

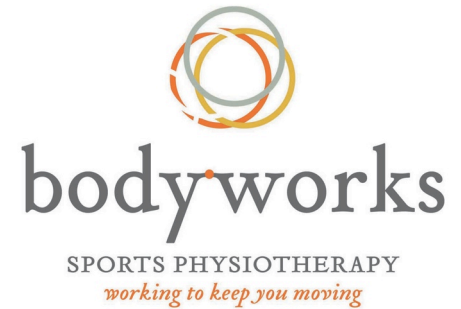


BODY WORKS SPORTS PHYSIOTHERAPY PRESENTS

INJURIES PREVENTION STRATEGIES FOR GOLFERS

Capilano Golf Club
June 9, 2014

WHO ARE WE?



Dana Ranahan

Registered Physiotherapist

B.Sc., B.Sc.P.T., Fellow of the Canadian Academy of Manual and Manipulative Therapy (FCAMT), Diploma Sports Physiotherapy, CGIMS



Eric Marriott

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!



INJURY PREVENTION STRATEGIES FOR GOLFERS

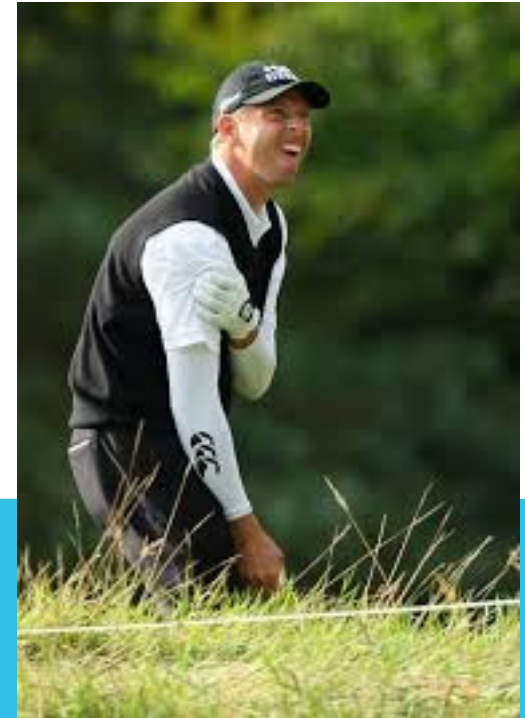
OUTLINE

1. Why do sports injuries happen?
2. What is Injury Prevention?
3. Examples of other Injury Prevention Programs
4. How to apply Injury Prevention to Golf
5. Warm up Strategies for Golfers
6. What is Static versus Dynamic stretching?
7. Static versus Dynamic Stretching for Golf – Research Article
8. Dynamic Warm-Up Suggestions
9. Postural Maintenance Exercises

WHY DO SPORTS INJURIES HAPPEN?

Sporting injuries can be caused by:

- An accident
- Not warming up properly before exercising
- Using inadequate or poorly fitting equipment
- Poor technique or poor biomechanics
- Overtraining, or pushing yourself too hard
- Poor body movement patterns, including areas of stiffness or weakness



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:

- How injuries occur,
- How to recognize what factors can lead to injury,
- How to prevent injury or recurrence of injury,
- What they can do about injuries when they do occur.



WHAT IS INJURY PREVENTION?

Injury prevention is taking the best efforts to find ways to reduce possible injury or pain from daily activities or sport.

How do we determine what to do?



WHAT IS INJURY PREVENTION?

We use principles of the demands of the sport to tailor a specific warm-up program and strengthening program to help you to be able to participate in your sport with more strength and endurance and less pain and injury.



EXAMPLES OF OTHER SPORTS INJURY PREVENTION PROGRAMS

Soccer - FIFA 11+



<http://f-marc.com/11plus/home/>

EXAMPLES OF OTHER SPORTS INJURY PREVENTION PROGRAMS

Soccer - FIFA 11+ Example

Lunges are a very important movement for soccer

11.2 SQUATS WALKING LUNGES



GOLF SPECIFIC INJURY PREVENTION

What are the most important components for golfers to help prevent injury?

