique warm-up routine ([www.cbssports.com/golf/eye-on-golf/25138921/watch-miguel-angel-jimenez-gets-low-while-warming-up-at-masters](http://www.cbssports.com/golf/eye-on-golf/25138921/watch-miguel-angel-jimenez-gets-low-while-warming-up-at-masters)). Almost without exception, every professional golfer engages in some form of warm-up both in the gym or at arriving at the course.

A number of warm-up research studies were conducted in the 1950's–1970's with confusing outcomes. Approximately 60% of the studies found some type of warm-up to be superior to no warm-up, 11% found no warm-up to be superior, and approximately 29% found no significant difference between different types of warm-up and no warm-up. These collective results seem to question common wisdom about the importance of warm-up. Follow-up research, however, using more appropriate research designs suggest a positive role for warm-up for golf.

### Enhancing Golf Performance With Effective Warm-Up

Benefits of warm-up prior to competition are summarized in the table on the left. One of the most striking findings is that proper warm-up can alter muscle temperatures to enhance increased muscle action— this translates to increased swing speed. Additional benefits accrue from ensuring that connective tissues are supple enough from stretching to support an adequate range of joint motion (ROM). Finally, there is the facilitation of coordinated motor pathways that occurs from rehearsal of specific swings. In particular, the first shot on most golf courses involves the driver that is usually swung as hard as possible; therefore, it is valuable to have already rehearsed the desired movements and incorporate any adjustments to accommodate painful or stiff joints.

Here's what most of us do. Get out of the car, swing a couple of clubs a few times and
go to the tee. And we wonder why we don't feel warmed up until the third hole? Below is a common sense warm-up program we all can do before tee time. Give it a try, I'm sure it will help.

**Simple Warm-Up Exercises That Work**

* Do not overstretch; you should feel a comfortable stretch in the targeted joint/muscle group but you should *not* feel any pain.
* Do not bounce; go to the farthest point you can without pain; hold for 15-30 seconds.
* While stretching do not hold your breath. Inhale deeply when you begin, then exhale slowly through the stretch. Continue to breathe deeply and try to stretch a little further with each exhale.

**Rotating Arm Circles** [Enhances shoulder blood flow; promotes relaxation; permits full ROM]

* Raise arms out to side, legs shoulder width apart
* Start with small circles with both arms, gradually increase circle size
* Hands should feel light
* Keep speed of movement moderate
* After 15 seconds switch directions and repeat for another 15 seconds
* Complete each direction twice

**Overhead Side-bend** [Improves ROM; improves full back swing; reduces back stress]

* Hold driver extended, overhead, just outside shoulder width, feet shoulder width apart
* Lean (bend) body to one side, feel stretch on other side in back and side
* Hold for 15 seconds; return to start and immediately repeat on the other side
* Repeat stretch on each side 3 times each
**Golf Rotations** [Prepares proper sequencing of swing, while warming muscles]

* Place club over shoulders behind head on neck with hand at each end of the club
* Assume golf posture and rotate upper body back and through as if you are making a full swing with moderate rotation.
* Keep lower body quite still and feel the stretch in mid section ("core")
* Make 10 "swings" at moderate speeds

**Partial Squat** [Increases blood flow and circulation; permits body to make a relaxed, comfortable first swing; Increases hip range of motion]

* Feet shoulder width apart
* Place club standing in front of you and hold with both hands for balance
* Lower body by bending at the knees not hips; only bend about 20 degrees
* Keep upper body very erect; you should feel activation of the thigh and calves
* Raise up and repeat 15 times

**Glute Bridge** [Strengthens hamstrings and lower back]

* Lie face up with arms out to sides; knees bent and toes up
* Squeeze glutes (butt muscles) and thrust hips upward until body is in a straight line from shoulders to knees
* Repeat 10 times
**Hip Cross Stretches** [Stretches muscles and tendons in hips and lower back]

* Lie face-up on the ground with arms at sides, knees bent, feet wider than shoulder-width apart, heels on ground; cross one leg over the other
* Rotate top leg til sole of foot touches ground; keep trying to rotate hips as fas as possible; keep shoulders on ground; abs tight; keep head still
* Return to start position and change legs and repeat on other side
* Repeat six reps on each side