The Body and the Golf Swing ™

A Team Training Approach to Golf

How a Medical Model in golf can help improve a golfer' ability and reduce injuries from golf.

The Medical Model in Golf

Primary Care Physician

- Family Practice
- Internal Medicine

Medical Specialists

- Neurology
- Orthopedics
- Physical Therapist
- MRI Testing Centers
- Radiologists

Golf Industry PCP

- PGA Teaching Professional

Golf Specialists

- Putting Instructor
- Club Fitter
- Fitness Professional
- Driving Instructor
- Short Game Instructor
- Medical Professional

The Medical Model in Golf

The PGA Teaching Professional is the point of entry for players into the golf system

LIKE

The Primary Care Physician is the point of entry for people into the medical system

The Medical Model in Golf

Responsibilities of Primary Care Physician

- Initial diagnosis of the problem
- Initial treatment of the problem
- Referral out to specialists for more detail evaluation and diagnosis when initial measures fail
- Management of the case through communication with the specialists

The Medical Model in Golf

Responsibilities of the PGA Teaching Professional

- Makes the initial swing diagnosis
- Initiates the initial treatment/training for the swing problems
- Referral out to specialists for more detailed evaluation when the initial treatment or training does not get the desired outcome or the assessment indicates sooner.
- Management of the case through communication with the specialists.

The Medical Model in Golf

Responsibilities of the Specialist in Golf

- Understand what has been done thus far and why the golfer has been referred to them
- Run special tests to diagnose the problem like 3-D motion analysis, weight transfer testing, physical, mental, equipment and skill area testing.
- Diagnose the problem based on the data
- Initiate a treatment plan based on the data
- Communicate the data and plan to the referrer

A Team approach to Golf Learning

IF we agree with the Medical Model in golf

THEN

We need to function in teams to help golfer improve, play more and stay healthy so that the stay in the game

The Golf Performance Team

- PGA Professional
- Medical Professional
- Fitness Professional
- Equipment Professional
- Mental Professional
- Nutritionist
- Others?

The Golf Performance Team

PGA Professional

- Team Leader and Coach
- Short Game Specialist
- Full Swing Specialist
- Putting Specialist
- Equipment Specialist
- Playing the Game Specialist

The Golf Performance Team

Medical Professional

Movement Specialist

- Weight shift
- 3-D Analysis

Injury Specialist

- Prevention and Treatment

Functional Training Specialist

- Movement Screens and Assessment

The Golf Performance Team

Fitness Professional

- Speed Specialist
- Power Specialist
- Conditioning Specialist

The Golf Performance Team

Sports Psychologist

- Mental Profiling
- Mental Planning
- Strategy Planning

The Golf Performance Team

All are responsible for communicating with one another and the Team leader

- PGA Professional
- Medical Professional
- Fitness Professional
- Equipment Professional
- Mental Professional

Toe Touch and Deep Squat Roles in Early Hip Extension

What is early hip extension?

- Lower body moves towards the golf ball on the back swing and/or the downswing
- Weight moves towards the toes
- Loss of posture
- Golfer often reports feeling “trapped” or “stuck” on the downswing to impact
- Errant ball flight and loss of distance

Toe Touch and Deep Squat Roles in Early Hip Extension

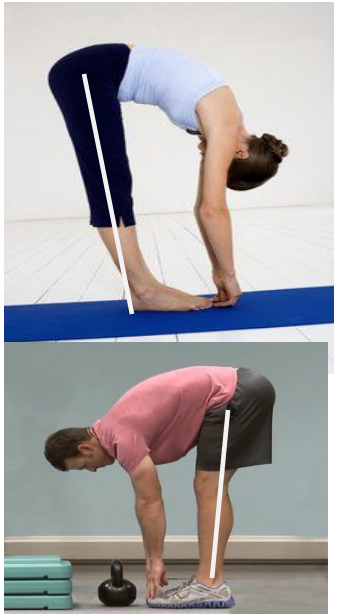
Overhead Deep Squat

- Spine parallel to shins
- Hips get below the knees
- Feet flat without pronation or splay
- Arms overhead as an extension of the spine
- Knees don't bow
- Hips are square and centered

Toe Touch and Deep Squat Roles in Early Hip Extension

Toe Touch

- Knees fully straight
- Posterior weight shift of pelvis
- Hip hinge vs spine flex
- Feet remain flat and level



Toe Touch and Deep Squat Roles in Early Hip Extension

The Research

- Performed at FitGolf Performance Centers Nationally
- Looked at Toe Touch and Overhead Deep Squat using the TPI Standard Testing Protocols
- Used the video motion analysis system to measure for the presence or absence of early hip extension.

Toe Touch and Deep Squat Roles in Early Hip Extension

We tested 350 golfers for:

- Toe Touch – Pass or Fail
- Overhead Deep Squat – Pass or Fail
- Leg Lowering Test – Pass or Fail
- Presence or absence of Early Hip Extension

Toe Touch and Deep Squat Roles in Early Hip Extension

Results

- **Toe Touch Test**
  - proved to have the strongest relationship as a cause and effect relationship with statistical significance.
  - Subjects who passed the toe touch test were 54% less likely to exhibit early hip Extension

Toe Touch and Deep Squat Roles in Early Hip Extension

Results

- **Overhead Deep Squat**
  - There is also a cause and effect relationship between early hip extension and overhead deep squat.
  - The relationship was not as statistically strong as we saw in the toe touch
  - Subjects who passed overhead deep squat were 25% less likely to exhibit early hip extension

Toe Touch and Deep Squat Roles in Early Hip Extension

Results

- Leg Lowering Test
  - There was no statistical relationship between leg lowering and early hip extension.

