FIVE CORE MOVEMENT 1

BEING A MOVEMENT SPECIALIST
Thinking For a Change :
Function Versus Structure

Ms Lim Yi Lin
Consultant Physiotherapist

Tesseract Centre
for
Advanced Movement Intelligence

Tesseract Centre
for
Advanced Movement Intelligence

Articles reading and discussion.

Tesseract Centre
for
Advanced Movement Intelligence

Structural Approach

1. Keywords : Biomedical approach,structure flexibility & strength,core stabilization,balance & posture care,joint care.

2. What are we assessing? Structure(s)

3. What are our aims?

4. What strategies do we use?

Tesseract Centre
for
Advanced Movement Intelligence

Functional Approach

1. Keywords : Biopsycho-social Model, Sensorimotor System, Integrated Spinal Stabilizing System, body awareness & perception emphasis in Posture care & Balance, Joint Centration

2. What are we assessing? System(s) influencing the structures.

3. What are our aims?
4. How do we integrate to strategize our treatment?

Tesseract Centre
for
Advanced Movement Intelligence

Key Concepts to Define

Functional Approach	Structural Approach
Bio-psychosocial Model	Bio-medical Model
Sensorimotor **System**	**Structural** Flexibility and Strength
Integrated Spinal Stabilizing System & good IAP regulation	Core stabilization
Body Awareness Emphasis in balance, joint and posture care	Balance, joint and posture care
Movement : segmental movement viewed in and with global movement (Importance of CNS control/programme in brain)	Movement: subluxation, dislocation, decentration, centration (Importance of orthopaedics viewpoint)

Tesseract Centre
for
Advanced Movement Intelligence

Structural Approach

Concept	Key Points
Bio-medical Model	Pathology of structure
Structural Flexibility and Strength	Range of movement and strength
Core stabilization	Core muscles emphasized : abdominals, multifidus
Balance, joint and posture care	Demonstration of common posture care instructions and proprioception test.
Movement: subluxation, dislocation, decentration, centration (Importance of orthopaedics viewpoint)	Segmental in evaluating a movement. Demonstration of evaluating a shoulder flexion movement.

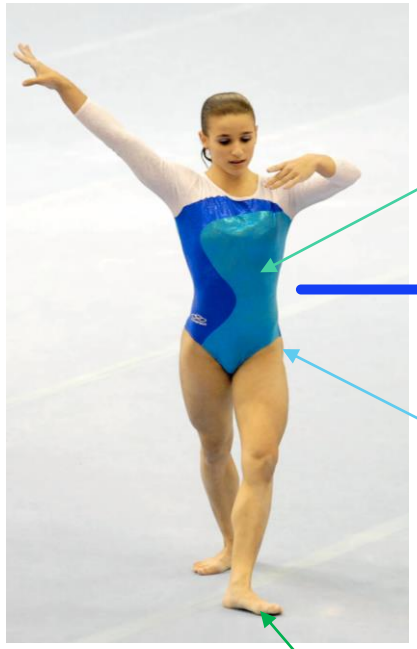
Tesseract Centre
for
Advanced Movement Intelligence

Functional Approach

Concept	Key Points
Bio-psychosocial Model	Physical , psychological (mental & emotional), social aspects
Sensorimotor **System** **Page et al, Assessment & Treatment of Muscle Imbalance: The Janda Approach.*	* Central nervous system Afferent Efferent Joint Proprioception & feedfoward+ feedback mechanism
Integrated Spinal Stabilizing System (ISSS) & good IAP regulation	Short intersegmental spinal muscles, deep neck flexors, serratus anterior, diaphragm, abdominal wall, pelvic floor muscle. SUBCONSCIOUS ACTIVATION
Body Awareness Emphasis in balance, joint and posture care	Practical session on DNS movement tests for this. (Lower limb, upper limb)
Movement : segmental movement viewed in and with global movement (Importance of CNS control/programme in brain)	Efficient coordination of body segments which consists of stabilization of a few body segments(ISSS)in order to perform a good quality of movement. - A whole muscular chain - Less degeneration to joints and strain to **passive** structures.

