1. The sacroiliac joint is a reaction joint like all other joints.

2. The minimal three dimensional motion at the sacroiliac joint is significantly important to itself and to the rest of the body.

3. It is the Chain Reaction™ of the entire body that creates movement in the sacroiliac joint.

4. Both the real and the relative motions of the sacroiliac joint must be fully appreciated.

5. Our initial analysis of sacroiliac function and dysfunction begins with the three dimensional motion of the pelvis.

6. Functional analysis of the sacroiliac joint includes the use of leg drivers and arm drivers in all three planes of motion.

7. Functional yet controlled specific manual analysis techniques must be employed to fully appreciate the sacroiliac joint.

8. Biomechanical influences can inhibit the normal healing process from an obvious acute injury.

9. Training and conditioning exercises that feed the sacroiliac joint consider the motion of the sacrum and the ilium as being driven by the arms and the legs.

10. An effective golf swing drives the sacroiliac joint through the lower extremities, being complemented by the upper extremities.

11. It is the correct relative proportions of movement that facilitate a healthy sacroiliac joint.

12. Motion of the hips dramatically influences the sacroiliac joint.
OBJECTIVES FOR THE SACROILIAC FUNCTIONAL GUIDE

To assimilate up-to-date information and knowledge about the sacroiliac. To learn how to apply effective functional techniques when testing and training for the sacroiliac.

To understand and appreciate the tri-plane Chain Reaction principles as they apply to the sacroiliac.

HOW TO USE THIS FUNCTIONAL GUIDE

This functional guide can be used as a convenient summary of the program's contents to take with you after viewing. You can also use this guide as a notebook; space has been provided so that you can make notes on relevant tracts as you watch them.
STRATEGY 1
Strategically appreciating the complex simplicity of the biomechanics of the sacroiliac joint.

STRATEGY 2
Strategically identifying the relatively real motion of the sacroiliac joint.

STRATEGY 3
Strategically understanding mobile stability and stable mobility.

STRATEGY 4
Strategically analyzing the singularly tri-planar function of the pelvis.

STRATEGY 5
Strategically evaluating the actively reactive nature of the sacroiliac joint.
STRATEGY 6

Strategically taking advantage of the contrived authenticity of manual reaction.

STRATEGY 7

Strategically determining the causative cures of sacroiliac dysfunction.

STRATEGY 8

Strategically training the passive drivers of the sacroiliac joint.

STRATEGY 9

Strategically transforming the loaded explosion of the pelvis for all activities.

STRATEGY 10

Strategically realizing the Chain Reaction™ nature of the sacroiliac joint.
My Functional Journey From The Ground Up and From The Top Down

The sacroiliac joint is like all other joints . . . it is a reaction joint.

• It reacts to gravity, ground reaction forces, momentum, body slants, external forces, and intentions.

As with all other joints we need to appreciate the movement of the two bones that make up the joint in all three planes of motion, all at the same time.

This appreciation of the SI joint actually simplifies the complexity of sacroiliac biomechanics.

The minimal motion of the SI joint creates a 3D stimulus to allow the rest of the body to be more successful.

The L5/S1 disc and the hips desire the right amount of motion at the right time at the SI joint with function.

Joints with very little motion . . . that very little motion is hugely important.

The SI joint is termed a “stable mobility” joint.

It is the Chain Reaction™ of the entire body that moves the SI joint.

Upon right foot initial contact and loading in gait with the left foot loading just prior to heel lift the following occurs:

• In the transverse plane the pelvis and the sacrum rotate to the left, with the pelvis rotating faster, therefore creating relative right rotation.

• In the sagittal plane the pelvis and the sacrum are anteriorly rotating, with the pelvis anteriorly rotating faster, therefore creating relative posterior rotation or counter rotation.

• In the frontal plane the pelvis and the sacrum are laterally flexing to the left, with the pelvis laterally flexing faster, therefore creating relative lateral flexion to the right.
Understanding the powerful muscles of the SI joint which include the piriformis, the erector spinae, iliopsoas, quadratus lumborum, abdominals, and hamstrings.

Initially these muscles control the motions of the SI joint eccentrically.

The key to analysis of the SI joint is to determine where the dysfunction of the SI joint comes from.

Description of how the abdominals influence the SI joint.

Description of how tight hamstrings influence the SI joint.

Description of top down and bottom up relative drivers determining the motion and the relative motion of the sacroiliac joint.
CASE PRESENTATION -
A special thanks to Beth Wiesman for her valuable assistance as a patient.

Explaining the SI joint to Beth

Describing the three planes of motion

“This bone, moving this bone, moving this bone, moving this bone, moving this bone” . .
explaining the Chain Reaction™ concept

One of the first questions is how well does the pelvis move through tweaking the gait.

Biomechanical locomotor analysis along with analysis of foot biomechanics

Sagittal plane movement with anterior and posterior lunge.

Frontal plane movement with lateral lunge.

(Keeping the patient’s mind “out of the act”)

Transverse plane movement with rotational lunge.

(The SI joints do not like significant asymmetries over time)

Sagittal plane movement with single leg balance with opposite leg anterior and posterior reach.

Frontal plane movement with single leg balance with opposite leg lateral reach

Transverse plane movement with single leg balance with opposite leg rotational reach.

Transverse plane movement with single leg balance with opposite leg toe touch rotational reach.

(Description of leg drivers in all three planes)

Anterior/lateral lunge

Single leg balance, knee flexion excursion

Single leg balance, hip adduction excursion
Repeat of lateral lunge

Sagittal plane movement with single leg balance with bilateral upper extremity anterior and overhead posterior reach.

Frontal plane movement with single leg balance with bilateral upper extremity overhead lateral and medial reach.