Toe Touch and Deep Squat Roles in Early Hip Extension

Conclusions:

- There are at least 2 physical reasons for early hip extension in the golf swing
- If a golfer early hip extends in his/her golf swing it is highly likely that they cannot touch their toes or squat properly

Implementing the Team Approach

How do you use this data?

- When you see early hip extension in your golfers look for failed toe touch or early hip extension or both. It will give you powerful knowledge and better understanding how to help your student resolve this challenge

Implementing the Team Approach

How do you use this data?

- If you consider the team approach with these students you will see greater outcomes and happier students as a well trained healthcare or fitness professional will be able to clear these physical challenges quickly and easily.

The Model – A Case Study

JD, a golfer and member of the club, arrives at JM, his PGA Professional for golf instruction. "Can you help me" is the question he poses to his pro.

The teacher agrees so he sits the golfer down and ask several history questions. He discovers several problems including frustration, consistency and distance issues, as well as a low back injury history. Teacher also asks about goals.

The Model – A Case Study

Goals identified

Lower Scores

Hit it longer off the tee

Be more consistent

BE LESS FRUSTRATED with SELF on the course.

The Model – A Case Study

Swing Evaluation by Teacher (using video)

- C-Posture at set-up
- Reverse spine angle with lateral hip sway at the top
- No hip/pelvic rotation to the left through impact
- Ball Flight – Fade on good shots to Slice on bad shots
- Distance with Driver – 235 average.

The Model – A Case Study

Physical Screens by the Teacher

- Failed Squat due to the Lat.
- Failed Toe Touch due to right hamstring issues.
- Failed Pelvic Rotation due to core stability issues
- Stability issues with torso rotation
- Normal Shoulder Rotation Test
- Failed lat test on the right.

The Model – A Case Study

The Plan

- One golf lesson a week for 2 months
- Referral to a Medical Professional for further evaluation of the physical issues identified
- Practice drills 10-15 minutes a day at home or on the range

Unbelievably, the golfer agrees to this and the program is started

The Model – A Case Study

Medical Professional Assessment

- Goals: same as stated to PGA Instructor
- Received a report of the golf and physical finding from the Instructor
- Performed a Functional Movement and Evaluation of the Golfer

The Model – A Case Study

Medical Findings

- Hip mobility is limited on the left to 25 degrees of rotation
- Spine rotation is 45 degrees to the left and 40 degrees to the right due to trunk stability issues in the pelvis and the lower torso
- Increased muscle tone in the hamstring but no shortening
- Poor latissimus length on the right and scapular weakness on both sides
- Pelvic girdle right side high

The Model – A Case Study

3-D testing data:

- X-factor of 20 degrees
- 15 degree loss of spine posture
- Early Extension on the downswing
- Hip rotation to 10 degrees left at impact

The Model – A Case Study

Weight Transfer Data

- Setup distribution - 55% right, and 55% on toes
- Top - 85% right, and 60% on toes
- Impact – 55% left, and 65% on toes
- Finish – 65% left and 60% on toes

The Model – A Case Study

Assessment

- Core instability, limited hip rotation, and upper back weakness are **contributing** to the swing faults of early extension, reverse spine angle, poor rotation to the left
- The reverse spine angle and core instability are causing the low back pain with golf.

The Model – A Case Study

Plan – Weekly sessions for 10 weeks

- Manual therapy
- Functional Movement Exercises
- Balance Exercises
- Stabilization Exercise
- Two sessions of Teacher/Medical on the Range with the client to see the changes from practice of drills, and body work, and to plan the next steps

The Model – A Case Study

The student agreed to both the lessons and body work

The physical findings and plan were send to the Instructor with bimonthly updates of physical process.

The golf instructor communicated progress via email with “next steps” for the swing so that the medical professional could plan training correctly.

The Model – A Case Study

Outcome - At 10 weeks reassessment revealed the following:

- X-factor of 40 degrees
- 5 degree loss of spine posture
- Early Extension reduced 50% on the downswing
- Hip rotation to 25 degrees left at impact
- Driving distance is 255 yard carry
- Average score down 2 strokes
- No Back pain during golf or the next day.
- Reverse spine angle resolved

The Model – Additional Data

This is a real case. I was the medical professional on the case.

The Golf Instructor understood that relationship between the body and the golf swing.

The Golf Professional knew that the body was part of the problem and that it needed to be fixed to help the student.

The Model

What are your thoughts on the model?

What are the challenges you face with this model?

How can this model help you and your students?

What are the steps you need to take to work with in this model?

The Body and the Golf Swing

Learn how to screen your golfer for physical and movement dysfunction that is affecting their swings and causing pain.

Take a course, get certified, work with a Medical Specialist and Fitness Specialist who know how do to this.

The Body and the Golf Swing

YOU CAN MAKE A DIFFERENCE IN YOUR STUDENTS' LIVES…

and YOURS TOO.