

Golf Injuries

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Special points of interest:

- Golf is a sport which is seemingly benign but is responsible for many injuries.
- Injuries related to golf are often due to inadequate conditioning, faulty technique, overuse and improper equipment.
- Injuries should be treated as soon as possible to prevent the development of chronicity.
- Proper technique and conditioning are essential in preventing injuries.
- There is a significant mind-body connection in golf which is amenable to training.

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Golf Injuries– More Common Than You May Think

Golf is a sport that has grown immensely in popularity over the last several years. It is a sport that involves both sexes and all age groups. The majority of golfers tend to be above 40 years of age.

Golf has traditionally been considered as a benign activity due to the lack of extreme physical exertion compared to other sports. It is a sport that nonetheless requires both physical and mental conditioning. The fact that the sport is not so benign can be seen from the reality that many golfers sustain injuries during the golfing season.

Most golfers do not report injuries right away and many persist in playing despite their injuries. This creates a situation where injuries have a tendency to be under reported. It is estimated that the average golfer loses 5 weeks of play in any given year due to injuries.

Back and elbow injuries seem to be most common in amateur male and female golfers as compared to lower back and wrist injuries which are more common in professional male and female golfers. The next most common sites of injury include the elbow (both medial and lateral epicondyles) and the shoulder.

In most cases the injuries can be traced to one of several causes such as poor technique, overuse, poor conditioning and inappropriate equipment .

It is now becoming more apparent to lay golfers that immediate and comprehensive treatment of injuries is essential in keeping them functioning optimally and preventing injuries from becoming chronic. While OTC treatments with NSAID's and braces can provide symptomatic relief for many conditions, these do not address the underlying cause of injury and therefore



Proper conditioning and technique are essential in preventing golf injuries.

will not provide a cure. Relative rest, appropriate rehabilitation, conditioning and instruction on proper technique and equipment are the best ways to treat injuries and prevent them from becoming chronic.

Finally, there is a significant mind-body connection in golf which is trainable and can significantly improve performance.

Swing Technique

Proper technique is extremely important for prevention of injuries. It is important to find a good golf pro to review one's swing when starting golf for the first time or even returning to a golf season.

To allow for good technique, proper conditioning is essential as conditioning allows one to

carry out the proper technique without undue stress to the body.

Modifications may have to be made to the basic swing depending on the flexibility strength and pre-existing injuries in a golfer such as a back problem, osteoarthritis of the knee etc.

The goal with respect to technique is to develop a swing which is consistent and produces good results without placing unnecessary stress on the body. *Practice alone makes permanent. Proper practice under the guidance of a golf pro and with the support of proper conditioning makes perfect.*



Overuse and improper technique are the most common cause of elbow injuries in amateur golfers.

Back pain is the single most common injury among amateur golfers and is preventable.



Overuse, previous injury and degenerative rotator cuff pathology contribute to shoulder injuries in golf.

Elbow Injuries

The most common tendon injuries in amateur golfers are related to the elbow. Among right handed golfers the left arm usually develops a lateral epicondylitis due to overuse and improper technique. Medial epicondylitis is more prone to developing in the right elbow due to faulty technique such as hitting the ground as well as overuse.

It is apparent especially the case of the elbow that proper technique and conditioning are essential in preventing as well as treating these injuries.

Controlling of symptoms alone with the use of braces oral or topical NSAID's and/or cortisone injections without addressing conditioning and technique will only lead to recurrence of symptoms and the possible development of a chronic tendinosis. Once tendinosis develops rehabilitation becomes more difficult and is less likely to be successful. This may lead to the need for surgery.

Golfers presenting with any seemingly mild tendon injuries

should be advised to address the problem appropriately as soon as possible and to refrain from playing through the pain.

Golfers traditionally have been slow to catch on to this line of thinking as they do not want to lose time from their season. Proper education as to the potential for aggravation of symptoms and chronicity is usually enough to get most golfers to accept a plan of at least relative rest and rehabilitation.

Back Pain

Back pain is the most common injury in both male and female amateur golfers.