Tesseract Centre
for
Advanced Movement Intelligence

Five Core Movement Concept : 5 Core Areas



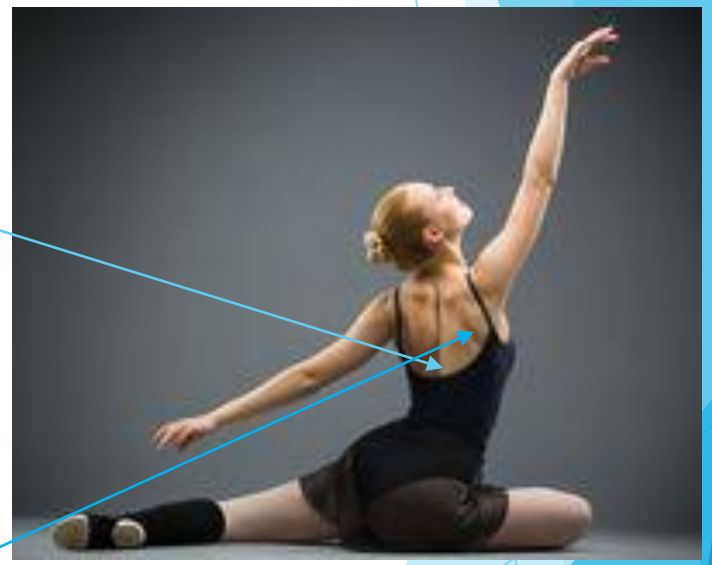
1. RIBCAGE

2. SPINE

IAP regulation

3. PELVIC

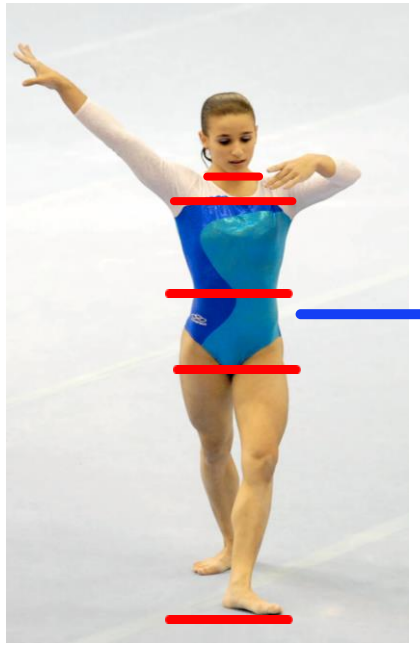
4. SCAPULA



5. FEET

Tesseract Centre
for
Advanced Movement Intelligence

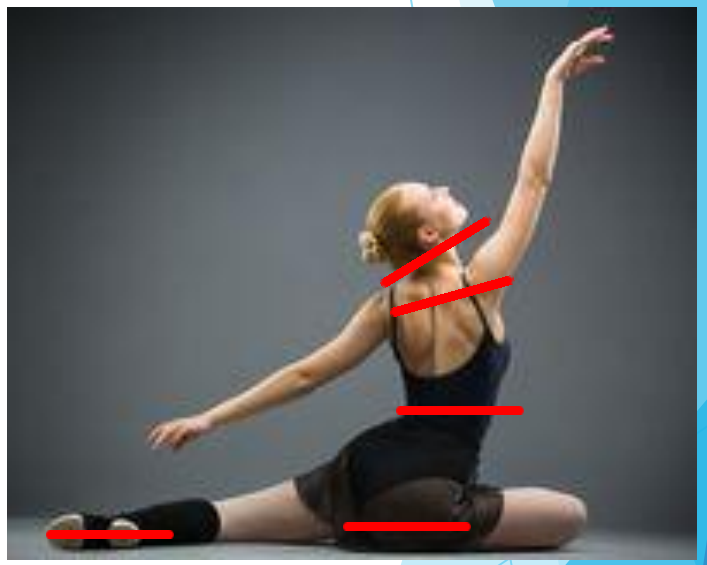
Five Core Movement Concept:5 Floors Foundation