- Proper fit for golf clubs
- Proper technique with good biomechanics and good body movement
- Good flexibility
- Good strength and power
- Good endurance
- Good warm-up



<http://www.golfwrx.com/>



WARM-UP STRATEGIES FOR GOLFERS

So, what do we do to prepare our bodies for a round of golf?

What is a proper warm-up?

Will it address my needs?

Will it help reduce injury?



WARM-UP STRATEGIES FOR GOLFERS

What is Static versus Dynamic stretching?

Static stretching

- Techniques that gradually lengthen a muscle to a more elongated position,
- Usually comprises a hold of 30 seconds to 2 minutes,
- During this holding period or directly afterwards, you may feel a mild discomfort or warm sensation in the muscles,
- Static stretching exercises involve specialized tension receptors in our muscles. When done properly, static stretching slightly lessens the sensitivity of tension receptors, which allows the muscle to relax and to be stretched to a greater.



WARM UP STRATEGIES FOR GOLFERS

What is Static versus Dynamic stretching?

Dynamic stretching

- Stretching while moving through active range of motion,
- Repeating the movements through large amplitude movements within what is required for the sport,
- Uses movements specific to the sport,
- Better used as a warm-up than static stretching.



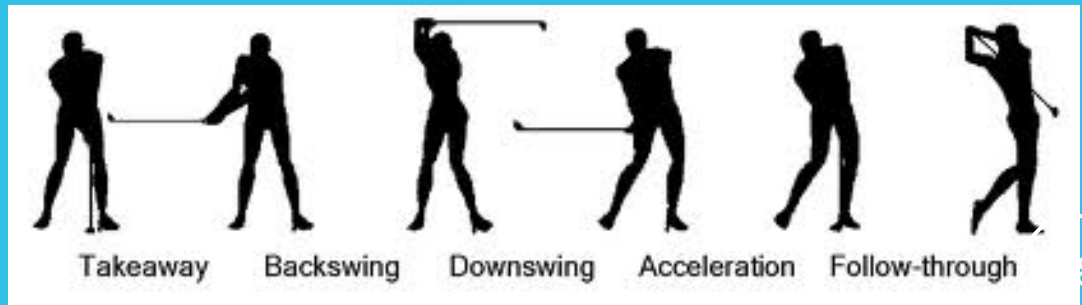
EFFECTS OF STATIC STRETCHING IN GOLF

Research Article on the effects of static versus dynamic stretching in golf

LATENT EFFECT OF PASSIVE STATIC STRETCHING ON DRIVER CLUBHEAD SPEED, DISTANCE, ACCURACY, AND CONSISTENT BALL CONTACT IN YOUNG MALE COMPETITIVE GOLFERS

JEFFREY C. GERGLEY

Human Performance Laboratory, Department of Kinesiology and Health Science, Stephen F. Austin State University, Nacogdoches, Texas



EFFECTS OF STATIC STRETCHING IN GOLF

Research article looked at several factors:

- driver clubhead speed
- distance
- accuracy
- ball contact consistency



All very important performance factors when driving the ball!

EFFECTS OF STATIC STRETCHING IN GOLF

All compared to the effects of a dynamic stretching routine:

Driver Clubhead Speed

-reduced up to 30 min after static stretching

Driver Distance

-reduced up to 60 min after static stretching

Shot Accuracy

-reduced for up to 45 min after static stretching

Consistent ball contact

-reduced up to 60 min after static stretching

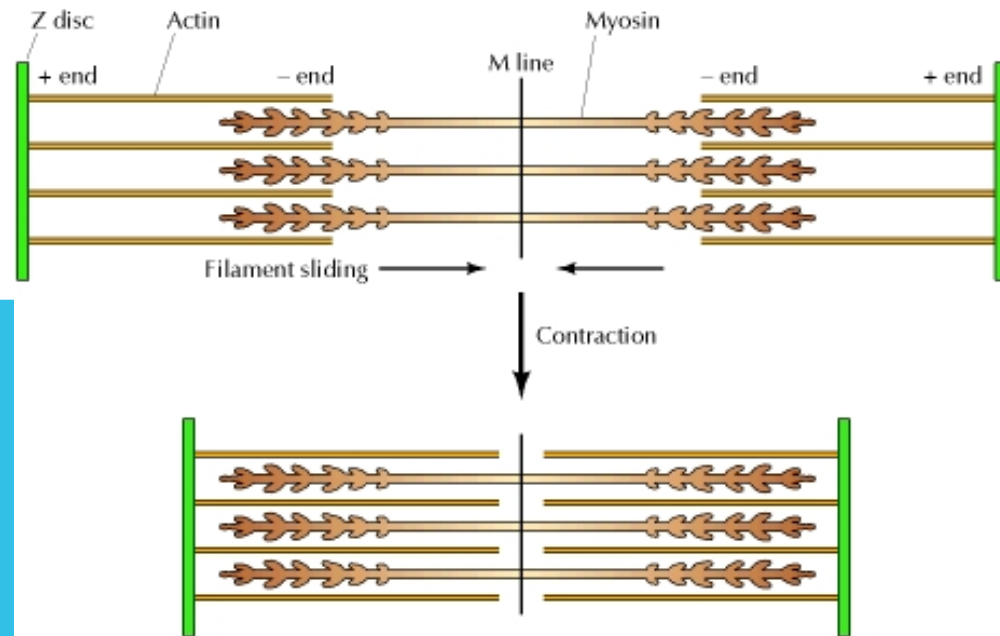
EFFECTS OF STATIC STRETCHING

Evidence from other sports, primarily soccer, also shows that static stretching routines may also increase your risk of injury *if completed as a warm-up*.

A more stretchable or compliant musculo-tendinous unit may be less able to resist the mechanical forces put under it during activity.

Further, a statically stretched muscle is not as capable of generating a strong contraction due to elongation.

Hence putting you at risk for injury.



EFFECTS OF STATIC STRETCHING

So, if static stretching is not a good idea before playing golf, when should I do it?

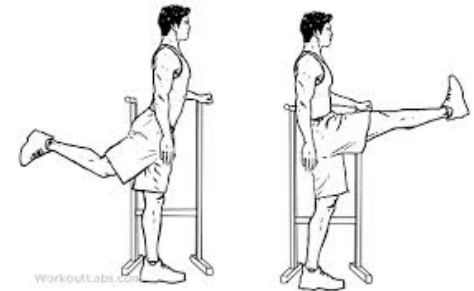
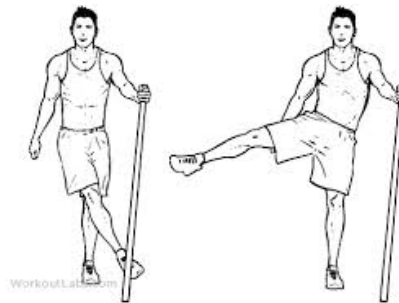
Static stretching is best done AFTER playing golf.

Static stretching, when done regularly after golf or at other times of the day, can help to increase flexibility in the muscle overall so that, over time, it can become more flexible and stronger within that new range of movement.



DYNAMIC WARM-UP EXAMPLE FOR GOLF

- Walking
- Active Neck Rotation
- Active Thoracic Rotation
- Hip Swings/Pendulums
- Gentle Toe Touches
- Gentle Backward Bends
- Gentle Side Bends
- Gentle Squats



DYNAMIC WARM-UP EXAMPLE FOR GOLF

- Arm Circles
- Wrist Circles
- Golf Club Warm-Up
 - Wrists
 - Arms
 - Rotations
 - Mini-Slow-Swings
 - Slightly Faster Swings



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%

DYNAMIC WARM-UP EXAMPLE FOR GOLF

Dynamic Warm-ups can be individualized based on your own needs and own injury history!

Do you have a stiff thorax?

Have you had a previous low back injury or low back pain?



GOLF SPECIFIC BODY MECHANICS

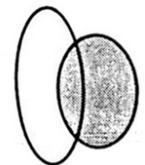
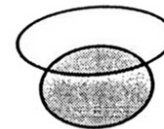
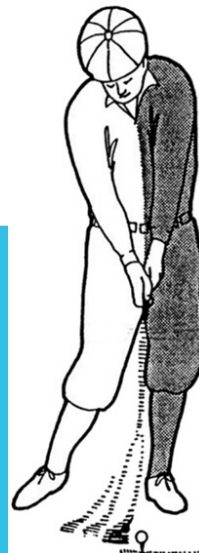
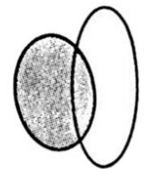
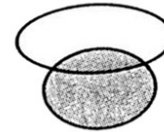
- Different golf swings require different body mechanics.
- There is no one perfect swing to prevent injury.
- Your body has to be prepared for the demands your swing places on it.