Amateurs have been found to use a higher percentage of their muscle reserves when swinging a due to less efficient technique compared to professionals and are therefore thought to be more prone to injuries of the back.

Back problems among amateur golfers include muscle strains, disc injuries, facet irritation

and aggravation of osteoarthritis including DDD, facet OA and spinal stenosis.

Treatment of back problems depends on the diagnosis and usually involves relative rest and rehabilitation.

It is important especially due to the age of the majority of golfers that other causes of back pain be kept in mind. Atypical symptoms such as night pain and pain not related to activity should prompt a full physical

exam and immediate investigations including a lumbar spine radiographic series (include oblique views to uncover facet pathology). In other cases failure to respond to appropriate treatment should also prompt further investigations.

A comprehensive conditioning program which is individually tailored for any preexisting conditions as well as proper technique and equipment is the best way to avoid back injuries.

Shoulder Injuries

Compared to other sports golf is not considered an overhead sport.

The golf swing, performed correctly does not put the shoulder at high risk for trauma. Most injuries of the shoulder are related to overuse injuries and faulty technique.

In golfers above 35-40 years of age the natural development of degenerative changes in the rotator cuff make these golfers

more susceptible to injuries in this area. This is especially so if the golfer has faulty technique and is not properly conditioned.

A history of shoulder problems and AC joint injuries may also crop up in the form of shoulder pain with golf despite proper technique and conditioning.

Rehabilitation, conditioning and review of swing technique is the appropriate approach with

golfers presenting with shoulder pain.

Further investigations such as x-ray of the shoulder and ultrasound or MRI may be indicated depending on the results of the initial assessment or lack of improvement with comprehensive rehabilitation and appropriate rest. These investigations may point to a need for surgical solutions.

Wrist Injuries

Wrist injuries are less common especially among amateur athletes. They occur more commonly among professional athletes and can be devastating to a professional career.

The majority of wrist injuries are overuse injuries of the wrist flexor or extensor tendons. In a right handed golfer the left wrist is more likely to be affected. Other conditions such as DeQuervain's tenosynovitis and an intersection syndrome are not uncommon.

Analysis of the golf swing reveals a significant amount of wrist activity involved in the

normal swing. Overuse is the more common cause in professionals. Amateurs should be suspected of faulty technique in addition to overuse.

Relative rest and rehabilitation is sufficient in most cases. DeQuervain's tenosynovitis usually requires topical or injected steroids in addition to splinting and rehabilitation.

Some of the technique faults which lead to wrist injuries include improper placement of the hands on the club as well as over gripping (too tight) and poor swing technique.

The most common bony injury in the wrist is a fractured hook of hamate. Pain along the ulnar aspect of the wrist or with flexion of the ring or 5th finger should raise suspicion of this injury. A carpal tunnel or hook of hamate view on plain films or a CT scan may be necessary to see the fracture. Acute cases are treated with a short arm cast immobilizing the hand and wrist for 6-8 weeks. It is not uncommon for the diagnosis to be missed initially in which case fibrous or non-union results and surgical excision may be necessary if the patient remains symptomatic.



Wrist injuries in amateurs are usually due to technique issues as opposed to professionals where overuse is usually the cause.

Knee Injuries

Knee injuries do not seem to play a major role in keeping golfers from their activities.

The most common knee conditions which can cause problems for golfers include osteoarthritis of the knee as well as meniscal tears. Patellofemoral syndrome while present in many golfers often does not limit them unless they insist on

walking the course.

Golfers with partial or full joint replacements may require extra conditioning and some modifications to their swing technique to be able to continue playing golf without incurring injury.

Education of the golfer as to any preexisting degenerative

changes in the knee, a strong rehabilitation program, knee braces, custom foot orthotics, injection of joint lubricants (viscosupplementation) and supplementation with glucosamine and chondroitin may be helpful treating many of the knee problems related to degenerative changes in the knee.

Suspect hook of hamate fracture when a golfer presents with pain or tenderness of hypothenar eminence.

Foot Conditions

Problems which arise in the foot and ankle vary from minor issues such as blisters, contact dermatitis and tinea pedis to other issues which can cause more prolonged symptoms such as Morton's neuroma, hallux rigidus, hallux valgus, plantar fasciitis and Haglund's deformity.