1. Mouth Floor
2. Thoracic Inlet Floor

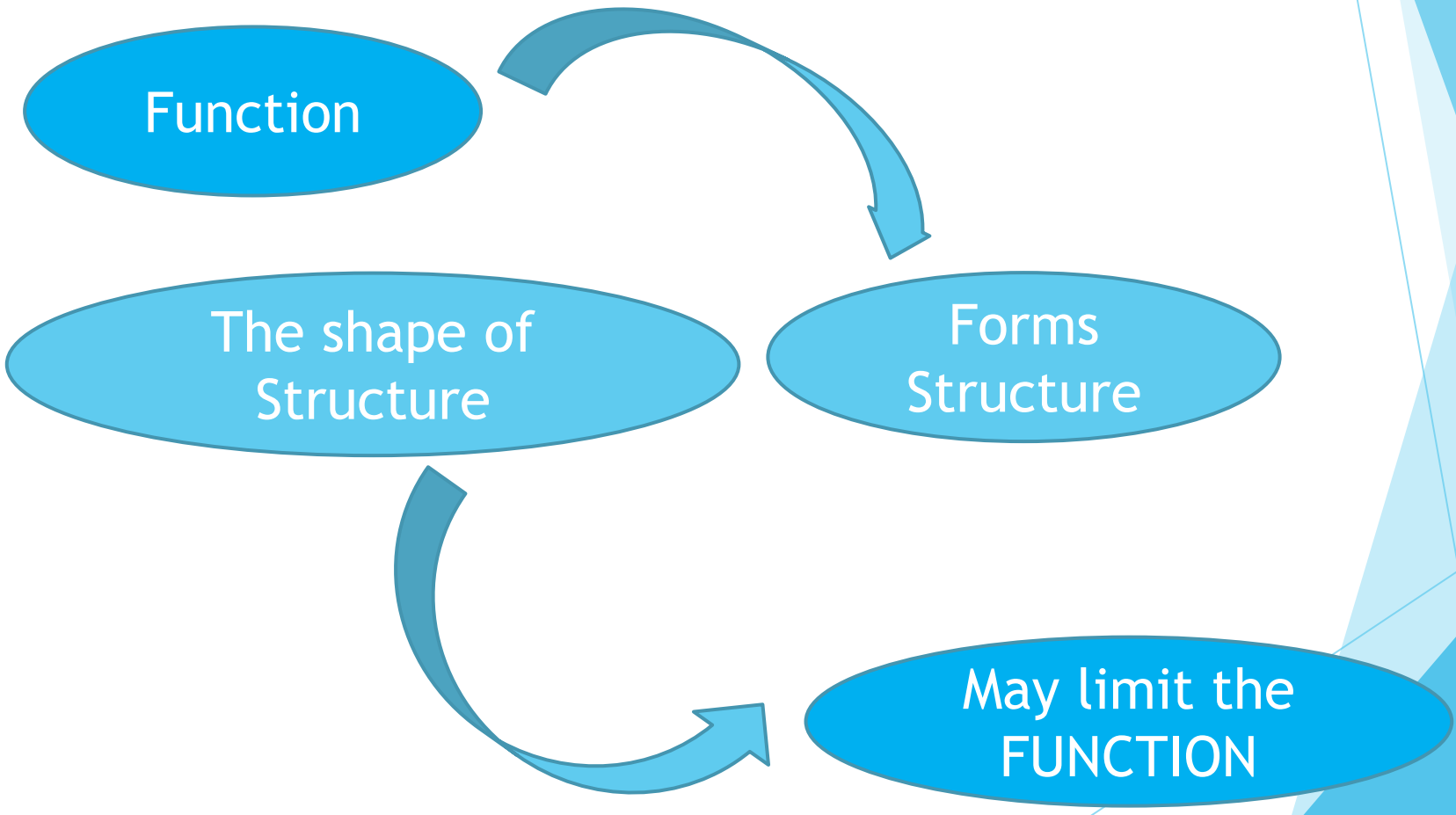
IAP regulation

3. Ribcage Floor
4. Pelvic Floor
5. Feet Floor

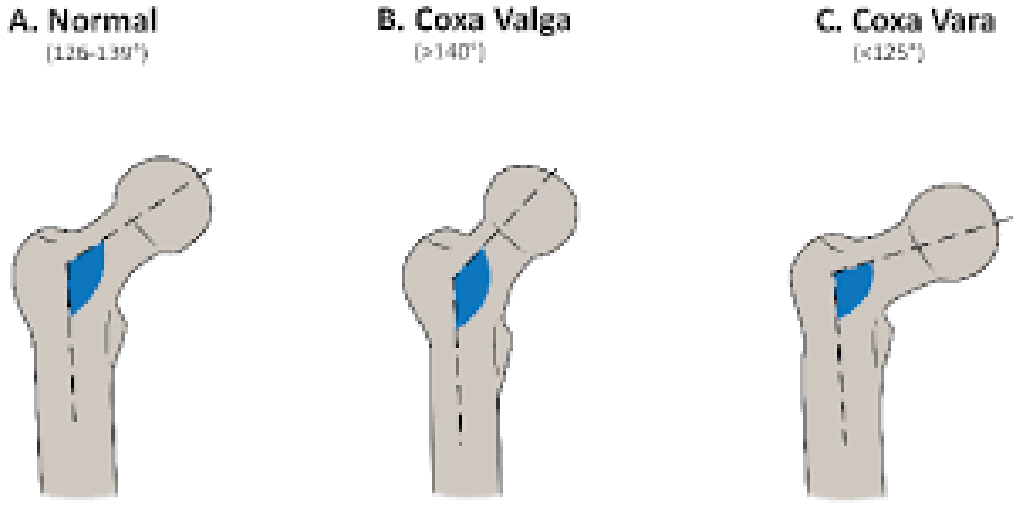


Tesseract Centre
for
Advanced Movement Intelligence

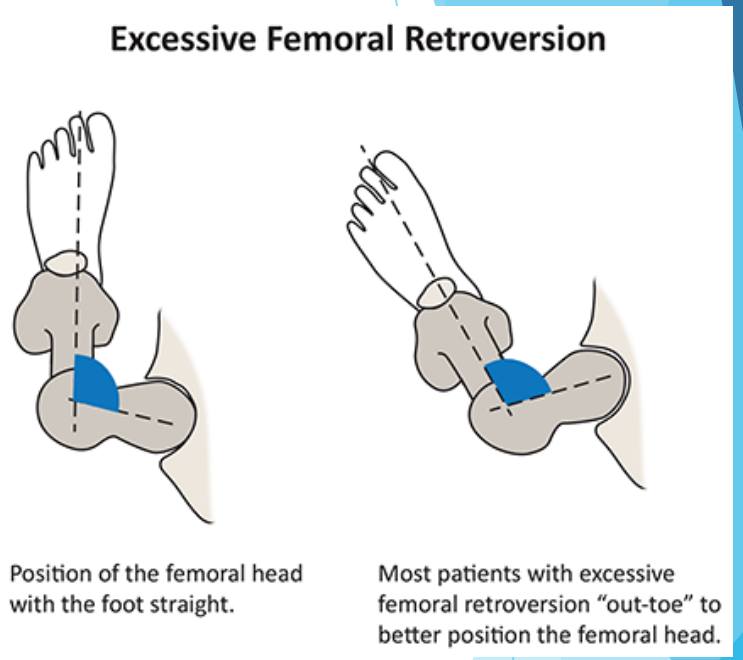
The Relationship



Tesseract Centre
for
Advanced Movement Intelligence



Function forms the Structure



Structure influences Function

Tesseract Centre
for
Advanced Movement Intelligence

5 Keys of the Functional Approach Strategy

1. Motor Learning Knowledge
2. Motor Control Application
3. Therapeutic Exercise Understanding
4. Motor Development (Development Kinesiology) Guideline
5. Task/Functional Oriented approach to Movement Re-education (Integrating the Lifestyle – BPS)

Tesseract Centre
for
Advanced Movement Intelligence

UNDERSTANDING CONCEPTS , PRINCIPLES , METHODS IN PHYSIO

1. Concept ? Idea / believe / (STRATEGY)

2. Principles ? Process tools (ELEMENTS/TOOLS)

3. Method ? Technique / Process (PLAN)

Tesseract Centre
for
Advanced Movement Intelligence

Proprioceptive Neuromuscular Facilitation

