

# Physical Screening Results



## Posture Assessment

Your posture is critical, as you address the ball, during the backswing and after contact. The ability to maintain proper posture throughout the entire swing will ensure that you maximize rotational speed and minimize any subtle movements which can cause inconsistencies in your game.

**YOUR RESULTS:** First of all, you demonstrate a C-Posture, which is not uncommon and is often a byproduct of our typical activities of life—being at the computer, driving a car, sitting in a couch. It's characterized by weaker (and generally overstretched) upper back muscles and generally tighter chest and pectoral muscles. We'll address this by adding flexibility exercises to stretch your 'front' while adding some strengthening exercises to pull back those shoulders and improve posture.

## Pelvic Tilt Test

The Pelvic Tilt Test is a great test for overall mobility of the hips in the lumbar spine and their ability to control the position of the pelvic posture. The ability to move and control the position of the pelvis is critical for optimal power transfer from the lower body during the golf swing.

**YOUR RESULTS:** You have good ability to move your pelvis forward and backward. You do demonstrate what we call 'shake and bake' though, which is noted during posterior pelvic tilting—It's a good sign though, as it shows your ability to activate your abdominal muscles to tilt your pelvis. We'll work on strengthening this group of muscles so this movement is smoother and the activation becomes more natural.

## Pelvic Rotation

This is an important skill for properly sequencing the downswing and generating a good separation between the upper and lower body. This movement requires good mobility of the spine, hips, and pelvis, along with simultaneous stability of the thorax.

**YOUR RESULTS:** You show good mobility and the ability of your pelvis to rotate improves when I physically stabilize your torso. Strengthening muscles in your 'core' will certainly improve your ability to stabilize these muscles when the torso must rotate above it.

## Torso Rotation

This is an important skill for properly sequencing the backswing and generating a good separation or coil. This movement requires good mobility of the thoracic spine, and simultaneous stability of the lower body.

**YOUR RESULTS:** You show good rotary movement of your torso, especially when I add stability when holding your hips stationary. Doing exercises to strengthen your core (specifically your glutes) will improve the ability of your pelvis to remain stable as your torso rotates above it. Strengthening the rotary muscles above will allow this powerful group to contract more forcefully and increase power.

## **Ankle Dorsiflexion and the Deep Overhead Squat**

Research at the Titleist Performance Institute has found several correlations between this test and the golf swing. First of all, if a golfer is unable to perform a full deep squat with their heels on the ground, then it is almost impossible for them to maintain their posture during the downswing. We usually see the golfer thrust their lower body towards the golf ball and raise their torso up during the downswing (early extension). This is usually due to either tightness in their calf muscles and/or lack of pelvic stability due to weakness in their core.

We also see a strong correlation between players standing up out of their posture during the backswing (loss of posture/flat shoulder plane) and, when golfers can't squat with the club over their heads. The Loss of Posture is usually due to limitations in mobility of their lat muscles and thoracic spines.

**YOUR RESULTS:** Most people fail this test miserably. You were able to squat deeply, but are limited with your arms above your head. You have adequate ankle dorsiflexion (ankle mobility), but slight improvement in this joint would help you. Your Left ankle is stiffer than your right ankle. The inability to put your arms over your head in a full deep squat is related to poor thoracic mobility (extension) and also your sore right shoulder. We'll address this.

## **Toe Touch Test**

The Toe Touch Test is a great test for overall mobility in the lower back and hamstrings, plus it can help identify a hip problem versus a lower back/core limitation.

**YOUR RESULTS:** With a little bit of work, this test is one we can improve upon. You can almost touch your toes and this hamstring flexibility improvement will enhance your ability to maintain your posture throughout the entire golf swing. Your Left hamstring seems a bit tighter than your right hamstring. Generally, this is good.