As is well known by any golfer each foot functions differently in golf. The differences seen in the force plate analysis of the

feet during a golf swing is quite dramatic.

Ensuring proper technique will help reduce the chances of injury.

Preexisting conditions such as bunions, hallux rigidus, Haglund's deformity may require modification in shoe wear and/or the use of custom foot orthotics prior to starting the season.

Proper fitting shoe wear with good support and breathable cotton socks will prevent other injuries such as blisters, tinea pedis and possibly dermatitis.

Standard treatment for Morton's neuroma, plantar fasciitis and other foot problems with proper shoe wear, rehabilitation and orthotics is usually sufficient.



Well fitting shoe wear and control of previous biomechanical faults and conditions is important in the treatment and prevention of foot injuries in golf.

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Toronto, Ontario
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Proper training including physical and mental conditioning as well as instruction in proper swing techniques are essential for golfers to adopt in order to prevent injuries.



The mind-body connection in golf cannot be overstated. It can and should be trained.



Golf After Joint Replacement

The two most common joints replaced are the hip and the knee.

Studies have indicated that most orthopedic surgeons have **not counseled their patients to avoid** golf after total hip or knee replacement. The recommendations of course depend on the individual condition of the patient and the prosthesis.

Most golfers who have expressed an interest to return to golf after total knee or hip

replacement have been able to return successfully. Golfers have even returned with bilateral hip replacements although these tend to be higher-level players who have the advantage of excellent technique, rehabilitation and conditioning programs.

After total joint replacement it is extremely important to emphasize a total body conditioning program specific to golf in addition to specific rehabilitation of the joint replaced. By

making sure all elements of the kinetic chain are optimized, excessive and unnecessary stresses are taken off the joint replacement. This will provide a safer and successful return to golf.

Appropriate restrictions and modifications of the swing and equipment may also be necessary.

Partial rest of the joints can be obtained by taking a cart instead of walking the course.

Conditioning for Golf

Most of the injuries in amateur golfers are related to faulty technique poor conditioning and overuse. Previous inadequately treated injuries are also causative.

A common error among golfers is to use the driving range for conditioning at the start of the season. This not only provides inadequate conditioning but is a perfect set up for overuse injuries. Many of these injuries can

be prevented by proper conditioning. Due to the age of many golfers certain limitations may be present which require the combined advice of a rehabilitation professional as well as golf pro.

Optimally golfers should begin a conditioning program at least six weeks prior to commencing golf if there are no significant limitations or conditions which require special attention. If not

started prior to the season conditioning at any time is better than no conditioning at all.

For the family doctor who is interested in helping their patients stay active and prevent injuries, it is advisable to raise the issue of pre-season conditioning during a routine office visit or annual physical exam. Patients appreciate the concern and attention when referred for such services.

The Mind-Body Connection in Golf

Golf is as much a game of concentration and control as it is of physical performance. High level golfers often report that "it is my mind that is swinging rather than my body".

Being able to focus the mind is extremely important in carrying out a swing with accuracy and reproducibility. Negative ruminations about previous performances and the day's stresses will produce negative emotions and upset concentration limiting the ability to focus. This will in turn decrease performance. Conversely the situation may conjure up negative emotions which then have

a negative effect on the golfer's thoughts, upset concentration and reduce the ability to focus. Those that are able to "swing from the mind" have learned how to control their thoughts and emotions so that their minds are free to focus on the shot.

Focusing on positive thinking is known to help the golfer concentrate and perform at a much higher level. Adoption of a relaxed breathing pattern is also essential in inducing relaxation and helping the golfer focus. Both of these activities need to be trained.

Mind-body conditioning is often absent in golf conditioning programs. At our centre we employ breathing, relaxation and focusing techniques with biofeedback in our golf conditioning programs. This helps golfers relax, focus and gain control over their thoughts, emotions and their swing. More importantly, once golfers learn how to relax and focus their minds in golf they can carry these skills into daily activities improving their concentration, effectiveness and reducing daily stress levels.