1. Concept ? Idea / believe / (STRATEGY)
2. Principles ? Process tools (ELEMENTS/TOOLS)
3. Method ? Technique / Process (PLAN)

Tesseract Centre
for
Advanced Movement Intelligence

Dynamic Neuromuscular Stabilization

1. It is an overall strategy (Approach) to **Movement** and **Stabilization**, not just a technique.

2. Aims to better understand the neurophysiological principles of the locomotor (MOVEMENT) system.

3. DNS Concept is based on scientific principles of **development kinesiology**(Movement development of approximately 1st year of life). It relates all movement to 2 BASE Patterns : **IPSILATERAL** & **CONTRALATERAL**.

4. Developed by Prof. Pavel Kolar (Physiotherapist with a Doctorate in Paediatrics and Physiology) in Prague, Czech Republic.

Tesseract Centre
for
Advanced Movement Intelligence

D N S

Diagnosis Method :

Compare the patient's **stabilizing pattern** with the stabilization developmental pattern of a healthy baby. It uses specific **MOVEMENT TESTS**.

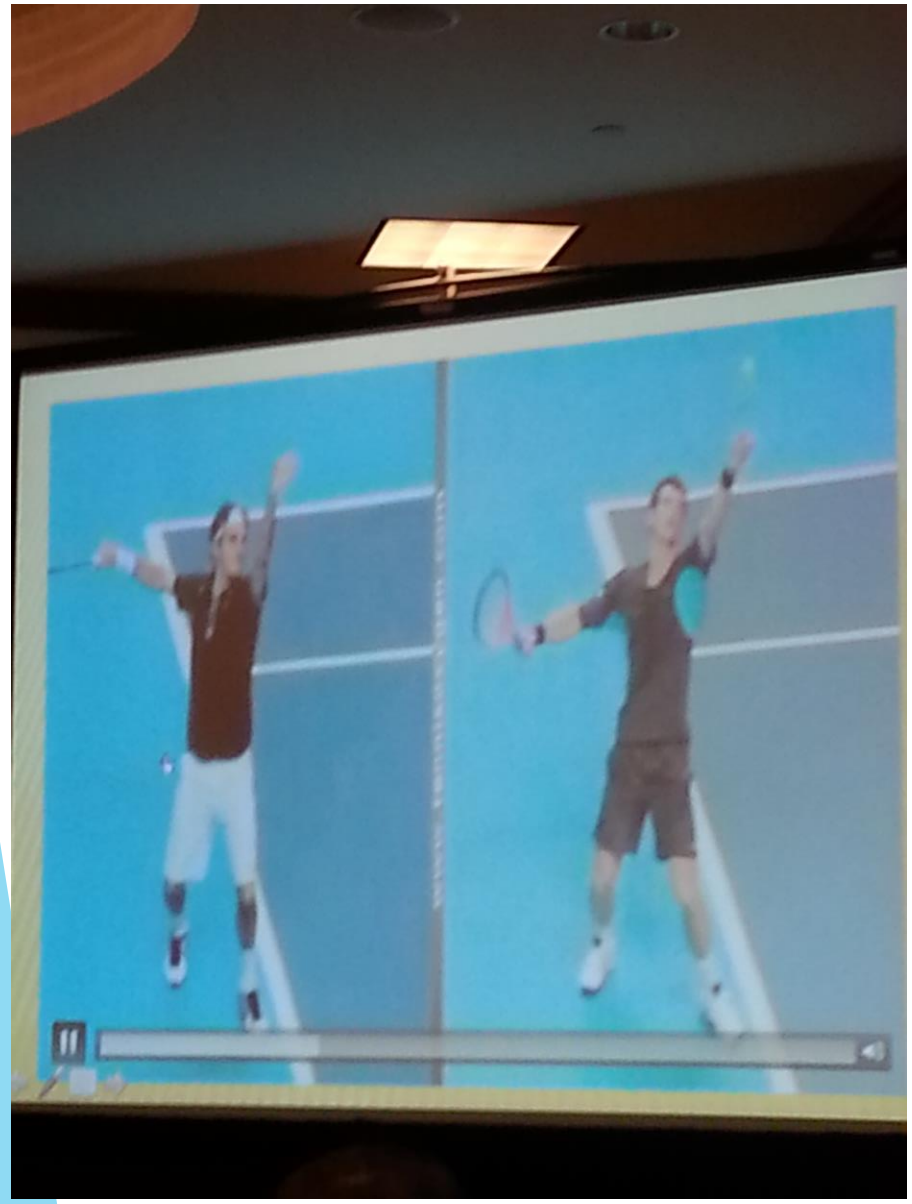
Eg : The diaphragm test : Inspiration & Expiration

