



AQUA CORE TRAINING

Functional Multi-Planar. Vertical & Horizontal

Presented by Manuel Velazquez

Aqua Core Training

- ◆ **Intro /
Welcome /
Gratitude**
- ◆ **Background &
The Wellness
Approach**
- ◆ **Purpose &
Action Plan**



Purpose

- ◆ To explore an improve dynamic balance, strength and muscular integration between proximal and distal body parts; using the water as the media to challenge both: Stability & Mobility.
- ◆ Challenge: Progressions & Regressions



Definition: What and How?

- ❖ **What?** The Core maintain or stabilize the body's central equilibrium as it moves; is the foundation from which all movement originates.
- ❖ **How?** Muscle integration: Stabilization of the spine and pelvis provide a solid foundation for movement in the extremities.

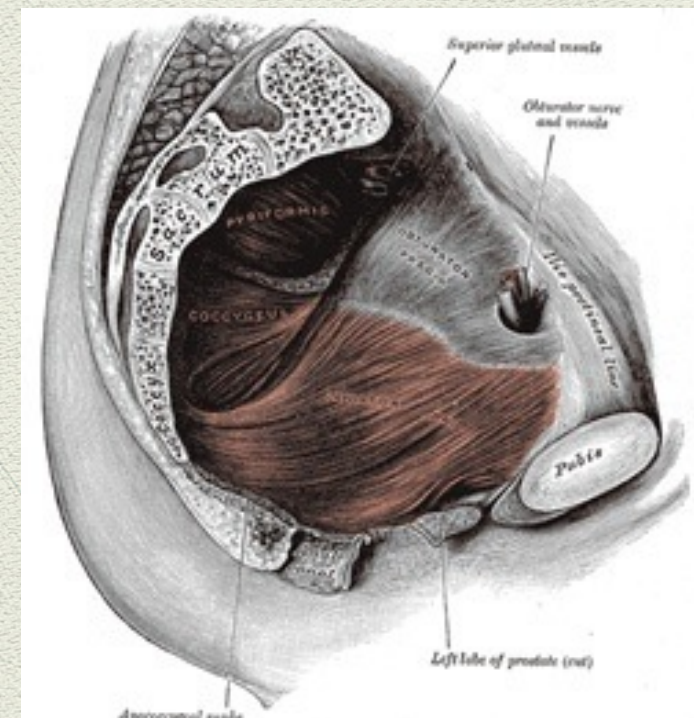
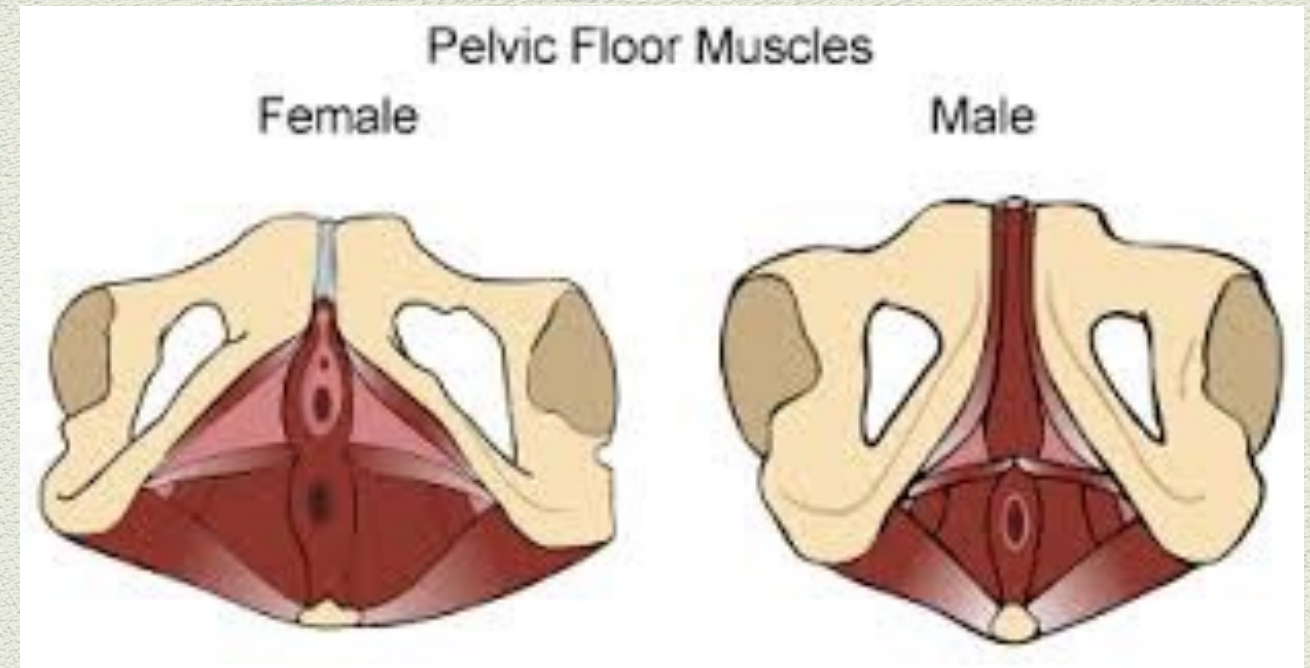