THE CLASSIC GOLF SWING

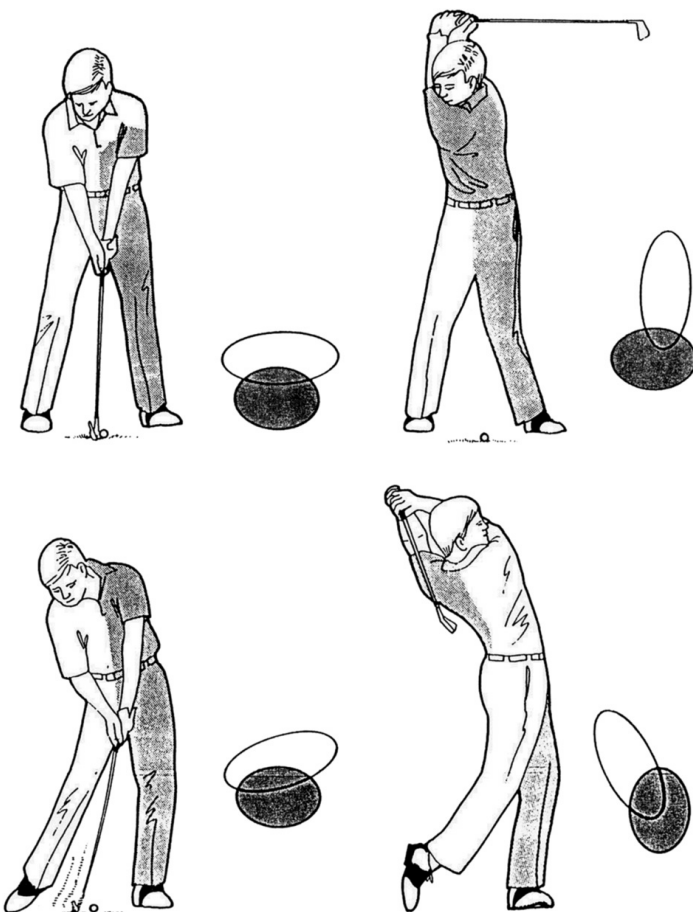
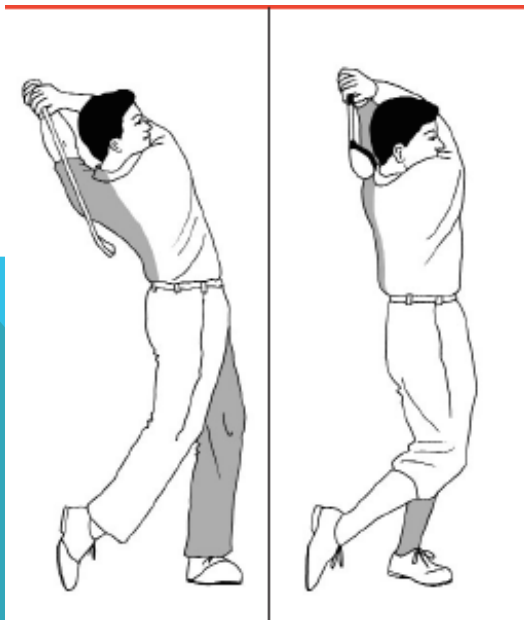
Note the large hip and shoulder turn.

- 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

DYNAMIC WARM-UP EXAMPLE FOR GOLF

What swing type do you have?