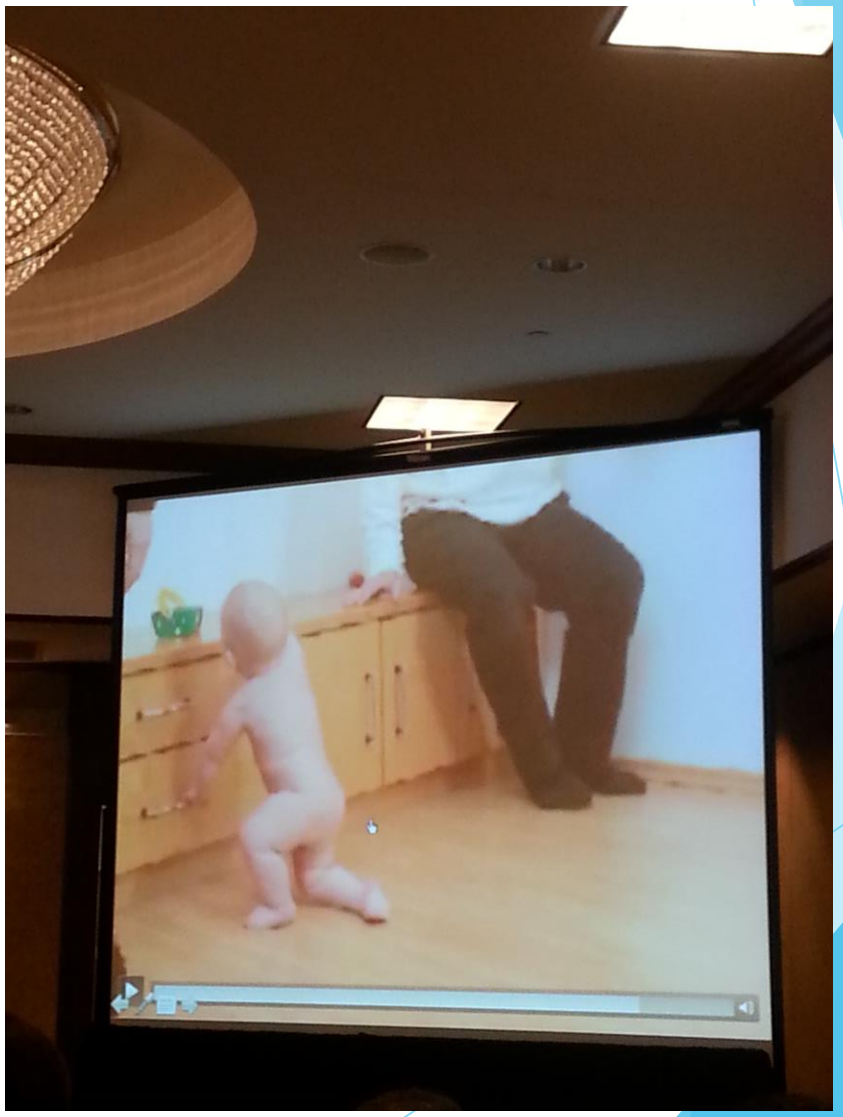
Treatment Strategies :

Aims to train IDEAL/PHYSIOLOGICAL patterns as defined by development kinesiology. Emphasizes **joint CENTRATION.**

Tesseract Centre
for
Advanced Movement Intelligence

Centration in Movement





Tesseract Centre
for
Advanced Movement Intelligence

D N S

Treatment Strategies :

1. Evoke the **ideal pattern of stabilization** – usually requires the Subconscious Activation Approachs, Example : Reflex Locomotor(Vojta Method), Sensori-motor or proprioceptive neuromuscular facilitation principles.
2. Patient activates the same quality of stabilization voluntarily under clinician's supervision(exercises based on developmental positions).
3. Self treatment techniques.
4. Integration of ideal pattern of stabilization in daily activities.
5. Includes a set of exercise, mobilization techniques based on developmental positions and body awareness training.

