1. Lack of stimulation to the scapula and the lack of 3D motion of the scapula creates havoc.

2. The Peltrunkula - the pelvis’s relationship to the trunk; relationship to the scapula; relationship to the trunk; relationship to the pelvis.

3. The function of the scapular muscles is to decelerate tri-plane loading and accelerate tri-plane unloading.

4. “Ask the scapula to give us hints as to what we might be missing.” - G. Gray

5. “Motion facilitates increased blood flow which facilitates healing, which facilitates getting rid of the grungees, which facilitates I feel better, which facilitates enhanced motion.” - G. Gray

6. The “full cheat” analysis with the Functional 3D Testing System.

7. “Manual therapy reaction is pushing the bone in the plane or planes of motion in sync with what the body wants it to do anyway.” - G. Gray

8. Functional medicine principles and the Chain Reaction between the scapula and the clavicle.

9. Expanding the envelope on function with a scapular reaction training program with ground reaction exercises.

10. If we can load the scapula better, we can explode the scapula better and therefore hit the ball better.

11. Understanding the transformation of tweaking the scapula for other activities in sports.

12. Asking for frontal plane shoulder abduction we get significant frontal plane as well as sagittal and transverse plane motion of the scapula.

13. The fatigue study shows significant position in motion changes in the scapula with the scapula mostly being inhibited from its initial reaction.
OBJECTIVES FOR THE SCAPULA FUNCTIONAL GUIDE

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

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

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 difference between the traditional model and the functional model of scapular analysis, rehabilitation and training.

STRATEGY 2
Strategically understanding the three dimensional functional biomechanics of the scapula.

STRATEGY 3
Strategically taking advantage of the peltrunkula relationships.

STRATEGY 4
Strategically analyzing the scapula's relationship to the rest of the body and the rest of the body to the scapula.
STRATEGY 5
Strategically applying functional manual rehabilitation skills to the rehabilitation of scapular involvements.

STRATEGY 6
Strategically designing effective rehabilitation programs based on our Chain Reaction understanding of function.

STRATEGY 7
Strategically transforming our understanding of drivers and tweaks into dynamic scapular training and conditioning programs.

STRATEGY 8
Strategically applying the academic efforts of outstanding research to the benefit of those for whom we create functional environments.
Discussion of the importance of the scapula.

The osseous configuration of the scapula.

Scapular **Chain Reaction** strategies.

The scapula is a dumb bone with no brain.

The scapula has significant muscle attachments.

*The criss-cross orientation of the many muscles of the scapula combined with appropriate scapular movement results in the effectiveness of the entire scapular complex.*

Lack of stimulation to the scapula and the lack of 3D motion of the scapula creating havoc.

Understanding the cause of the need for surgery that takes care of symptoms and compensations at the shoulder.

Lumbar dysfunction secondary to scapular involvement.

**The Peltrunkula** - the pelvis’s relationship to the trunk; relationship to the scapula; relationship to the trunk; relationship to the pelvis.

The scapula is a key link to the locomotor system and even more specifically to the ACL, the patella femoral joint, and the function of the feet.

Understanding the scapula as a functional default button.

*“Ask the scapula to give us hints as to what we might be missing”* - G.Gray
Scapular trigger points, pain syndromes, fibromyalgia, usually lead back to the lack of normalized scapular motion in all three planes of motion.

The scapula has 17 major muscle attachments.

The function of the scapular muscles is to decelerate tri-plane loading and accelerate tri-plane unloading.

The scapula is a tri-plane “gizmo” with all three planes reacting together.

Taking advantage of the latissimus dorsi attachment to the scapula and understanding the function of the latissimus dorsi.

Understanding the biomechanics of the slouch posture.

“Motion facilitates increased blood flow which facilitates healing, which facilitates getting rid of the grungees, which facilitates I feel better, which facilitates enhanced motion.” - G. Gray

Description of loading and unloading the scapula in all three planes of motion.

The scapula as the chicken and/or the egg.

The need to get the scapula happy subconsciously in all three planes of motion.

Improvement through biomechanical grace.

Ways of subconsciously driving the scapula.
CASE PRESENTATION -
A special thanks to Mike Howe for his valuable assistance as a patient.

Mike is one week status post right acromioplasty.

Clinical presentation to Mike.

How can we best help the scapula and the rest of the body today?

The “full cheat” analysis with the Functional 3D Testing System
   Hip flexion load to shoulder flexion unload.

