



BODY WORKS SPORTS PHYSIOTHERAPY PRESENTS

BODY MECHANICS AND INJURIES IN GOLF

Capilano Golf Club
May 26, 2014

WHO ARE WE?



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Registered Physiotherapist

Master of Physical Therapy, Bachelor of Human Kinetics

WHAT DO WE DO?

We are a small intimate physiotherapy clinic providing one on one physiotherapy services in North Vancouver.

We have extensive experience in assessing how your body moves and how to retrain better movement patterns.

We have years of sporting experience at various events, such as:

- Vancouver 2010 Olympics Short Track Speed Skating,
- Women's National Soccer team,
- Men's volleyball, Men's baseball,
- hockey and figure skating to mention a few.

We apply our experience in sports and body movement to help create sport specific assessment, treatment, exercise prescription and education to address your specific needs.

We are happy to come today to talk with you about the wonderful game of golf!

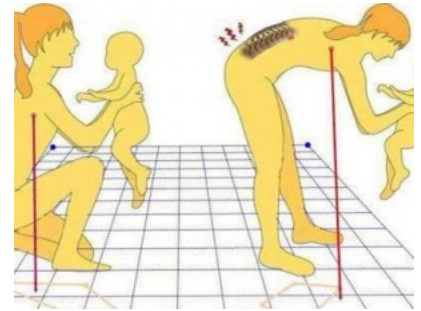


BODY MECHANICS AND INJURIES IN GOLF

OUTLINE

1. What Are Body Mechanics?
 2. Body Mechanics Specific for Golf
 3. What Happens With Poor Body Mechanics?
 4. Typical Golfing Injuries
 - 1.-Low Back Pain and Golf
 2. Hip Pain/Injuries
 3. Wrist Pain/Injuries
 4. Shoulder Pain/Injuries
 - 5.Elbow Pain/Injuries
 6. Knee Pain/Injuries
 5. Acute injury Management
- 

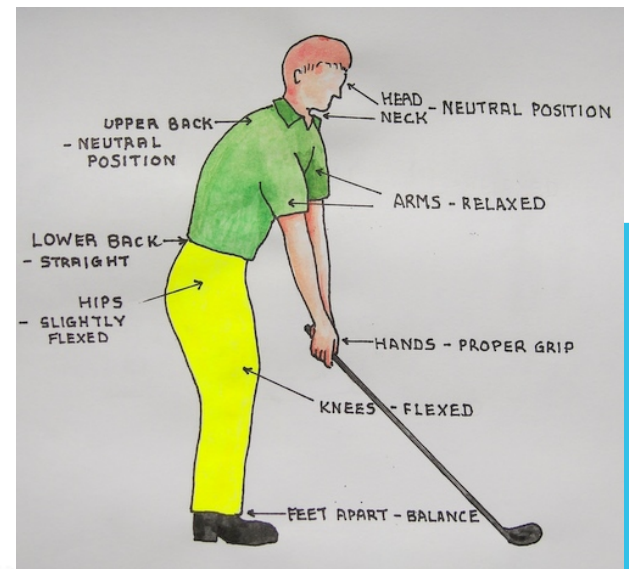
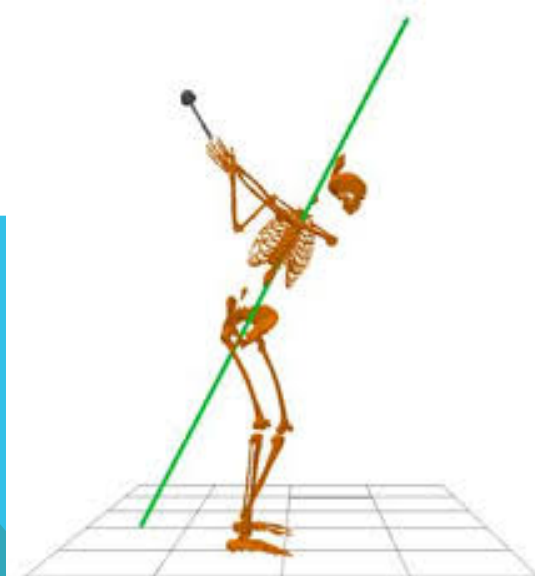
WHAT ARE BODY MECHANICS?



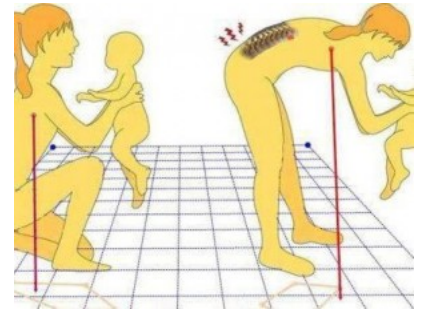
Body mechanics basically means looking at how the body moves.