Tesseract Centre
for
Advanced Movement Intelligence

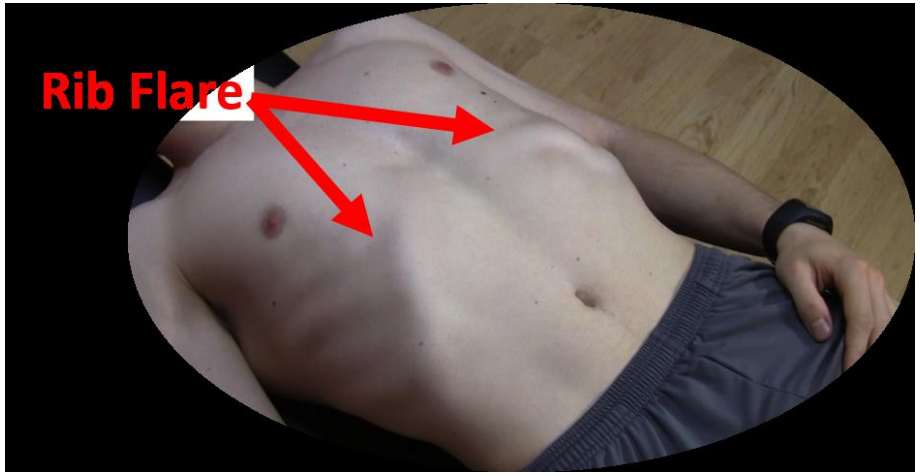
Practical Session :

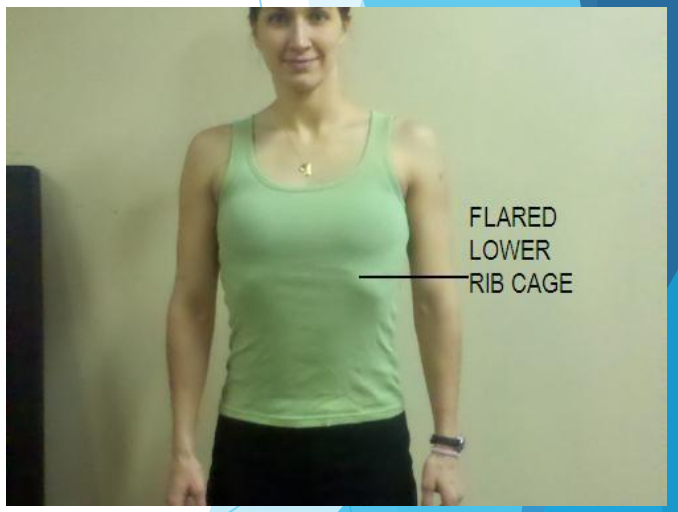
* Body Awareness with Weight Bearing and Spine Posture.

* Discovering your Body Perception.

Tesseract Centre
for
Advanced Movement Intelligence

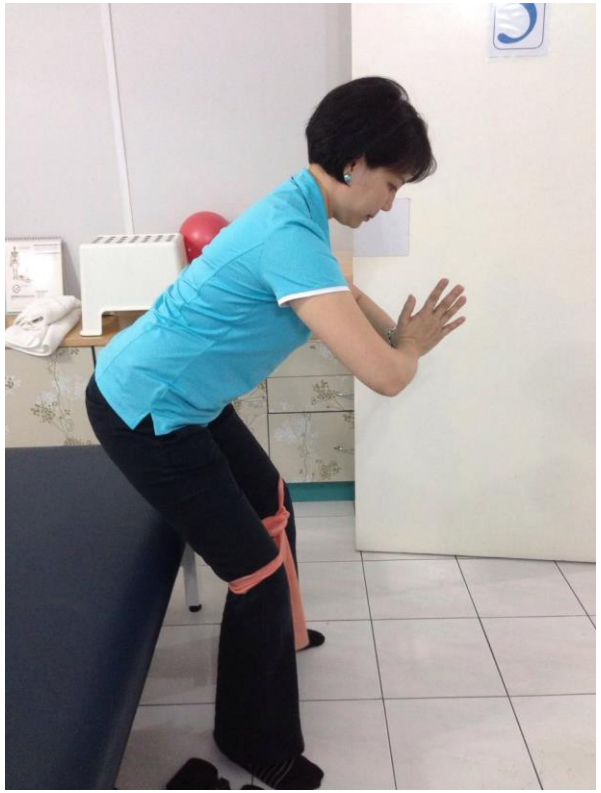
Example of pathological pattern of stabilization