Discussion of future functional tests

Functional manual scapular reaction “dance” analysis
   • Same side hip flexion and extension with scapular sagittal plane loading and exploding
   • Opposite side hip adduction with scapular frontal plane loading
   • Same side hip adduction with scapular frontal plane unloading
   • Opposite side hip internal rotation with scapula transverse plane loading
   • Same side hip internal rotation with scapula transverse plane unloading

Describing and demonstrating the functional manual scapular reaction analysis and rehabilitation

True Stretch environment
   • Sagittal plane right hip flexion with sagittal plane scapular mobilization
   • Sagittal plane right hip extension with sagittal plane scapular mobilization
   (discussion of hip flexion stretching)
   • Transverse plane left hip internal rotation with transverse plane scapular mobilization
   • Transverse plane right hip internal rotation with transverse plane scapular mobilization
   • Frontal plane left hip adduction with frontal plane scapular mobilization
   • Frontal plane right hip adduction with frontal plane scapular mobilization
Free standing environment
• sagittal plane right hip flexion with sagittal plane scapular mobilization
• transverse plane left hip internal rotation with transverse plane scapular mobilization
• frontal plane left hip adduction with frontal plane scapular mobilization
• sagittal plane right hip extension with sagittal plane scapular mobilization
• frontal plane right hip adduction with frontal plane scapular mobilization
• transverse plane right hip internal rotation with transverse plane scapular mobilization

A retest of the initial functional test

Bringing the motion along with the strengthening

Discussion of home exercises with wall reaction and three dimensional butt sways

Comparison of the traditional strategy versus the functional strategy
ANALYSIS AND REHABILITATION DEBRIEF WITH BOB WIERSMA, EXECUTIVE DIRECTOR, ACCELERATED FUNCTIONAL REHABILITATION NETWORK

• Understanding the True Stretch™ strategy.

• Allowing the patient to drive the appropriate manual therapy reaction.

• Functional manual reaction doesn’t have to be nit picky.

• Empowering the patient versus making the patient dependent.

“Manual therapy reaction is pushing the bone in the plane or planes of motion in sync with what the body wants it to do anyway”. - G. Gray

• Pure function treats balance in motion, posture in motion, everything subconsciously and nothing consciously.

• Functional medicine principles and the Chain Reaction between the scapula and the clavicle.
• The scapula hooks into the big toe.

• With chronic pain the scapula is usually “dead in the water”.

• Getting to the painful scapula through the hips.

• The best modality for pain is proper motion.

• Motion is the breath of life.

• The key is to go to successes and build from there.

• The power of the transverse plane.

• Fully appreciating the transverse plane hug.
SCAPULA WORKOUT AND TRAINING SESSION

Expanding the envelope on function with a scapular reaction training program with ground reaction exercises.

Discussion of “Closed Chain Reaction” shoulder exercises.

**Ab Dolly™**
- Sagittal plane Ab Dolly
- Frontal plane Ab Dolly
- Transverse plane Ab Dolly

**Three dimensional squat thrust matrix**
- Sagittal plane in sync squat thrusts
- Frontal plane in sync squat thrusts
- Transverse plane in sync squat thrusts
- Sagittal plane hand tweak with three dimensional in sync squat thrusts
- Frontal plane hand tweak with three dimensional in sync squat thrusts
- Transverse plane hand tweak with three dimensional in sync squat thrusts
- Sagittal plane out of sync squat thrusts
- Frontal plane out of sync squat thrusts
- Transverse plane out of sync squat thrusts
Push-up position mirror hand reaction touches

Body Blade™
• One handed push-up position with body blade reaction in all three planes with other hand.

Box hand step-ups
• Sagittal plane hand step-ups
• Frontal plane hand step-ups
• Transverse plane hand step-ups

Discussion of the ulatrunkpel reaction

A special thanks to Keith for an amazing workout.
Special thanks to Dr. David Tiberio for his valuable assistance

Scapular reaction golf drill

Description of scapular loading in all three planes of motion with the complete golf swing.

If we can load the scapula better, we can explode the scapula better and therefore hit the ball better.

Out tweaking ourselves with range drills is always a concern.
Using the scapular reactor . . . the elastic figure of eight.
• Normal stance
• Rotational tweak with the feet to the right
• Rotational tweak with the feet to the left

The key to a good range drill is when we “untweak” ourselves, we hit the ball more consistently, further and straighter.

Understanding the transformation of tweaking the scapula for other activities in sports.
Intransformationalizing is a game we enjoy playing . . . especially with the scapula.


A study with pins in the scapula

Review of scapular motion in all three planes

Asking for frontal plane shoulder abduction we get significant frontal plane as well as sagittal and transverse plane motion of the scapula.

Review of tri-plane rule of function

The scapular motion in space
90° rotation of the shoulder driving significant sagittal plane scapular motion.

Go where you are successful and with proper tweaking you can get what you want.

With the slouching posture comes (or is caused by) a shutdown of the sagittal and transverse plane of motion of the scapula.

The fatigue study shows significant position in motion changes in the scapula with the scapula mostly being inhibited from its initial reaction.

Appreciating studies that make sense to our functional understanding.

Understanding an integrated isolated fatigue strategy for functional training and rehabilitation.

Training the big toe and the thumb concurrently.

A special thanks to Dave for his ongoing exceptional efforts in bringing pertinent research articles to the table.