- Classic versus Modern

The swing type will vary the loads put on the body throughout golf swing and throughout the round of golf

For your swing type, how important is:

- thoracic rotation
- spinal extension
- hip rotation and mobility

DYNAMIC WARM-UP EXAMPLE FOR GOLF

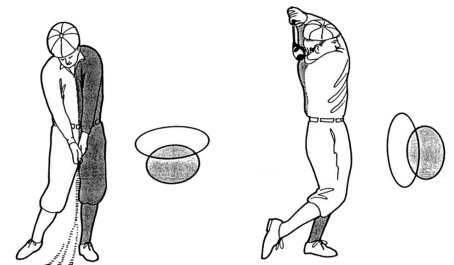
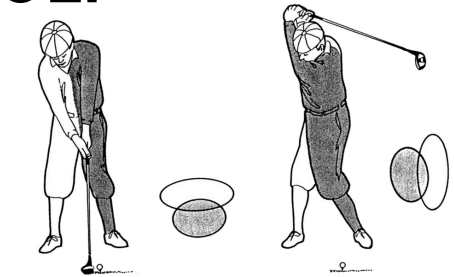
Classic Versus Modern Swing Types

The **Classic type** swing requires:

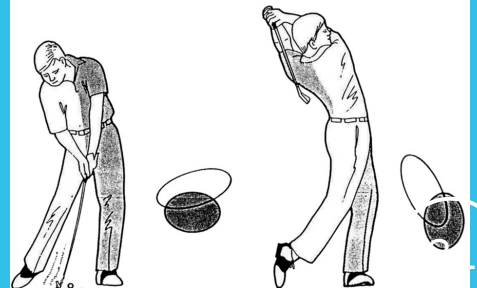
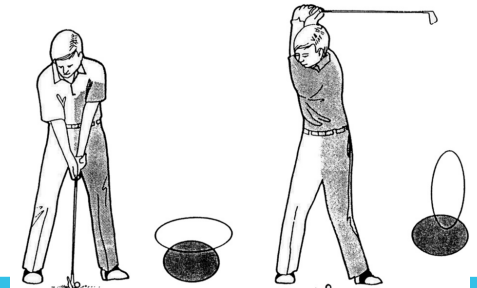
- Good hip mobility and good shoulder mobility.
- Thus, warm-up will require more emphasis on warming up hip and shoulder mobility.

The **Modern type** swing requires:

- More spinal mobility and core control.
- Thus, warm-up will require more emphasis on warming up spinal rotation and muscular control of rotation.



Classic golf swing



Modern golf swing

DYNAMIC WARM-UP EXAMPLE FOR GOLF

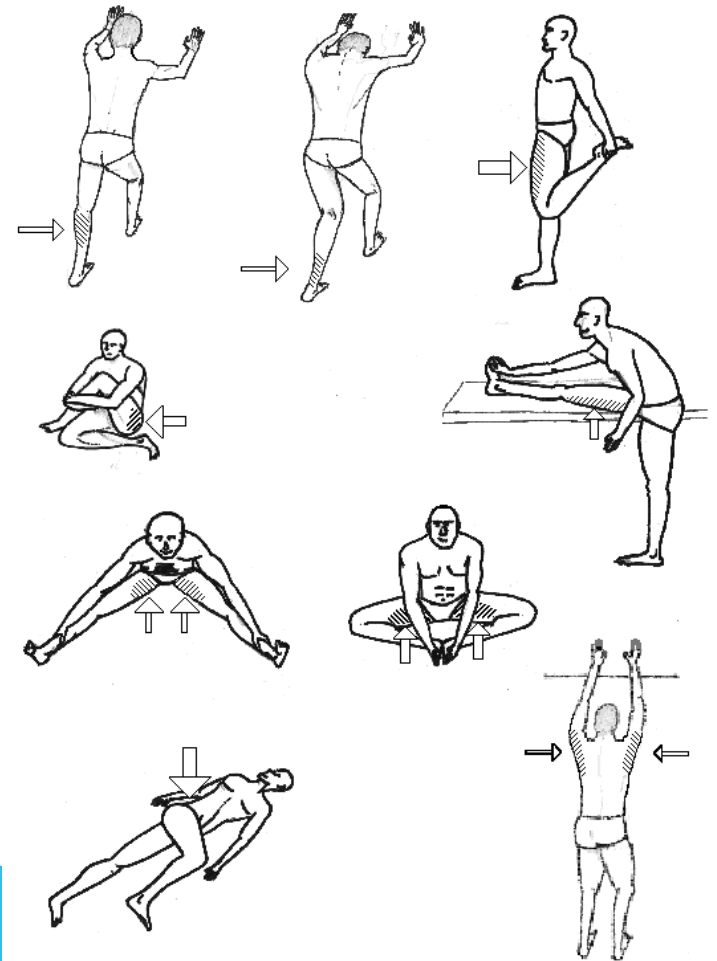
How do I modify my warm-up if I need:

- **Extra Hip Mobility?**
 - Increase “hip gate swings”
 - standing pelvis rotations
- **Extra Shoulder Mobility?**
 - active back scratches
 - full arc light bulb turns
- **Extra Spinal Mobility?**
 - thoracic rotations with breathing
 - adapted child’s pose thoracic rotations

WHAT ELSE CAN I DO TO PREVENT INJURY?

If you have restrictions in your body movements and your swing requires better mobility in these areas, then it is a good idea to complete a **static stretching exercise program at home** daily to help increase and maintain your mobility.

This can be done any time of day, just not right before your golf game!

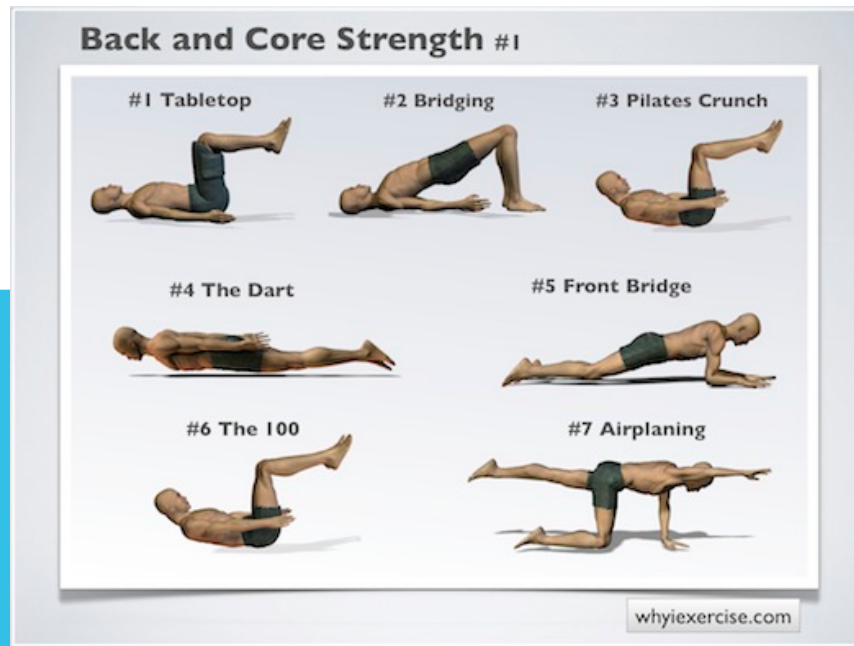


Static stretching example

WHAT ELSE CAN I DO TO PREVENT INJURY?

Strengthening is also important because:

- appropriate muscular strength will help protect joints and decrease joint irritation, breakdown and pain,
- increasing end range muscular stability will enable you to swing with better control of movement,
- If you are strong in the right places, you will not make as many faults in your movement patterns.



WHAT ELSE CAN I DO TO PREVENT INJURY?

Endurance also helps reduce injury because:

- The less fatigued your body and musculoskeletal system is the less likely it will breakdown.
- Think of:
 - **muscular endurance** for specific tasks, such as the golf swing repetition, and
 - **overall fitness/endurance** which is the ability to last through the golf game or for a longer duration event.
- With more endurance, you will be better able to walk the course and last through a round of golf.



WHAT ELSE CAN I DO TO PREVENT INJURY?

Part of good endurance and good biomechanics requires:

Postural Maintenance - maintaining good posture is essential to creating easy and effortless movement.

With any body movement, there is an anticipatory postural control that happens in the body.

Example: a big arm swing requires the core and lower body stabilization before the arm can move well.