Single leg balance with trunk extension

Transverse plane movement with single leg balance with bilateral upper extremity rotational reach to the left and to the right at shoulder height

(Description of arm drivers in all three planes)

Description of leg length analysis

Coming up with a functional hypothesis

**Specific manual analysis techniques in the controlled environment of the True Stretch™**

Hip flexor and SI analysis

Description of sagittal plane analysis

(Description of manual reaction techniques if required)

Description of relative foot positions

Hip flexor and rectus and SI analysis

Hip rotator and SI analysis

Demonstration of right hip and SI manual reaction mobilization

Putting the body in the position of function to facilitate function with the mobilization of various body parts or part

Hip abduction and SI analysis
Description of findings in treatment strategies with Beth

Reassessment of left leg balance with shoulder to overhead 3D Matrix

Reassessment with right leg balance with shoulder to overhead 3D Matrix

Discussion of treatment strategies

Description of a “blessed glitz” understanding that the test is the exercise and the exercise is the test.

Listening to what the SI joint has to say

Overview of treatment strategy including self mobilization, balance reaction exercises, lunging exercises, and progression into additional functional exercises to be shown in functional training and conditioning.

Debrief with Bob Wiersma, Executive Director, Accelerated Functional Rehabilitation Network

• Static alignment and palpation evaluation techniques

• Evaluate for a purpose

• “So what whopper jawed ya?” The new functional model

• “Correction” in non weight bearing and static postures versus dynamic functional motion.
• Trying to treat the cause and the compensations at the same time

• Biomechanical influences that inhibit the normal healing process from an obvious acute injury.

• In function not being able to differentiate.

• “Function trumps pathology” - B. Wiersma

• Treat the function and the dysfunction and let the good Lord take care of the healing.

• Disabling versus discomforting pain . . . the assessment needs to be tweaked if pain becomes the driver.

• The patients simply want to feel better now . . . our responsibility is to them today, tomorrow and forever.

• Not letting a method drive my evaluation, but the patient’s function.

• Everything we do affects the SI joint

• The chicken, the egg, the pork chop.

• The fun in being stumped
GARY’S OPPORTUNITY TO REHAB, TRAIN AND CONDITION WITH BETH

Combination rehabilitation and training and conditioning

Discussion of 3D iliopsoas, hamstring, IT band, adductor, and hip rotators stretching

Taking advantage of the new motion that we have achieved

• Anterior lunging
• Lateral lunging
• Anterior/lateral lunging
• Posterior/lateral rotational lunging

SI feeding exercises
• Anterior lunging with anterior reach to knees
• Lateral lunging with opposite lateral overhead reaching
• Posterior/lateral rotational lunging with same side rotational reach at shoulder height

Loading tweak with a double handled kettleball
• Anterior lunging with anterior reach to knees
• Lateral lunging with anterior reach to knees
• Posterior/lateral rotational lunging with anterior reach to knees
• Anterior lunging with rotational reach to opposite side
• Lateral lunging with rotational reach to same side
• Posterior/lateral rotational lunging with rotational reach to same side
The next progression, faster and more repetitions.

The next progression, 3D lunges with the opposite reach

- Anterior lunge with overhead posterior reach
- Lateral lunge with overhead lateral reach
- Posterior/lateral rotational lunge with rotational reach opposite side

Single leg balance overhead matrix
- Left leg balance, shoulder to overhead matrix with 5 lb. dumbbells
- Right leg balance, shoulder to overhead matrix with 5 lb dumbbells

Discussion of the next progression . . . 3D lunges with 3D shoulder to overhead matrix

Discussion of medball training in three planes of motion

Tolerating the boredom

Thanking Beth for her excellent efforts and an opportunity to work out with her.
The SI joint is an integral part of the golf swing.

We have to know how the SI functions in all functional activities.

During the back swing of a right handed golfer, the pelvis rotates to the right, the sacrum rotates to the right and the trunk rotates to the right.

The key question is “are you driving your backswing and the entire golf swing with predominantly the legs or the arms?”

Loading the pelvis in all three planes . . . exploding the pelvis in all three planes.

**Pelvis - Bungee Cord Range Drill**

First bungee cord load . . . facilitating the load of the pelvis in all three planes to facilitate the backswing.

Letting the bungee cord have its way to facilitate all three planes of motion for the pelvis.

The concentric ability gets easier because the eccentric loading is fully loaded by the bungee cord.
Second bungee cord load . . . facilitating the unload of the pelvis in all three planes of motion, therefore facilitating the complete pelvis follow-through.

Overcoming bungee resistance to get the pelvis fully loaded into the back swing.

Understanding the effects of an artificial load.

When we are unloaded, how do we feel and how do we swing and how do we hit?

The proof of the pudding
RESEARCH ROUNDTABLE WITH DR. DAVID TIBERIO

We know the pelvis and sacrum move together . . . if we get the “correct relative proportions” of movement we will have a healthy SI joint.

Agree that the SI joint doesn’t move much . . . and we need to know who is zooming who.

Any limitation of hip motion and any asymmetry will throw off the SI joint.


Limited internal rotation of the hips were more prevalent in the pain group.

A discussion of what needs to happen to facilitate hip internal rotation.


Those with SI pain have a unilateral pattern of asymmetrical internal rotation.

Discussion of structural and functional limitations.

Causes of pathology.
Look at what inhibits the motion of the pelvis with reaching activities.

The lack of locomotor shock absorption leads to SI dysfunction.

The loss of thoracic rotation influencing the SI joint.

Understanding transverse plane SI dysfunction and L5/S1 spondylolisthesis.

Understanding that the cause of SI pain and dysfunction is rarely at the SI joint.

A special thanks to Dr. David Tiberio for sharing such relevant research articles.