As physiotherapists, we are trained to look at how the body moves.

We help to identify where your body is restricted and where it may be moving too much. We then look at sport specific movements.

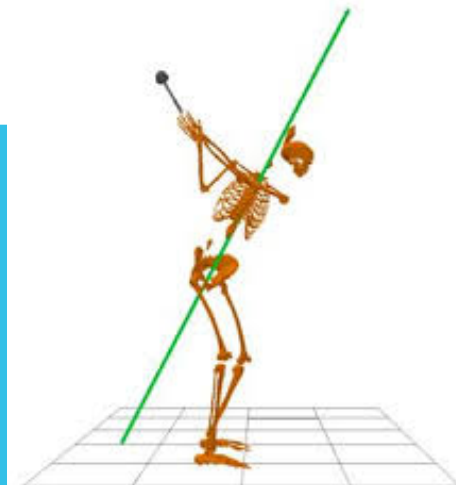


WHAT ARE BODY MECHANICS?

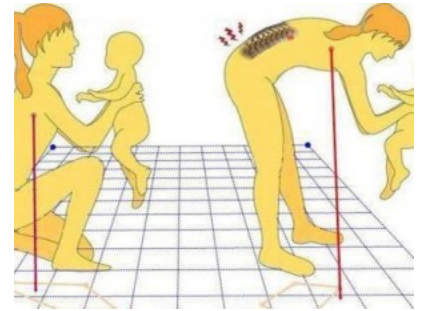


For example, we would look at how you swing your golf club and help to determine how restrictions in your body might be affecting your golf game.

We often think of good body mechanics when we go to lift sometime heavy, but we don't often think about it with daily activities or sport.



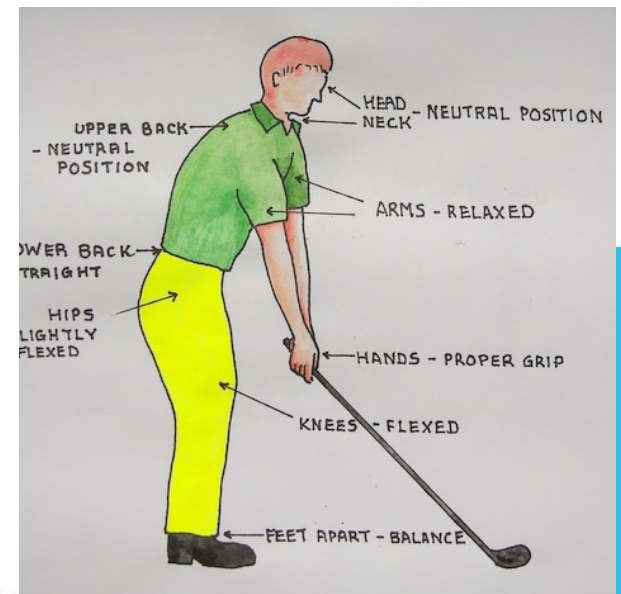
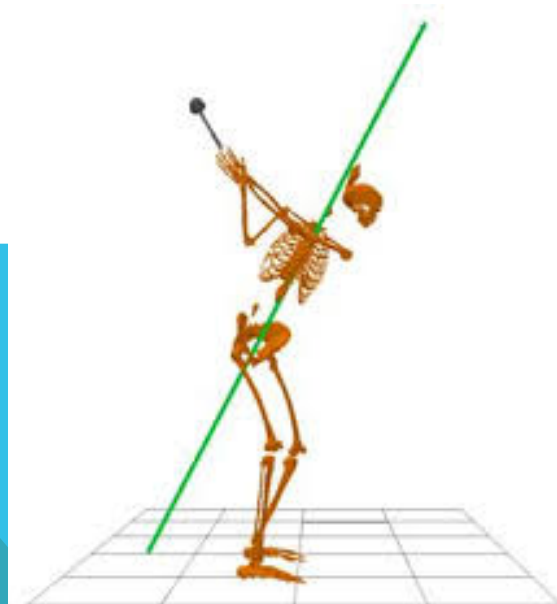
WHAT ARE BODY MECHANICS?



With golf, the golf swing consists of a complex series of movements in the body.

Every golf swing is different.

We look at your individual style to help make the best recommendations specifically for you.