The Pelvic Floor: Where and How?

- ◆ **Body's intrinsic center of stability and balance.**

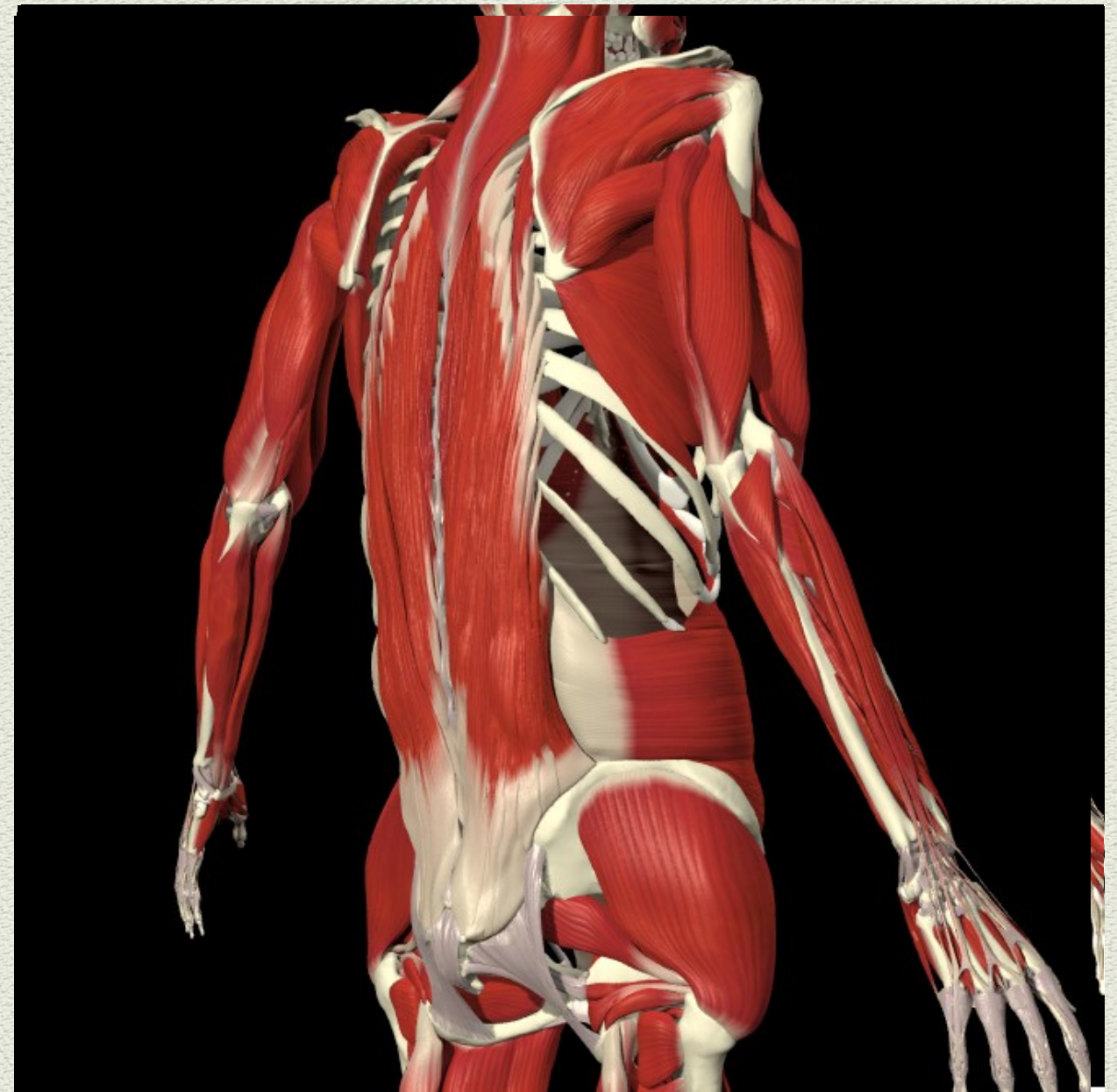
- ◆ **Runs on a reflex base:**

- **It's musculature is engaged by reflexes in response to your actions and reactions in attempt to stabilize the spine so that more efficient movement patterns of the extremities can be produced.**



Thoracolumbar Fascia:

- ◆ Provide a tensile support to the lumbar spine via deep trunk muscle activity.
- ◆ Deep Lamina: Multifidus
- ◆ Superficial: Erector spinae