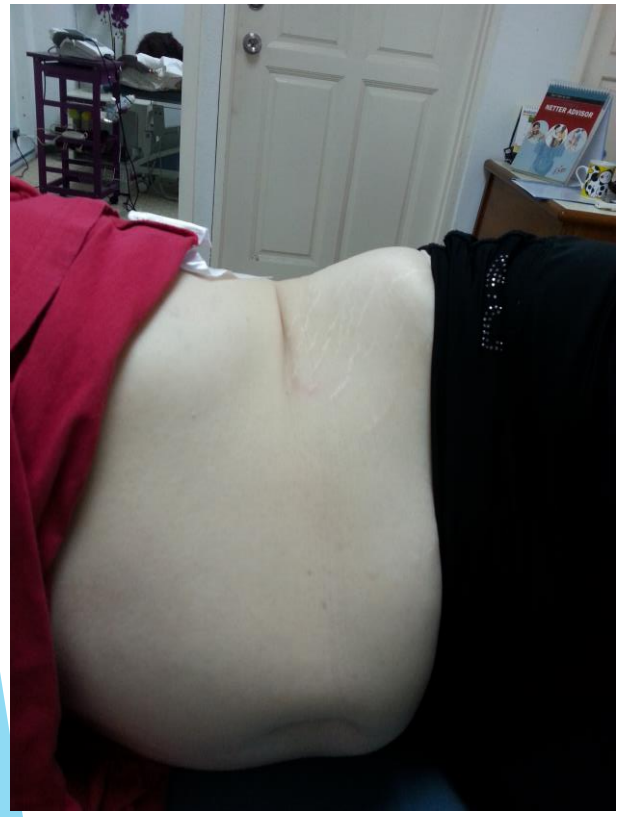
Tesseract Centre
for
Advanced Movement Intelligence

Comparisons



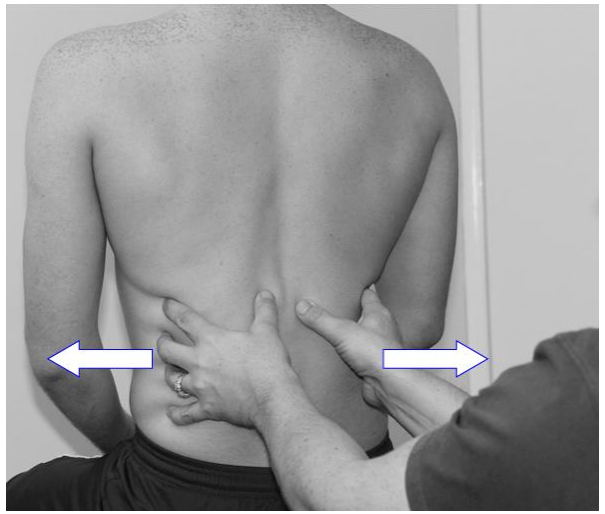
Tesseract Centre
for
Advanced Movement Intelligence

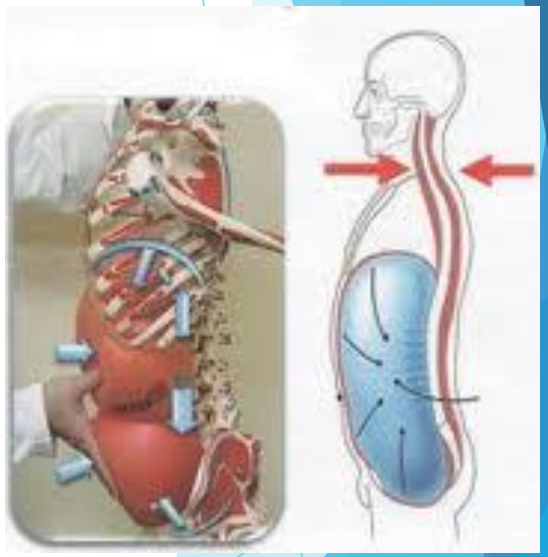
Comparisons



Tesseract Centre
for
Advanced Movement Intelligence

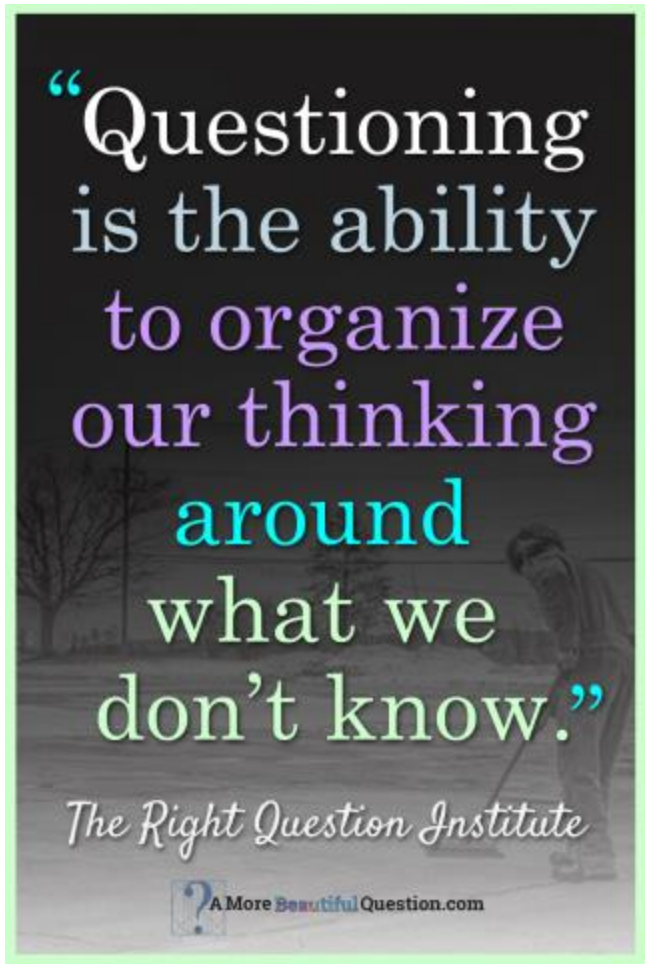
Example of Ideal Pattern of Stabilization