GOLF SPECIFIC BODY MECHANICS

4 General Components to the Golf Swing

- Back swing/Take Away
- Forward Swing
- Acceleration to Ball Strike
- Follow Through

AND the Address Position

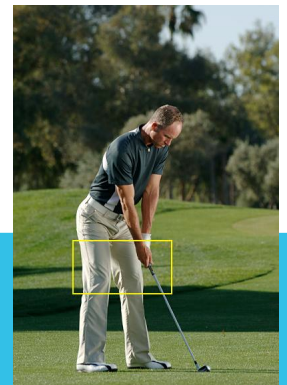
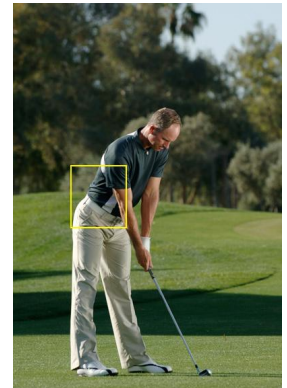
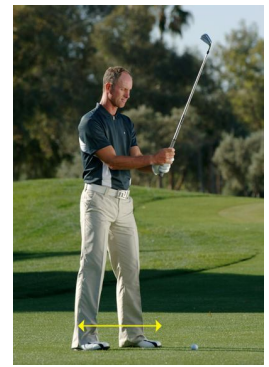


GOLF SPECIFIC BODY MECHANICS

The Address Position

From the physiotherapist perspective these points are important:

- Stance shoulder width apart
- Neutral spine posture, “long spine”
- Hip Hinge
- Slight knee bend and athletic stance
- If the starting position has a flaw in the body mechanics, the following movement is likely to have flaws as well
 - As a result, there is likely an increased load in the golf swing in conjunction with that faulty movement



GOLF SPECIFIC BODY MECHANICS

The Back Swing/Take Away

From the physiotherapist perspective these points are important:

- Winding up the swing and all of the body's tissues
- Storing elastic energy to be released
- Developing thoracic rotation

What happens to your feet?



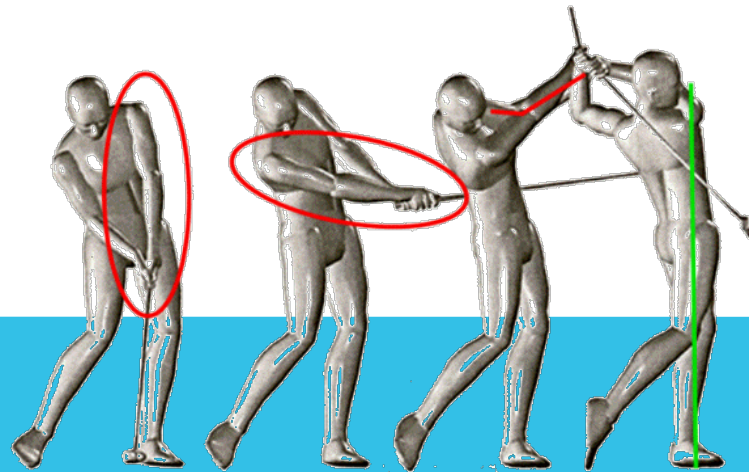
<http://orthocorept.com>

GOLF SPECIFIC BODY MECHANICS

The Forward Swing

From the physiotherapist perspective these points are important:

- Unwinding the rotation developed during the back swing
- Beginning to transfer energy from the hips, pelvis and thoracic spine to the club head
- Switch from potential energy to kinetic energy

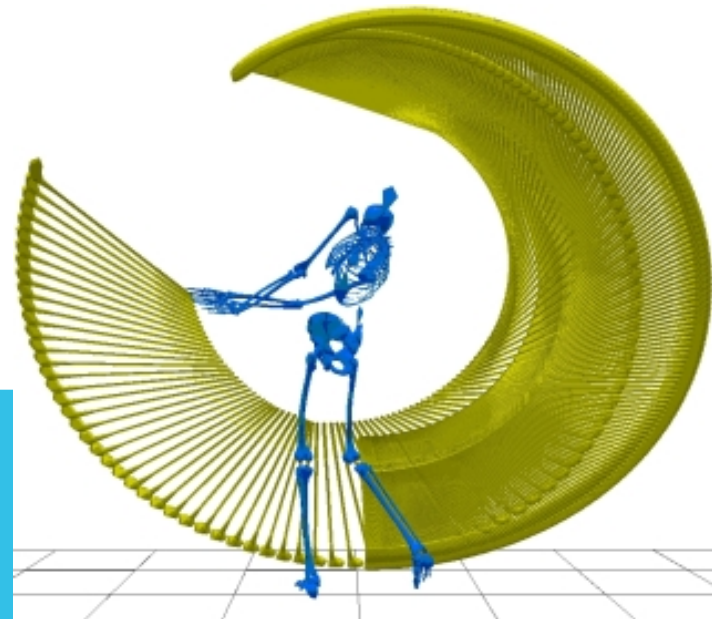


GOLF SPECIFIC BODY MECHANICS

Acceleration to Ball Impact

From the physiotherapist perspective these points are important

- Maximum torque generated from transferring all potential energy possible
- Maximum club speed generated towards ball strike