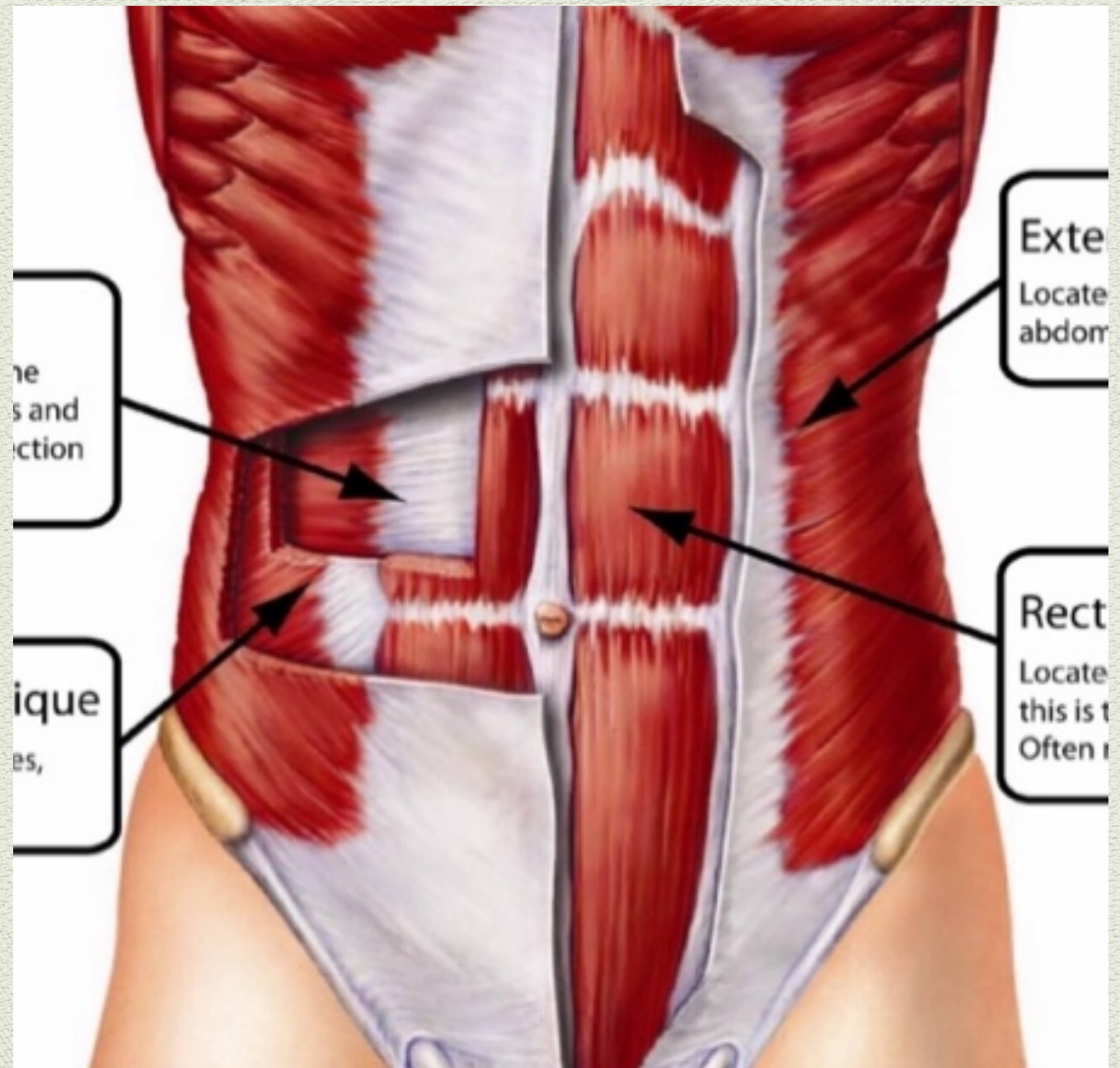


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The Abdominal Wall:

Engagement for Stability & Mobility:

Some of the top risks of injury for those starting a fitness regimen include: core weakness, muscle imbalances, musculoskeletal abnormalities, and poor neuromuscular control.



Neuro-development:

- **Most basic patterns of human movement and how they build upon each other in a neuro-developmental sequence starting in infancy and developing through childhood. Therefore, the most fundamental activities of the human body revolve around simple and basic movements of running and climbing**



Stability & Mobility



Actions of the Spine:

ACTIONS of the Spine

1. Balance And Stability Invoking Compression & Strength

compression accomplished by transverse abdominus

2. spinal extension accomplished by spinal erectors, multifidus

3. lateral flexion accomplished by quadratus lumborum, obl.

4. spinal flexion accomplished by rectus abdominus

5. rotation accomplished by obliques, et. al.

6. inversion accomplished by (depends)

compression is support in stability to spine

The Challenge & Action Plan

- **Stability > Mobility**
 - **Stability:** is the use of muscular timing, control and sequence to maintain a relatively stationary or stable spine in the presence of extremity movement whereas strength would demonstrate or reflect the need for movement.



Water environment challenge

- **Stabilization technique:**
- **Functional foot position and requirements of spine stability.**
- **Squatting - symmetrical**
- **Stepping – hurdle step or single leg stance**
- **Lunging – combination of the two above**



Prescription:

- **Specificity of Conditioning**
 - **Overload**
 - **Progressive Overload**
 - **Adaptation**
 - **Variability – Cross Training**
 - **Reversibility**



Muscular Integration

- **Main concept:** Multi joint and multi planar action. Using many muscles in coordinated movements.
- Inner Unit and Outer Unit
- Posterior and Anterior
- Lateral System
- Deep Longitudinal System



Water environment

- **Vertical Core Stabilization:**
 - **Head over heart over hips over heels.**
 - **The upper body in relation to stabilize lower**
 - **The lower body in relation to stabilize upper**



Water environment

- **Proprioception and Reactive System**
 - **Dynamic Movement:** changing your center of gravity to match your movements.
 - **Kinesthetic Awareness:**
Ability to know where your body parts are in a three dimensional space for every movement we make.



Choreography Notes:

- ◆ **Warm Up:** all planes of motion, short, long levers, rebound, neutral and suspended.
- ◆ **A . Jog/Run/Travel variations**
- ◆ **B. CCS Rhythmic variations. Arm games.**
- ◆ **C. JJ Rhythmic variations. Arms games**
- ◆ **D. Equipment: Noodle additions for isolation, external support and or resistance and dragging effects.**



Choreography Notes:

◆ Noodle Drills:

◆ A. Lounge Chair: Noodle behind

- ◆ 1. Heel over toes and curl.
- ◆ 2. V- Legs & Hip Twist
- ◆ 3. Bicycle crunch 6, roll over.

◆ B. Standing: Noodle under one leg

- ◆ 1. Hop Forward/Back
- ◆ 2. Wide Stance Neutral Fig 8
- ◆ 3. Side Crunch Leg Abd/add

◆ C. Sitting: Noodle behind

- ◆ 1. Sit JJ tuck curl, ext leg, alt touch ^
- ◆ 2. Side reach side curl.
- ◆ 3. Legs Around the World



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