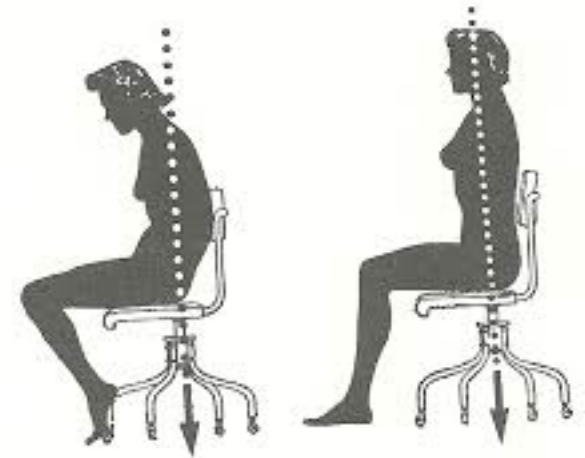
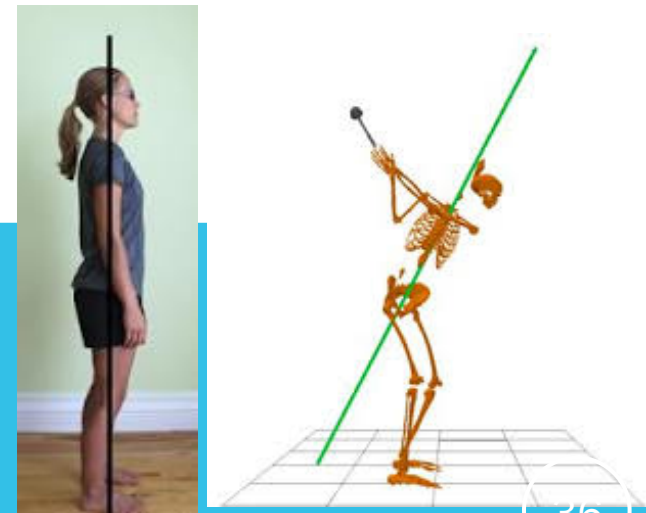


Figure 4.13. Left, a slumped sitting attitude that is typical of balance-disturbing posture. Note distortion of the spine compared with the properly balanced figure on the right.



POSTURAL MAINTENANCE

Postural Maintenance Exercises

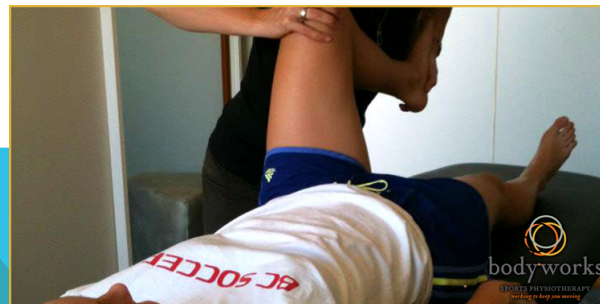
- Awareness of poor postural habits and correcting as able
- Chin tucks/long neck posture
- Shoulder shrugs
- Deep breathing – using diaphragm and softening chest and midback
- Muscular pressure point release can help release tight muscles
- Getting up out of sitting frequently at work or home helps change and reset posture
 - Especially prevalent with computer work and desk jobs

HOW TO PREVENT INJURY IN GOLF

If it is unclear to you what you need to be doing, you should consider being **assessed by a physiotherapist** to see where your body is stiff and where it is weak.

Physiotherapists also use various techniques in treatment to help you regain your mobility where you are stiff and help to wake up muscles that are weak. And we can educate you about what the problem is.

Then, a specific exercise program of stretching and strengthening can be given to you to address your specific needs and put you on a better path to preventing injury and enjoying golf!



OUR NEXT TALK

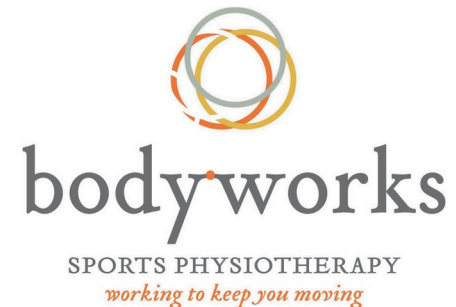
June 23rd, 10am

Core Strength, Fundamental Movement & Golf mechanics

Please come dressed to work on movement!

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

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THANK YOU!

QUESTIONS?