GOLF SPECIFIC BODY MECHANICS

The Follow Through

From the physiotherapist perspective these points are important:

- Decelerating the motion and slowing down the motion
- Dissipating all of the forces generated during the swing



GOLF SPECIFIC BODY MECHANICS

- Different golf swings require different body mechanics.
- There is no one perfect swing to prevent injury.
- Your body has to be prepared for the demands your swing places on it.



CLASSIC VS MODERN GOLF SWING

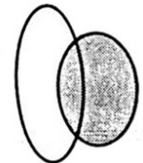
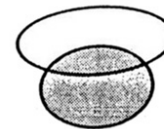
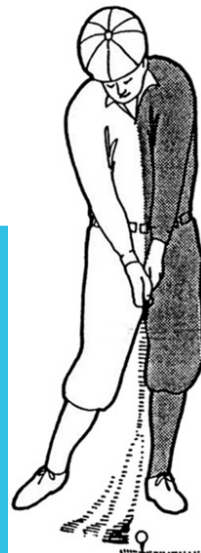
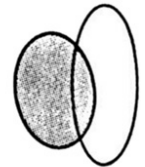
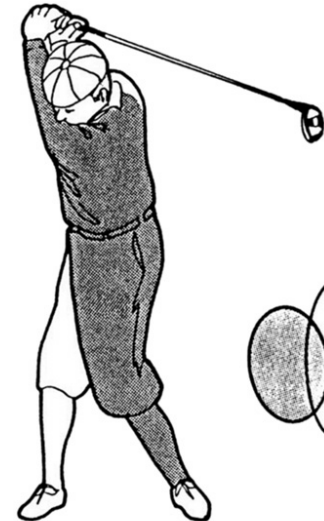
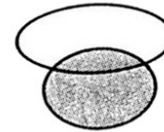


www.golfdigest.com

THE CLASSIC GOLF SWING

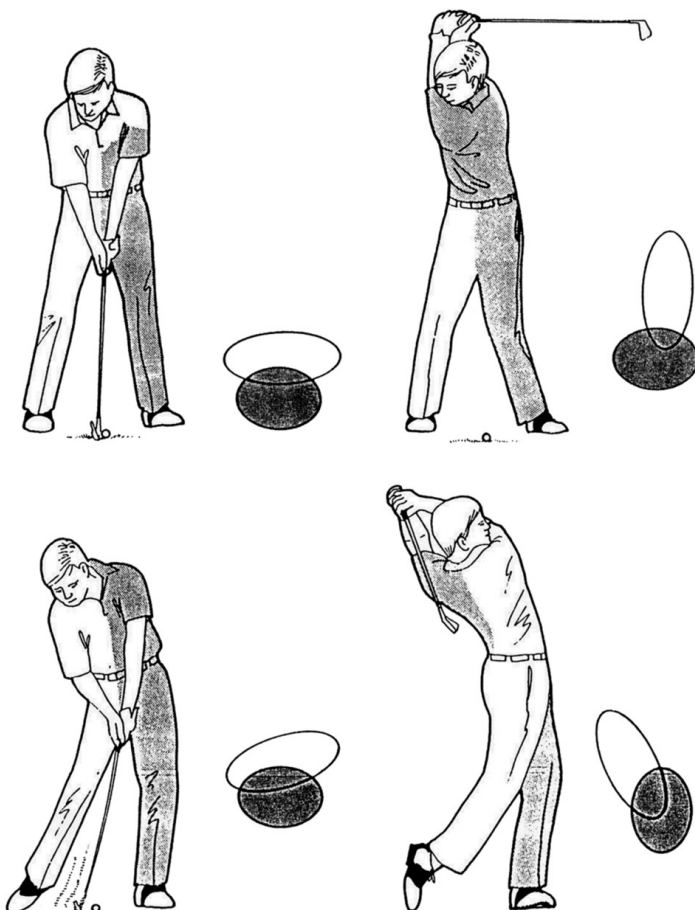
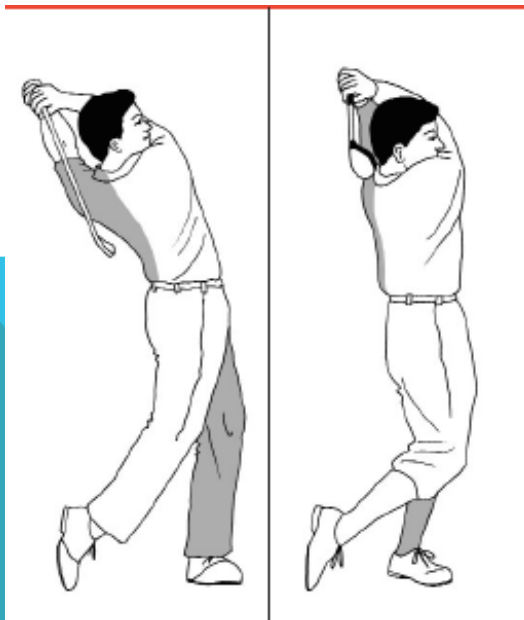
Note the large hip and shoulder turn.

