



Improve Your Manual Handling Handicap – Safer Manual Handling for Golfers

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supported by Gareth Milner Director of Osteopathic Solutions



## Introduction

Golf is a club-and-ball sport in which players use various clubs to hit balls into a series of holes on a course in as few strokes as possible. The modern game of golf originated in 15th century Scotland. The 18 hole round was created at the Old Course at St Andrews in 1764. Golf's first major, and the world's oldest tournament in existence, is The Open Championship, also known as the British Open, was first played in 1860 in Ayrshire, Scotland.



This year's Open Championship was won by my fellow Irishman, Shane Lowry (shown above with the trophy) at Royal Portrush Golf Club

As you may know, golf has many health benefits.

Golf is good for your mind - As physical as golf can be, 90% of the game is mental. An 18-hole round is basically one long mental exercise, constantly making you think and forcing you to stay focused on the task at hand. Golf can also help relieve stress, anxiety, and even depression. Director of Osteopathic Solutions Gareth Milner finds this challenging sport a great escape from real life, and one that helps generate the healthy state of mindfulness.

Golf is a friendly sport –The game of golf is a lifelong endeavor. It is a game that young and old alike can enjoy, and it is a game that many of us will play for as long as we are physically able to swing a golf club. What other sport can claim that? And while posting a good score is always a lot of fun for an avid golfer, it's those who we play with, our friends, that make golf such a great game. If you enjoy golf, you want to share it with other people who enjoy golf, and as a member at a golf club, that's just what you'll get. These people already have something in common with you, they also love golf!

Golf is good for your body. The average course requires a person to walk over 5 miles; carrying or pushing a bag and walking up and down different undulations. This can be a great workout, and can burn up to 2,000 calories depending on how flat or hilly the course is. Even if you are taking a cart, the golf swing itself is a full body workout, using arms, legs and core muscles.

Despite golf being a great workout on your body, if the manual handling tasks involved are not carried out with 'BackSafe' Manual Handling technique and practice, it can reap havoc for your musculoskeletal system. Additionally, people who suffer from chronic or recurrent episodes of lower back pain can be frustrated because the pain hinders their ability to play golf (ask Tiger Woods).

If you are an avid golfer and want to continue playing for as long as possible (with no aggravation caused by future or current bothersome pains and aches) it is essential to apply our BackSafe manual handling techniques and practices which will be discussed within this blog. As well as focusing on biomechanics of the golf swing – discussed later in this blog (reducing the physical loading on the musculoskeletal system), having a focus also on perfecting your lifting, carrying, lowering, pushing and pulling while playing this great sport, and you will be striking golf balls comfortably for many years to come, pain free. I will run through the usual tasks we carry out on the golf course, commonly in hazardous form, discuss the implications and also provide some useful 'BackSafe' practical solutions to keeping your musculoskeletal system at its prime.

### Arriving at the Golf Course

Picture this... it's a Saturday morning and you've just driven in to your favourite golf course, ready for a morning of hitting golf balls and the sun is beaming down. There's no better feeling for the golfer. The first thing you do is to reach for your golf bag.

In order to ensure this is a lifelong sport for you, I am going to discuss from your arrival at the course, through to your journey to the 19<sup>th</sup> hole, best practice manual handling to prevent any painful injuries occurring.

### Golf Equipment

Let's look at the load first, from the HSE's manual handling acronym TILE (Task, Individual, Load, Environment).



This Callaway Golf British Open Golfer's bag is an example of a bag, in which you hopefully *aren't* reaching for. It is unnecessarily bulky, large, thick and perhaps real leather (I assume, with the outrageous price tag it has!). It will add unneeded strain to your back.

The golf bag you should be reaching for is (as you may have guessed) a lightweight one.



This Titleist STADRY Golfer's bag (available to purchase from [www.americangolf.co.uk](http://www.americangolf.co.uk)) only weighs 2.7 kg and is an ideal example of a lightweight bag in which you should be using to hold your clubs, golf balls and everything else golf related.