## **90/90**

This test is designed to highlight any limitations in mobility of the gleno-humeral joint and/or stability of the scapulo-thoracic junction. More specifically, the 90/90 Test measures the player's range of external rotation in the shoulder and their ability to maintain scapular stability in a golf posture. We look at the amount of external rotation in each shoulder from a standing position and then compare that range to how the shoulder rotates in their golf posture. Many golfers will lose range of motion in their golf posture due to a lack of scapular stability. If the shoulder blade elevates or flares due to muscular imbalances or poor posture in their golf stance, it will change the orientation of the glenoid fossa (shoulder joint). This in turn, will greatly reduce the amount of external rotation in their shoulder joint.

**YOUR RESULTS:** You demonstrate some mobility problems here, especially in your Right shoulder. Both shoulders show decreasing range of motion when in the golf posture. This could be because the shoulder blades (your scapulae) do not remain retracted, effectively falling away from the midline of the spine. When this occurs it is common to show reduced mobility in the glenohumeral joint. This is true for you. I think we should investigate this shoulder and get our physical therapist involved. You can contact your Primary Care Dr. and ask for a referral to physical therapy. James Markwica can probably see you quickly—and he's also TPI certified.

## **Single Leg Balance Test**

The Single Leg Balance Test measures the golfer's overall balance. It highlights any proprioceptive imbalances from left to right as well as overall stability in the core.

YOUR RESULTS: Your balance could be improved. We'll work on it.

## **Lat Test**

Tightness in the lat can lead to loss of spinal posture anytime the arms are elevated, such as during the backswing. Also, the lat muscle can limit the ability of the player to rotate their shoulders on the backswing or the follow-through. The lat muscle is a powerful internal rotator and adductor of the humerus. Therefore, it is a major contributor to power in the golf swing.

YOUR RESULTS: Your left Lat appears pretty flexible, but could use some further improvement. Your right lat is difficult to assess due to the restriction in your right shoulder joint. We'll need to address this.

## **Trunk Rotation**

Good separation between the upper and lower body is important to help generate speed and maintain a stable posture during the golf swing. Many golfers lack true thoracic spine rotation. The lack of rotation may cause them to create excessive lumbar spine rotational forces or over use the shoulder joint to compensate for limited thoracic spine mobility.

YOUR RESULTS: At first glance you show pretty good trunk rotation, but when your shoulder blades are retracted (close to the midline—shoulders back) your trunk rotation decreases. You seem to have more of a restriction on your backswing (<40 degrees of rightward rotation). Additionally you seem to get some 'cramping' which could also be indicative of some tight core (rotational-obliques) muscles. We'll address this by working on simultaneously stabilizing the lower body and working on rotational mobility through your thoracic spine. We'll also need to work on building some strength and stability of your scapular muscles so that you can maintain good posture.

## **Bridge with Leg Extension**

In the golf swing there may be no more important multi-function muscle than the Gluts. This entire muscle group is vital in helping the golfer to maintain lower body stability throughout the swing. It is also vital in helping to maintain core stability throughout the swing. It is this one muscle group that helps to blend the lower body movement into the upper body movements, via the central portion of the body (the Core). Therefore it is of utmost importance to have this muscle group functioning at its optimal levels in order to attain a repeatable and consistent swing.

YOUR RESULTS: Your hamstrings cramped up and your mid-section sagged a bit. It shows that your hamstrings may be trying to do the work of your glutes which seem to be weak. We'll work on strengthening this important stabilizing muscle group.

## **Lower Quarter Rotation Test**

Hip and tibial internal/external rotation and foot inversion/eversion are essential for a proper golf swing. The hip, tibia and foot coil and load on the trail leg during the backswing and rotate and post in the lead leg during the downswing. There is potential for excessive lateral motion in the golf swing (sway and slide) anytime a golfer finds restrictions in the lower quarter.

YOUR RESULTS: Pretty good. No significant restrictions.

### **Your Primary Weaknesses**

Pelvic and lower body stability--Glute and general core stability weakness

Upper body thoracic extension (posture)

Rotational mobility

Upper back scapular stability

Right shoulder pain—Needs further investigation/treatment

Lack adequate mobility in both shoulder joints—this could be improved and strengthened.

### **General Program Considerations**

Cardiovascular conditioning in light of your pulmonary fibrosis—monitor o2 sats, light cardio

General Strengthening routine—major muscle groups

Golf specific exercises to include corrections to the above