- Unshaded oval represents shoulder position
- Shaded oval represents hip position



THE MODERN SWING

- **Hip Shoulder Separation:** generates potential energy but places a lot of torque on the trunk
- Leading to the Reverse C Position
- Compressive and extension load
- Requires more muscular control and strength



Note the restricted hip turn.

- Unshaded oval represents shoulder position
- Shaded oval represents hip position

WHAT HAPPENS IF I HAVE POOR BODY MECHANICS?

With poor body mechanics, the axis of movement in your body and joints becomes altered. This alteration can be due to tight muscles, stiff joints, or muscular imbalances where some muscles are tight and others are weak.



Sometimes poor mechanics of movement are just bad habits that you have learned with movement over time or as a result of other sports, activities, work or previous injuries.



WHAT HAPPENS IF I HAVE POOR MECHANICS?

Our brain has a “computer program” which automatically tells us how to move. If you do have restrictions in your body, then you will automatically compensate for this and change how you move.

Changing how you move during the golf swing due to compensation may lead to overuse of certain joints, muscles and/or tendons.

This is where **overuse injuries** come from.



TYPICAL GOLFING INJURIES

Golf is perceived as a low risk sport. There is no body contact like soccer, basketball and football. However, there are numerous injuries that can occur in golf.

The prevalence of golf injuries can vary depending upon:

- The level of play
- The level of fitness and body conditioning for golf
- Difference in swing mechanics
- The number of rounds that are played in a given time period
- The amount of practice swings taken



GOLFING INJURY PREVALENCE

A recent study by the American Orthopedic Society for Sports Medicine suggested that during a two year period:

- 60% of golf professionals and 40% of amateurs suffered either a traumatic or overuse injury while golfing
- 80% of all of the reported injuries were related to overuse.



GOLFING INJURY PREVALENCE - OVERUSE

The average golfer plays 37 rounds of golf per year and many more day practicing.

Highly repetitive, asymmetrical activity.

It is no wonder then that there are many overuse injuries in golf.

Especially if there are compensation patterns going on during your swing



INJURY PREVENTION FOR GOLF

With this high of a prevalence of injury in golf, it is crucial that we help to educate golfers of all types about:

- what they can do about injuries,
- how they can occur,
- how you recognize them, and
- what you can do about it.



COMMON AREAS FOR INJURY IN GOLF

The most common areas for injury in golf are:

- Lower Back
- Hip
- Elbow
- Shoulders
- Knees

professionals

WRIST/HAND: 37%
LOW BACK: 24%
SHOULDER 10%
ELBOW: 7%
KNEE: 7%



<http://www.doctordivotmd.com/injuries6.asp>

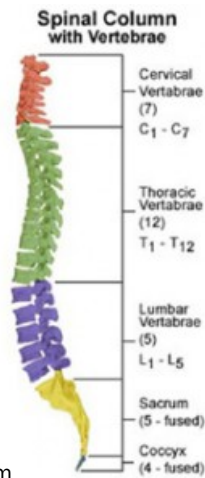
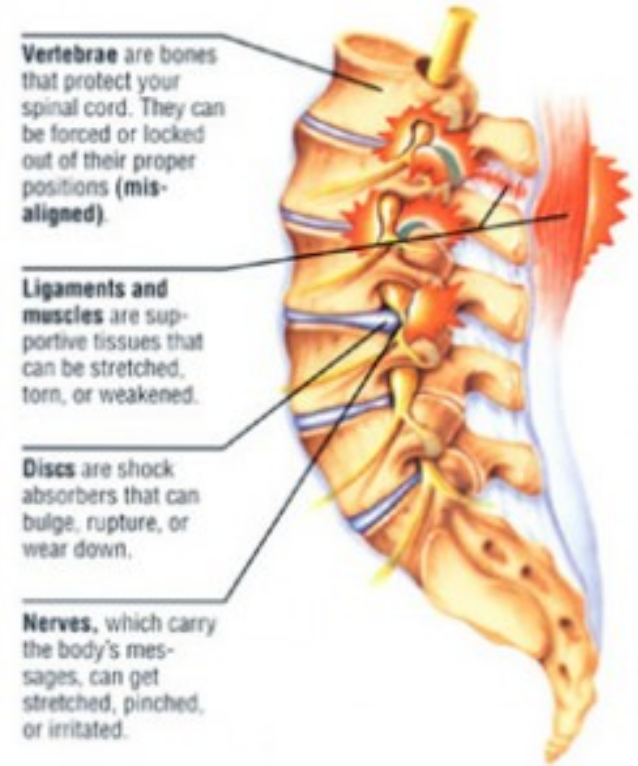


amateurs

LOW BACK: 35%
ELBOW: 33%
WRIST/HAND: 20%
SHOULDER: 12%
KNEE: 9%

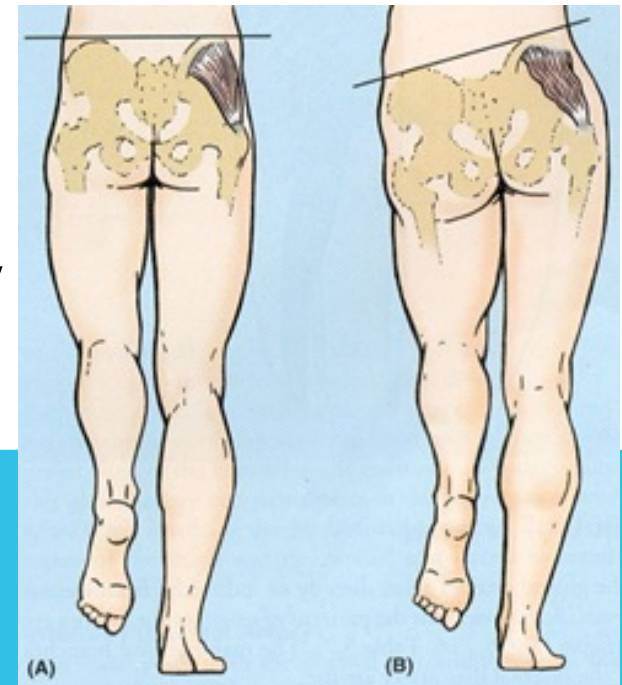
LOWER BACK PAIN AND GOLF

- Lower back pain is #1 injury for amateur golfers
- Lumbar Spine is often the involved area
- Areas that can be injured include
 - Lumbar spine *Intervertebral Disc*
 - Lumbar spine *musculature*
 - Erector Spinae muscle group especially
 - Lumbar spine *ligaments*
 - Lumbar spine *facet joints*
- Some studies show that trailing side low back pain is more common in golfers and correlates with an increase in degenerative changes over time in the trailing side
- Up to 8 times body weight in compressive loading during the golf swing



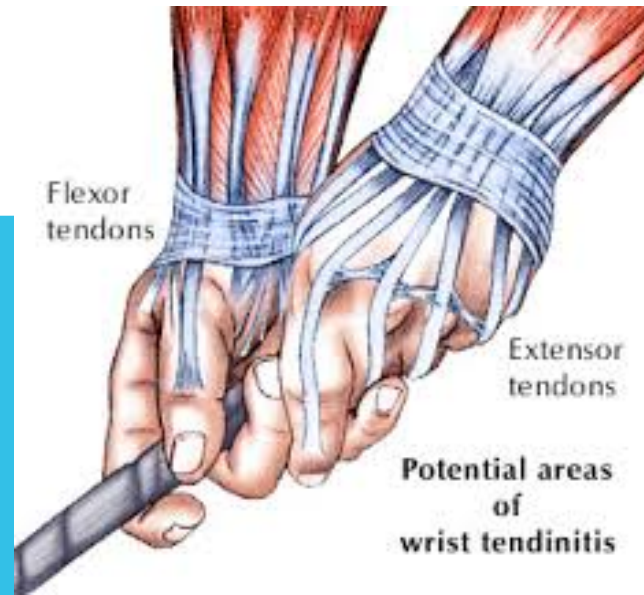
HIP PAIN AND GOLF

- The golf swing is known to use rotation of the hip, pelvis and torso for an efficient swing, but often golfers have tight or weak hips
- Hip pain can emanate from a variety of sources, including:
 - Anterior hip impingement
 - Iliopsoas bursa
 - Hip stabilizer muscle weakness
 - Degenerative changes in the hip joint
- A change in walking demand during golf season may also aggravate an existing hip injury