#### Minimise its Contents

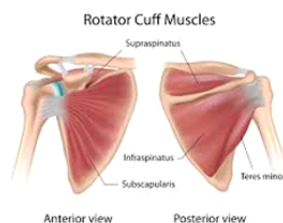
While we are on the subject of golf bags, as you are packing to go to the course that morning, it is important to minimise its contents. Golf Irons are heavy enough, as well as golf balls, without having unnecessary golf trip magazines, that jumper you squeezed in to the side pocket for when it gets chilly which you have never worn, and that old glass bottle of water you took from the restaurant terrace because you like how it looked the last time you played. Remember to always only take the bare minimum! Talking additional items will add weight in which your back can really do without.

#### Lifting your Golf Bag from your Car

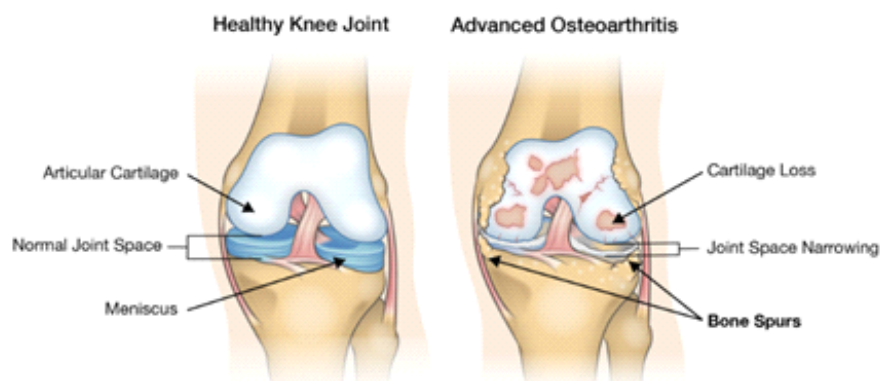
Is the photo below an accurate representation of how you might grab your bag out of the car boot (maybe distracted whilst talking with your friends)?



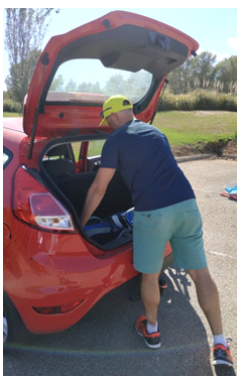
If so, please listen up! This stance and body position, believe it or not, is hazardous for your shoulder and knee and continuing to do this for many years to come, *will* eventually lead to chronic musculoskeletal injury and pain. Twisting to lift and lower a load with a handle places significant strain on the neck and shoulder rotator cuff muscles. The rotator cuff is a group of muscles and tendons that hold the shoulder joint in place and allow you to move your arm at the shoulder joint. If the rotator cuff becomes irritated or damaged due to repeated hazardous lifting (like above) the results will lead to pain, weakness and reduced range of motion and potentially a Rotator Cuff Muscle tear. Most tears are the result of the wearing down of the tendon that generally occurs slowly, over time and can be incredibly painful.



As well as this, weight bearing on the same right knee will commonly lead to painful osteoarthritis of the knee (see diagram below.) The symptoms of knee osteoarthritis include visible joint swelling and pain whilst you are active, either sharp in nature or aching; and if the knee is that degenerate, throbbing pain at rest.



The pains associated with the above injuries could very easily put a stop to your favourite hobby for a long period of time, if not always. Do the above symptoms sound familiar?



This unsafe practice above is another example of how you may take your golf bag from the boot, load bearing on one leg. Much like the lower back, the knees have a compromise between mobility and stability, which makes them a common site for injury. The primary motion of the knee joint is flexion and extension. Common injuries of the knee joint include cartilage tears, ligament sprains and tears, tendonitis and osteoarthritis giving symptoms such as aching pain at rest; sharp pains when walking up and down stairs, running and kneeling.

If you are suffering with a chronic knee injury already, the below photo demonstrates how you should carry out lifting and lowering of your golf bag to prevent further aggravation/ injury to the knee. For best practice lifting (and lowering) with a knee injury, always ensure the load is as close to your centre of gravity as possible i.e. keep the load close. A 'mini' squat should be performed (when lifting loads that are knee height or below if you suffer from a knee injury avoid full squatting and perform a semi squat).



Best Practice Lifting Technique (with a knee injury) from the Car Boot



Free from knee injury, the photo below is a prime example of how good lifting and lowering (with reference to the car boot) should be carried out.