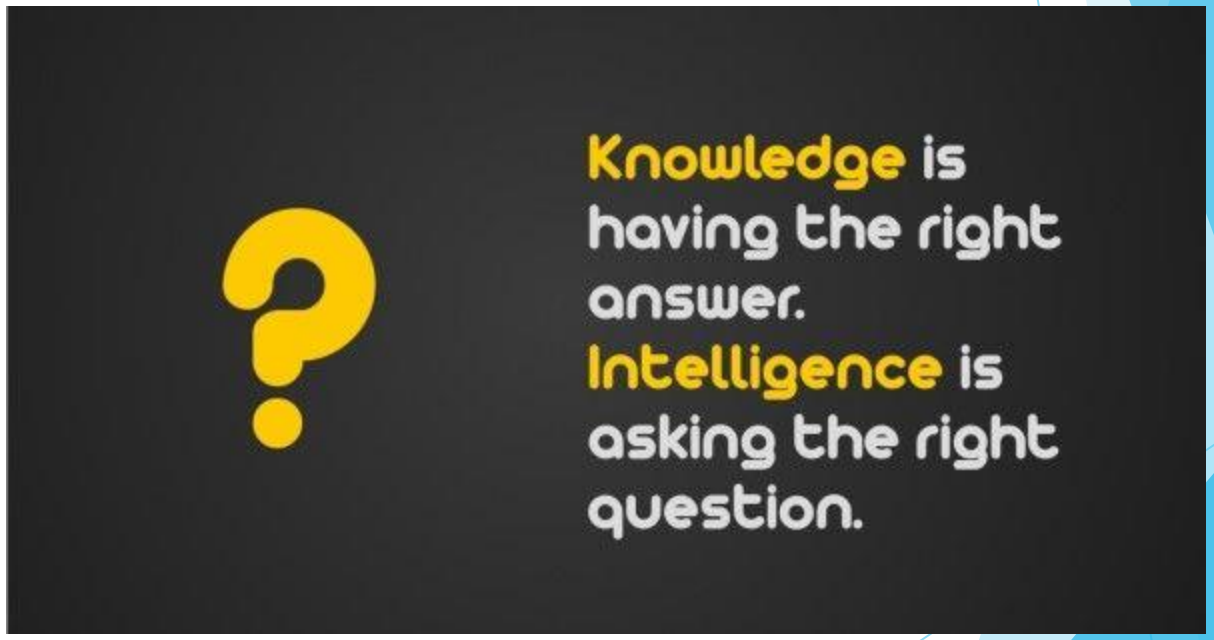




Tesseract Centre
for
Advanced Movement Intelligence

Questions ……





Tesseract Centre
Advanced Movement Intelligence

Tesseract Centre
for
Advanced Movement Intelligence

References

Frank, C., Kobesova, A., & Kolar, P. 2013. Dynamic Neuromuscular Stabilization & Sports Rehabilitation. The International Journal of Sports Physical Therapy, 8(1):62-73.

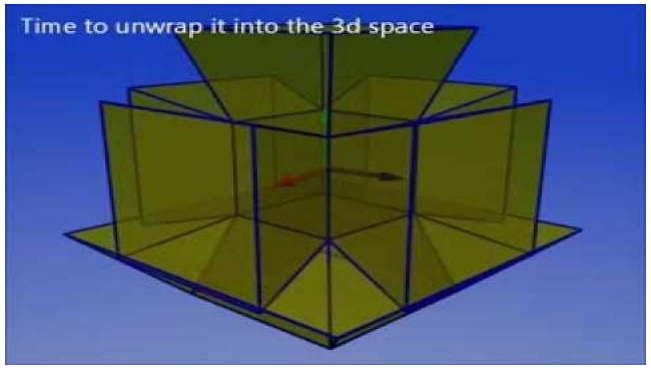
Kobesova, A. and Kolar, P. 2013. Developmental Kinesiology : Three levels of motor control in the assessment and treatment of the motor system. Journal of Bodywork & Movement Therapies, 18:23-33.

Kolar, P. et al. 2013. Clinical Rehabilitation. 98-100

Page, P. and Frank, C. 2003. Function over Structure : The Janda Approach to chronic musculoskeletal pain emphasizes muscle function. Advance For Directors in Rehabilitation, 27-30

Tesseract Centre

Advanced Movement Intelligence



https://youtu.be/BVo2igbFSPE

Tesseract Centre
for
Advanced Movement Intelligence

Thank you

tesseract.com.my

www.rehabps.com