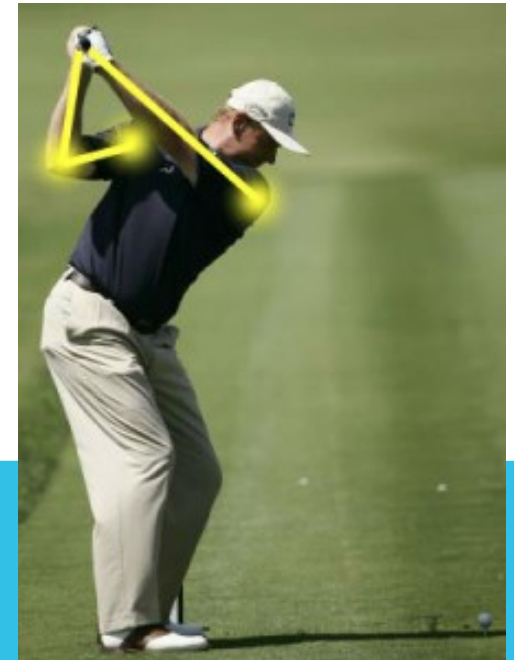
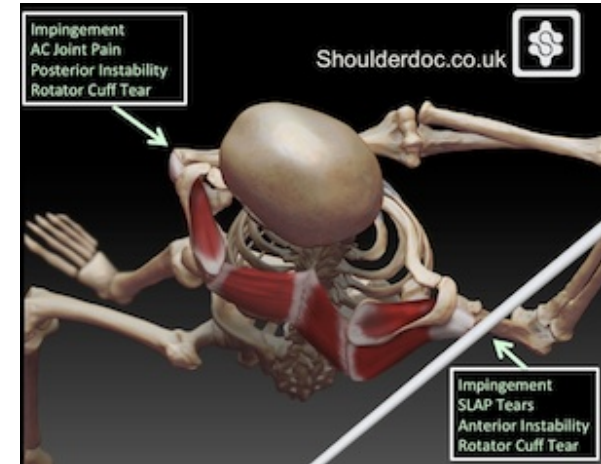
WRIST PAIN AND GOLF

- Wrist injuries are very common for golfers
- Repetitive strain on the tendons at the wrist joint can cause tendonitis/tendinopathy
- Extensor tendons on the top hand, or flexor tendons on the bottom hand are most common
- Strengthening and stretching exercises can help
- Wrist injury also often occurs at the point of impact when the golf club comes into contact with something other than a ball!