Best Practice Lifting Technique from the Car Boot

Stand close to the load and grasp the bag comfortably and securely with both hands. This will spread the load weight across both shoulders and remove a significant spinal twist. This practice will significantly reduce spinal strain. Always remember these 5 key principles of Safer Manual Handling when lifting loads to reduce the likelihood of MSDs (musculoskeletal disorders) which are:

- Keep the load close
- Face square on to the load
- Bend through your hips & knees
- Use the powerful leg muscles
- Maintain your spinal S-shape



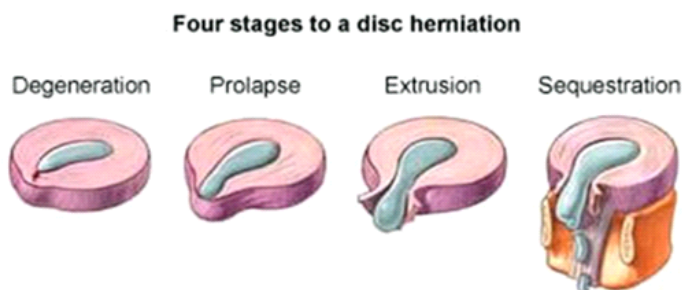
If you have a large and practical boot (like the Mercedes estate pictured above) you will easily be able to slide the bag comfortably and close to your body with minimal strain. If you tend to keep your golf bag in the front seat beside you, check out the below picture to see how accurate 'BackSafe' lifting from the front of the car should generally be performed. Again, grasping the load with both hands, being square on (no twisting) and close to the load. Simple, but very important stuff!



## Consequences of Hazardous Lifting Practice to the Lower Back

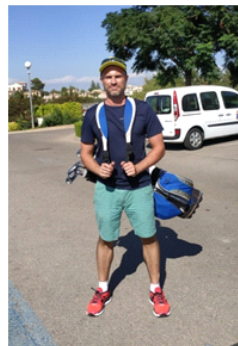
The farther away the load is from the body the greater the leverage effect acting on the spinal column. Greater muscular activity is required to perform the lift, and consequently great pressure is created on the lumbar discs. Coupled with the gel like nucleus of the disc (see images below) being forced into the rear of the disc and the weakening of the rear disc annulus, this eventually can lead to disc herniation, and eventual prolapse (Tiger Woods' recent spinal injury that has been operated on 4 times).

The below is an example of the four stages of what happen to the discs during this process. Ouch! You won't be playing much golf with any of these disc injuries.



## Carrying your Golf Bag to the Course

Do's - Now that you have taken your golf bag safely out of the boot. It's time to hit the course. What's the first thing you need to do? Ensure your bag is positioned comfortably and evenly on your back of course! Adjust the straps on the bag so you can feel that the weight is evenly and comfortably distributed. If you suffer from back pain, the way you are currently carrying your bag could be contributing to your pain. Postural imbalances can have serious consequences to the spinal discs and spinal cord (a very sensitive structure when compressed).



Don'ts – Carrying your bag on one shoulder



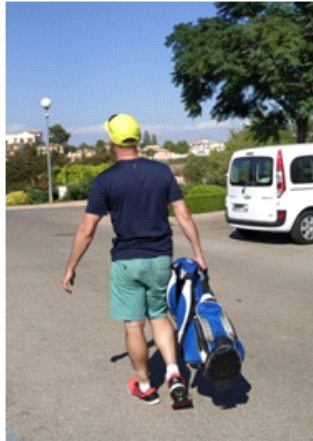
Shoulder: Many people tend to carry their heavy golf bag on one of their shoulders. Carrying a heavy golf bag on one side of your body leads to an imbalance in posture. It also presses muscles and nerves in the neck which run down to the shoulder and are severely strained due to constant and heavy loading. If proper care is not taken in time, this can lead to frozen shoulder, and shoulder (complex) and neck arthritis. Cumbersome golf bags may leave you with neck and shoulder pain, and even headaches (google cervicogenic headaches!).

Back: In the long term you might end up with soft tissue injuries and postural misalignment without even noticing.

Neck: When you carry a bag, your neck naturally leans away from the load to help carry and balance the weight. This causes tension on the carrying side of the neck and compression on the opposite side.

