



Developing Athleticism for Golf Performance and Injuries

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About Us



- Physical Therapy
 - General Orthopedics
 - Sports Rehab
 - Balance, Strengthening
- Pilates
- Golf Fitness
- Massage Therapy
- Chiropractic
- Sports Performance
 - ACL Prevention

Survey

- Do you currently utilize any physical training or fitness training for your golfers?
 - Why or why not?
- Common injuries/problem areas for your golf athletes?
- How involved are you in the coaching of technical/biomechanical aspect of golf swing?

My training - Titleist Performance Institute

- TPI seeks to educate golf industry professionals and the playing public on the importance of the body and how it relates to the golf swing
- 25 of the top 30 official world golf ranked players are advised by a TPI expert or team
- TPI Certifies fitness, medical, and golf professionals. It takes a team in order to provide the best care.
- Highly recommend!

Foundations

- There is not one way to swing a club, but rather an infinite variety of optimal swings, based upon the individuals physical resources. Each person will have an "optimal swing" based upon their body
- The most important fact is not necessarily what the swing looks like, but on the "efficiency" of their swing.
 - So, although they identify 12 "swing characteristics" which tend to decrease efficiency, analysis and treatment must be tailored to the individual and 3D analysis is gold standard

Swing efficiency versus swing style



- Every golfer has a slightly different swing "style". That is, what their swing looks like.
- However, every great golfer will utilize a very similar kinematic sequence

<https://www.golfer.com/whats-important-longer-drives-john-daly-backswing/>

Kinematic Chain

- Transfer of energy from the ground through the golf club and to the ball
- Order of acceleration
 - Hips/Pelvis > Torso > Lead Arm/Shoulder > Club Head
- Order of deceleration
 - Same. Deceleration of the hip occurs as energy is transferred to torso for increased magnitude of acceleration

How does fitness help?

- In order to reproduce an efficient swing, one must possess the necessary physical resources.
- 2 aspects of any athletic movement:
 - 1) **Skill** – The ability to perform a task efficiently, quickly, effectively. Motor control. Lots of REPS.
 - 2) **Capacity** – The ability of the body to perform and withstand the necessary movements/forces/stressed placed upon it by the skilled movement

Common Injuries

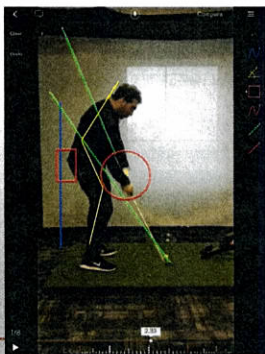
- **Low Back Pain**
 - Generally a result of:
 - Poor disassociation of torso and pelvis
 - Lack of mobility that leads to compensatory sidebending at spine
 - Poor hip strength or mobility
- **Elbow Pain**
 - Golfers with tend to “scoop” or “cast” the club as compensatory pattern for various limitations
- **Hip Pain**
 - Most often a result of hip mobility, as golfer repeatedly works into the end range of motion.
 - Treatment can be as simple as adjusting foot angles at setup

Physical Resources

- Hip Mobility
- Pelvic Mobility
- Torso Mobility
- Shoulder Mobility
- Wrist Mobility
- Core strength and control
- Disassociation of pelvis and trunk
 - Ability to move the pelvis without movement of upper torso and vice-versa

Video Analysis

- How do these factors impact the golf swing?
- Image to Right:
 - “early extension” and “over-the-top” style swing.




Problems and Solutions – Rotation

- **Inability to rotate hips and torso independently**
 - Will force compensatory patterns that will decrease efficiency
- May be attributed to:
 - Mobility
 - Coordination
 - Stability/Strength

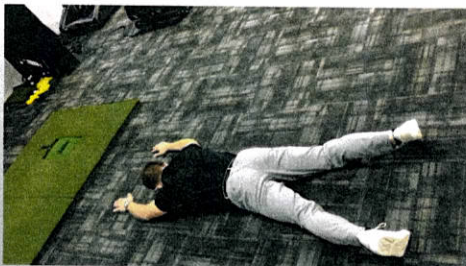
Rotation - Mobility

- Quadruped Reach Through




Rotation - Mobility

- Windmill Prone




Rotation - Strength/Power

- Med Ball Throw




Rotation - Strength/Power

- Cable Chop




Rotation - Control

- SL Hip Rotation



Rotation - Control

- SL RDL with Rotation



Problems/Solutions – Pelvic Tilt

- Inability to tilt pelvis anteriorly or posteriorly. No posterior tilt on downswing tends to draw body towards the ball. Arms over top. Outside in pattern or compensations at wrist.

Problems and Solutions – Power Generation

- The gluteal muscles are the cornerstone of the golf swing. Under-utilization of gluteal muscle group in the swing tends to lead to decreases in clubhead speed.
- Will also lead to compensatory patterns that decrease efficiency.
- MAY be predisposed to low back pain.

Strength

- RDL
- Stiff-Legged
- Conventional Deadlift

Power Generation

- Kettlebell Swing
- Note: Lumbar Extension versus Hip Extension

Power – Split Squat

Back to Golf

- Addressing the physical limitations is only half the battle. Must be applied to the swing itself.
 - Skill Development
- Interdisciplinary Team
- Drill Examples

Rotation – Draw a Line

- Rotate into backswing. Shaft should following line parallel to feet at ball during address.

Scoop Drill

- Success
 - Shaft does not contact L side of body
- Fail
 - If golfer scoops or casts wrists, then club will contact L side of body

Drop the Heels

- Promotes pelvic tilting and rotation through impact rather than to stand up to ball
- Begin with heels in air, drop heels and drive them into floor with downswing

Problems and Solutions – Upper Body Mobility


- Without adequate shoulder or upper back mobility, it is difficult to attain a full backswing or follow-through

Problems and Solutions – Upper Body Mobility

- Shoulder Mobility
- Upper back mobility

Upper Body Mobility

- Lat Stretch



Golf Fitness and Rehab
at Peak Physical Therapy & Sports Performance

Questions?

References

- Though terms left out of this presentation per copyright, a portion of my knowledge base for developing our golf program at Peak was developed in training for certification with Titleist Performance Institute
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