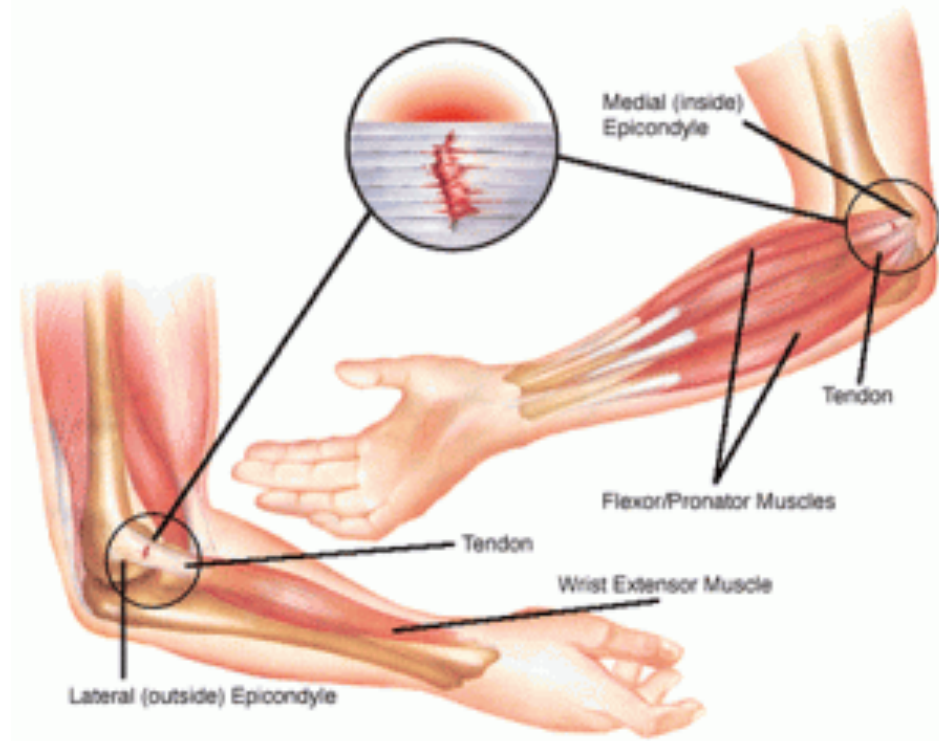
SHOULDER PAIN AND GOLF

- The shoulder is a complex joint
- Shoulder impingement syndromes can be caused by a number of factors including:
 - poor muscular control around the shoulder from the rotator cuff or scapular muscles, or
 - compensation from another area of the body.
- Common golfing related shoulder injuries occur from:
 - Trail side shoulder impingement during the back swing
 - Front side shoulder impingement during the follow through



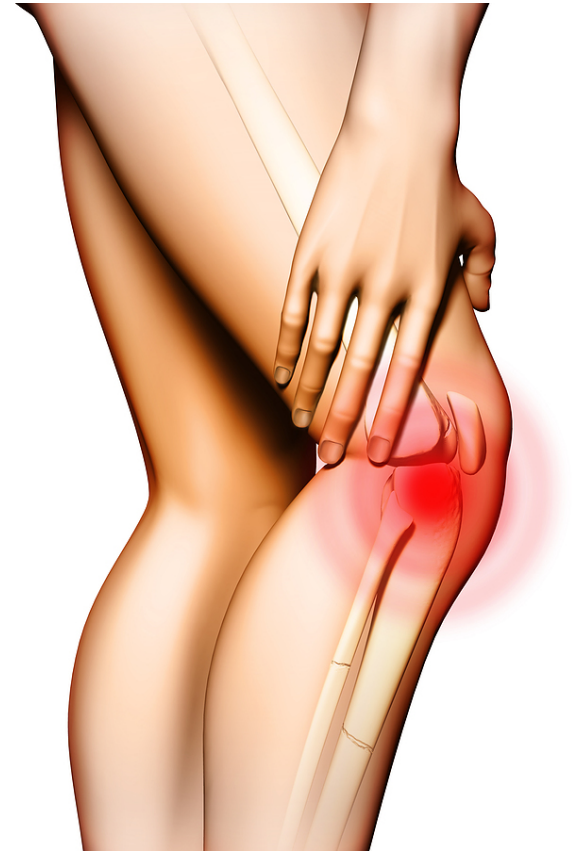
ELBOW PAIN AND GOLF

- Elbow tendonitis/tendinopathy is also very common and commonly related to repetitive strain
- Most commonly there is:
 - **medial elbow pain**, often referred to as “golfer’s elbow” and more commonly occurs on the trail arm, or
 - **lateral elbow pain**, often referred to as “tennis elbow” and more common on the lead arm
- Can be related to gripping the club too tight, using excessive force, or poor technique



KNEE PAIN AND GOLF

- Rotational torque at the knee joint could aggravate a meniscus injury or put stress on knee ligaments
- Knee pain can also come from an increase in walking demand during golf season, coupled with poor body mechanics



ACUTE INJURY MANAGEMENT

What should you do if you develop pain or an injury while playing golf?

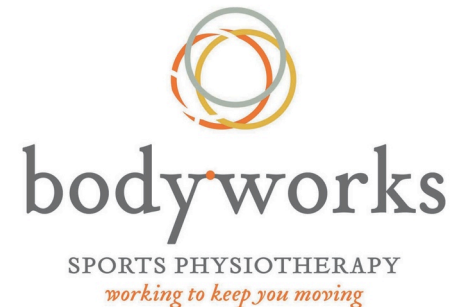
- RICE Principles
 - Rest
 - Ice
 - Compression
 - Elevate
 - (Protect)

OUR NEXT TALK

June 9th, 10am

Injury Prevention Strategies

If you have any specific questions that you would like addressed, please email us at info@body-works.ca



www.body.works.ca
604-983-6616

THANK YOU!

QUESTIONS?