Legs: Increased pressure over the long term on your legs may lead to the development of arthritis. Carrying a bag makes you walk differently which changes the way forces act through the skeletal system which can cause problems. The greater the load of the bag, the more pressure on the leg joints. Over a long period, force on the knees can cause wear and tear and joint pain problems.

Another common carrying position (pictured below) is carrying the golf bag with one arm straight but with no load being carried by the other arm. Due to the weight of the load this pulls the spine away from the side it is being carried on. This creates an uneven load of the spine, straining the soft tissue structures, especially in the lower neck and lower back. The shoulder soft tissue structures holding the load (especially the supraspinatus muscle) will also be strained, increasing the likelihood of injury.



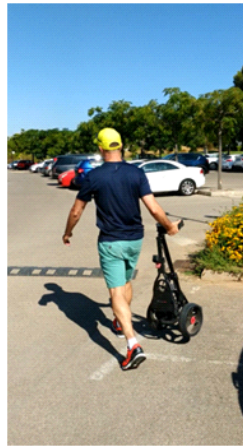
If you are still finding your golf bag weighty, even when positioned comfortably on your back and with the most minimal of contents, there is a helping hand. A Golf Trolley.



### Usage of a Golf Trolley

The Caddymagic 4-Wheel Folding Golf Trolley (shown above) and other manufacturers' similar products can help you on your way to a back (spine) friendly golfing experience. However, remember pushing and pulling if not done in a BackSafe manner can lead to musculoskeletal disorders. Many people may think they are saving their musculoskeletal system from injury by simply not having to carry their bag. This is not the case.

Firstly, let's look at manual handling of the trolley. The trolley when taken out of the boot (as in the same technique as taking the golf bag out of the boot) should be held close to your centre of gravity. The weight should be distributed evenly across your body, gripping the trolley securely with both hands. The trolley should then be lowered to the ground with squat practice. We would recommend with a semi squat as they are not overly heavy, and full squat technique is unnecessary.



### Hazardous Pulling of Golf Trolley – Facing Away from The Load

The most common unsafe pulling technique involves:

- Taking a narrow stance sideways to the load
- Gripping the load with one hand
- Forward bending & twisting the spine, leaning away from the load
- Using bodyweight and the shoulder/ arm muscles to pull the load

### Musculoskeletal Injuries

Supraspinatus muscle strains and tears are common when the load is pulled with one arm. Forearm muscle strains and tendonitis are also common. Knee injuries can occur as the bodyweight is placed on the furthest leg from the load, combined with a twist through the knee (which overstretches the ligaments).

### Hazardous Pulling of a Golf Trolley – Facing the Load

When loads are heavy, or high force is needed to pull the load, a backward bend of the spine is enforced straining the lower back (especially the L5/ S1 joints) and neck soft tissue structures. Even with moderate weight loads this is commonly performed and involves the following:

- Feet close together in a parallel stance (i.e. normal standing position)
- Little of no knee bending
- Backward bend of the spine using bodyweight
- Elbows in front of the body
- Straight arms, or minimal elbow flexion

### Musculoskeletal Injuries

Shoulder rotator cuff muscle strains and tendonitis are likely. Neck and lower back muscle strains and spasms are also likely, with this practice over time causing spinal joint degeneration (osteoarthritis) and chronic neck and/ or lower back pain.

### Best Practice Pushing & Pulling of a Golf Trolley

As with a squat lift of a Golf bag, the power in pushing comes from the legs, with most of the power coming from the glutes, the quadriceps and the hamstring muscles. There will be forceful contributions from the upper body muscles ('pecs', deltoids, biceps and triceps). As with all safer manual handling practices the aim is to maintain the natural spinal curves. Once you have assessed the load you should position yourself by:



- Facing the load with one foot in front of the other (the front heel should be just in front of the rear foot toes)
- Placing the feet your normal hip width apart
- Bending both your knees (no more than a semi-squat)
- Placing your hands safely on the load, wrapping your fingers around its corners or gripping the handles.
- Keeping your elbows close to your body, level with the trunk
- Keeping your spine upright, looking forward

To initiate movement of the Golf Trolley forward from a standing start drive your whole body forward with your leg muscles, keeping your elbows in, your spine upright and your head looking forward. The rear foot should step off the ground quickly so to avoid the elbows going away from the body initiating a forward bend of the spine. For heavier loads taking large steps initially will extract more power from the glutes. Once the load is moving a normal walking gait should be performed, maintaining the elbows close to the body.

