

Bodies in Motion

TOTAL HEALTH CENTER NEWS LETTER



Call us at (269) 968-0888
Mon to Thurs 7am-7pm
Fridays 7am-4pm

“Expert Care with Caring Hands” Volume 4

Total Health Center is a full service physical/occupational therapy clinic where expert patient care is our first priority. We treat a full range of orthopedic and neurologic conditions. Our clinic has therapists with advanced training and specialist certifications. Our goal is to help you, the patient, reach your full potential.

Golfing and Lower Back Pain

The most common injury to both amateur and professional golfers involves the lower back. Approximately 65-80% of golfers have disabling back injuries at some point in their career. Golf is not considered a strenuous sport but the golf swing subjects many parts of the body, especially the lower back, to large stress loads. Golf injuries tend to develop from overuse, poor physical conditioning, lack of appropriate warm up, technical swing errors, and accidents secondary to terrain and lack of etiquette. Recreational golfers often play sporadically and without proper warm up. They may have relatively poor mechanics which makes over practicing dangerous.

Different activities we perform variably increase the load on the lumbar spine. For instance the load on the spine is nearly 0 when lying quietly and increases to 400 N when standing. Loads can be greater than 4000 N with vigorous activities. Running produces a peak compressive load of 3 x body weight and rowing, seven times body weight. The golf swing by comparison, develops a peak compression load of more than eight times body weight in both amateurs and professionals. In general, there are some differences in loading between amateur and professional golfers with amateurs' poorer swing mechanics generally resulting in larger loads.

The spinal loads developed by a golf swing are similar in magnitude to loads that produce disc disruption in cadavers. The speed at which the spine is loaded during the swing serves as a protective mechanism for the disc. A normal disc may be able to withstand these compressive loads but with aging the disc degenerates and loses its viscoelastic properties, increasing its susceptibility to injury and increasing the amount of load resisted by the facet joints and posterior vertebral structures. This increased facet loading may lead to development of lower back pain and disability.

It has been shown that the lumbar paraspinal muscles activity averaged 92% of the maximal voluntary isometric effort available to the muscle. The loads on the lumbar spine during a golf swing and muscle forces generated may pre-dispose the golfing population to muscular strains, herniated discs, spondylolysis, and degenerative facet changes with associated spinal stenosis. The most common cause of lower back pain in golfers may be lower back strain or lower back muscle spasms. Thus, it is important for golfers to perform a proper warm-up and off-course strengthening and stretching programs prior to commencing play.

There are 2 main types of golf swings. The classic swing uses a one-piece takeaway in which the arms, shoulder, and hips move as a unit, causing less torque and shear through the lumbar spine. At the end of the follow-through, the spine is generally straight and facing the target. In contrast, the modern swing uses a segmental takeaway. The arms begin the swing, followed by the trunk and then the hips. This improves club head speed and allows the golfer to hit a higher shot but creates a significant amount of shear force in the lower back. The modern swing is more strongly linked to lower back injuries. Because of the shear forces generated in the spine with the modern swing, it is recommended that



Tracy Winnie, MPT, OCS
THC Physical Therapy
thcincbc@sbcglobal.net
www.thcinc.biz

Healthy Recipe of the Month

Citrus Salmon with Broccoli

INGREDIENTS:

1 Lemon
1 Tbsp. sugar
1/2 Tbsp butter
4 4 oz. skinless salmon fillets
1Tbsp snipped fresh dill
1 bunch broccoli
4 cloves garlic, peeled and sliced
lemon slices and fresh dill

Slice 1/2 of the lemon into thin slices; set aside. Juice remaining 1/2 lemon into a 1 cup measure; add water to equal 1/2 cup. Stir in sugar. Set aside.

In 12 inch non-stick skillet, heat butter over medium-high heat. Sprinkle salmon with salt and pepper; add to skillet. Cook 2-3 minutes or until the bottom is golden; turn fillets. Add lemon juice mixture. Top with snipped dill and lemon slices. Reduce heat to medium; cover and cook 5-6 minutes more or until fish flakes easily when tested with a fork.

Meanwhile, in another skillet heat 1 Tbsp. olive oil. Quarter broccoli lengthwise into long spears; add

people use a classic swing after lumbar surgeries.

Limited mobility or flexibility in areas other than the spine itself can pre-dispose golfers to injury. For instance, a golfer with limited hip rotation will compensate by putting increased stress on the lumbar structures in order to get adequate rotation for the swing. Our bodies tend to take the path of least resistance to complete a motion and our bodies are experts at compensation for joints and muscles that are not functioning adequately. Therefore, rehabilitation and preventative programs must take into account overall joint function and not look at the spine in isolation.

Overall conditioning for golf needs to take into account trunk flexibility to decrease the tendency toward lumbar strain. Shoulder mobility, especially horizontal adduction (cross body reach) is important to decrease risk of rotator cuff dysfunction and impingement. Hip mobility is important for decreasing rotational stress on the lower back, knees and ankles. Strengthening is another very important factor and programs should focus on spine extensors as well as abdominal obliques and transverse abdominis. It is also important to strengthen the rotator cuff, wrist flexors/extensors and to perform closed chain LE exercises.

Physical therapists can help identify musculoskeletal problems contributing to golf injuries of the lower back and extremities. We are experts at biomechanics and recognizing how limitations in body structures can affect the whole body.

Exercise of the Month

Lumbar rotation, bent leg cross over

Lie on your back with 1 knee drawn toward your chest. Slowly bring the bent leg across your body until a stretch is felt in the lower back/hip area.

Hold 30 seconds and repeat 3 times each leg.



to the skillet along with garlic. Cook over medium heat 8-10 minutes, or until crisp-tender, turning often. Serve salmon with broccoli; pour pan juices over salmon. Serve with additional lemon slices and fresh dill

Patient Testimonials

Not only was the therapy effective, I greatly enjoyed the pleasantness and helpfulness of the entire staff. Except for the crunches, I even enjoyed the gym. Thanks so much.
James

You are all a great team.
Kawinn