Depending on the shape and size of the load, and whether it is safe in not seeing where the load is going, placing your back against the load can be 'BackSafe'. With one foot in front of the other, knees bent (to a semi-squat) and using the leg muscles the spine can be kept in an upright position minimising spinal strain.

So, you are now on the golf course, ready to take your first of many shots! (Hopefully, a hole in one...) Time to position yourself correctly and ensure your 'BackSafe' stance and positioning is at its best.

#### Picking up the Ball out of the Hole

So you've taken your last shot on the hole! Let's hope you holed for a birdie or eagle (maybe leave an eagle to the pros). Time to grab that ball out of the hole. Most people while doing this exercise, dip one hand down into the hole, in a sudden movement while weight bearing on one leg with the same practice being carried out to lift the flag up, both tasks shown below. Sound familiar?



These hazardous practices if performed over time will cause many unpleasant implications to your spine.

The correct techniques (shown in the photos on the next page) should involve:

- Legs should be in a semi squat position. The majority of the power in squat technique comes from the glutes. When lifting, the quadriceps and glutes will powerfully contract and extend the hips and knees, helping to straighten the body up. During both lifting and lowering, the spine is straight but no longer upright, with the natural S-shape curves maintained
- The feet should be symmetrically positioned, slightly wider than shoulder width apart with the load between your base of support

- As ever, standing close to the load with no spinal twisting

As the load is very light (a golf ball!), performing a full squat is not recommended. Yes, it is the technique of choice for lifting loads from knee to ground level, but if practised too often will likely lead to knee injuries. Keep the full squat of heavier loads.



On a side note, these pictures were taken during my second game of golf in which Gareth introduced me to and I have to say, I loved it. I got my first ever 'par' which I am proud of, as before commencing the game, I was concerned about not even being able to hit the ball!

For those of you not familiar with Golf, a par is the predetermined number of strokes a golfer should require to complete a hole. On hole 7 (there were 9 holes within this particular Pitch & Putt Course), I completed it in 3 shots, yay! (pure luck, if I'm honest!)

### Common Golf Injuries

To the untrained eye, golf swings look rather innocuous. However, as I have started to research further into the game of golf and hear about common golf injuries from an Osteopath's point of view (Gareth Milner, Osteopathic Solutions Director and Qualified Osteopath) and also having researched the web; I realise this is not the case. There are numerous motor skills involved as well as an importance of flexibility and core strength. If the golf swing is performed incorrectly, it can cause injury to many body parts. The most common injuries include:

- Lower back strain. Rarely a first time event, often related to pre-existing back problems
- Rotator cuff tear. Often with pre-existing pathology present
- Fractured hook of hamate. Related to hitting a large number of golf balls or contacting the ground/ matt repeatedly. This injury is more common in golf than any other sport.

The more frustrating issues are often those that arise over time, and commonly affect swing mechanics, endurance and score.

To conclude this blog, I hope you have enjoyed our guidance on changing your golfing Manual Handling habits for the better. We at Osteopathic Solutions hope it allows you to enjoy this fantastic game for many more years to come!

If you have any questions about an injury you currently have which you feel may be due to golfing, or perhaps a query about how you would like to better your Manual Handling technique within your golfing experience, please connect with us on LinkedIn on <https://uk.linkedin.com/in/emma-farrell-osteopathic-solutions> and <https://uk.linkedin.com/in/gareth-milner-osteopathic-solutions> and send us a message. If you would like to learn more about carrying out Best Practice Manual Handling technique within your daily life please LinkedIn message us for a free PDF copy of our Manual Handling Instructor Assessor Course Booklet, which we always provide attendees with on our Manual Handling Instructor Assessor Courses. For information on our Public Manual Handling Instructor Courses accredited with The CPD Certification Service please view [www.osteopathicsolutions-manualhandling.co.uk/public-manualhandlinginstructor](http://www.osteopathicsolutions-manualhandling.co.uk/public-manualhandlinginstructor)

*We hope you enjoyed another blog from us at Osteopathic Solutions and remember to always keep 'BackSafe'!*