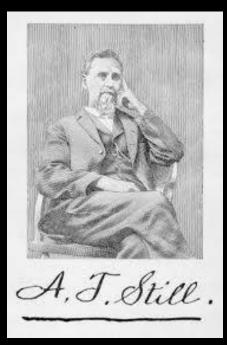


International Aquatic Therapy Symposium

June 28, 2012

Jessica Huss PT, DPT, CCI

Aquatic Rehab & Wellness Center



- Manual Techniques
 - Myofascial Release
 - Muscle Energy Techniques
 - Neuro-Developmental Training
 - Proprioceptive Neuromuscular Facilitation
 - Strain/CounterStrain
 - Joint Mobilizations
 - Crainiosacral Therapy

- AT Still University
- Manual Techniques
- Stretching
 - Dynamic vs. Static



Traditional Manual Techniques

- Myofascial Release
 - Described by A.T. Still
 - Form of soft tissue therapy
 - Release of tissues accomplished by relaxing contracted muscles
 - Increases Circulation and lymphatic drainage
 - Stimulation of Stretch reflex of muscles and overlying fascia





John Barnes

Traditional Manual Therapy Techniques



Neuro-Developmental Training

- Bobath Concept
 - Generally performed after stroke or children with CP
 - Specific handling skills to guide patients through initiation and completion of intended tasks
 - Therapeutic Handling to influence quality of patient's movements
 - Incorporates Facilitation and Inhibition
 - » Goal is to improve motor control

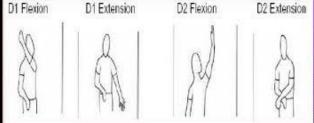


- Traditional Manual Techniques
 - MET
 - Direct and Active Technique
 - Reaches end ROM /restricted barrier
 - Patient performs an isometric contraction
 - » GTO; direct inhibition of agonist
 - » Reflexive reciprocal inhibition at antagonistic muscles
 - » Pt. relaxes; both agonist/antagonist are relaxed for further stretch into restricted movement



Traditional Manual Therapy Techniques

- PNF
 - Designed in 1940s and 1950s to rehab patients with paralysis
 - Combination of passive Stretching and isometric contractions
 - 1980s started to be used on athletes
 - Techniques
 - Hold-Relax Agonist
 - Hold-Relax Antagonist
 - Hold-Relax –Swing/Hold-Relax Bounce
 - Rhythmic Initiation
 - Rhythmic Stabilization





Traditional Manual Techniques

- Strain/Counterstrain
 - "passive positional release"
 - Developed in 1960s by Lawerence Jones, D.O.
 - Alleviates muscle and connective tissue tightness
 - Specific tx positions held for 90 seconds-3 minutes
 - Feeling for release of tissues





- Traditional Manual Techniques
 - Joint Mobilizations
 - Type of passive movement of a skeletal joint
 - When applied to spine known as "spinal moblization"
 - Grade I-V
 - V; Joint manipulation





- Traditional Stretching Techniques
 - Static Stretching
 - Holding same position



Dynamic Stretching

- Moving quickly in and out of end stretch position
 - Ballistic stretching



Dynamic Stretching has been documented to improve torque velocity and improve sport performance (Parsons et al)

Traditional Manual Therapy

- Craniosacral Therapy
 - Developed in 1899 by William
 Garner Sutherland
 - Therapist "tunes into the craniosacral rhythm"
 - Used to treat mental stress, neck and back pain, migranes, TMJ, Fibromyalgia



- Land to Water
 - Transitioning manual techniques











Aquatic Therapy



Immediately reduces chronic aches and pains up to 100% in 1st

Session!



AquaStretch

Creates Profound Relaxation Reduces muscle tension Reduces post exercise soreness





Two Major Differences from traditional cranial training

- Giving the participant the permission to "move if you feel the need to move"
 - Encourages "Intuitive Movement"
- Accenting
 - Amplifying the participant's intuitive movement

AquaStretch: Getting Results Rehab Wellness and Fitness!







AquaStretch: Getting Results!

AquaStretch Rehab

- 2x More Effective at improving ROM
- 80% less treatment induced pain
 - No use of Mobilizations
- Decreased recovery time





Rehab Applications:

- Chronic Pain
 - Myofascial pain
 - Frozen shoulder
 - *Osteo/Rheumatoid Arthritis
- Pre/Post-Surgical Orthopedic and Neurological conditions
 - TKR
 - MRI confirmed disc herniations
- ore! Multiple level spinal fusions
- Repetitive use injuries
- Pediatrics to Geriatrics

AquaStretch: Getting Results!

AquaStretch Wellness Programs

- Promotes Relaxation
- Alleviate Muscle Tension
- Improve Sleep and Well-being





Wellness Applications

- Occupationally aggravated adhesions
 - i.e., repetitive use
- "Over-Play" recreationally or physically train too quickly or excessively
- Genetically predisposed conditions
 - Scoliosis, Fibromyalgia
 - Do something goofy i.e., lift boxes/bags improperly, move as if "20 years ago"
- Those "addicted to health"

AquaStretch: Getting Results!

Fitness Applications

- Athletic Conditioning
- Athletic Training
- Athletic Psychology





Fitness Benefits

- Restoring/Improving Flexibility
- Decrease Muscle Soreness
- Relieve pain following injury
- Compress Training Efforts
- "Get Loose" before competition
 - Cut 5 minutes off ½ Marathon
 - Drive Golf ball 20-30 yards farther

Intuitive Movement: The 2 Part Challenge

Part I Part II







Sensing Movement

Intuition







Part I: Stimulating Movement

- Patient Education
- 4 Basic Step Procedure
- Appropriate Hand Placement
- Stretch Resistance
 - Weights
 - Changing level of Buoyancy
 - Altering the pressure

Part I: Stimulating Movement



Patient Education

- What to Expect
- Let them know they will be participating
- Psychological
 encouragement to
 "move if they feel the
 need to move"
- PAIN INSTRUCTIONS
 - GOOD vs. BAD
 - Client Repeats!!

PAIN INSTRUCTIONS

Good vs. Bad

Stop, or less *immediately*!

Now, please tell me what I just told you, about pain.



Bad pain, that is, Good pain is ok!

PRACTICE

AquaStretch: Intuition

Part I: Stimulating Movement

- 4 Basic Step Procedure
 - Play
 - Freeze
 - Pressure
 - Move
 - Improves Client's self awareness
- Wait for initial Movement
 - » Apply grip and wait!



Stimulating Movement



Utilizing Stretch Resistance

Changed by

- Altering facilitator pressure
- Application of weights
- Changing level of buoyancy



Stimulating Movement: Utilizing Stretch Resistance

Aqua Stretch
Weight
Application



Altering Facilitator Pressure

AquaStretch: Intuition

Clinical Pearls on teaching intuitive movement





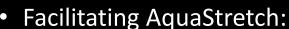
- Have client close their eyes
- Minimize chattiness
- Utilize visualization and relaxation techniques
- Change Verbal Cuing
 - Let's get it!
- Add additional Buoyancy to add relaxation
 - Belt, collar, noodles

- Intentional Movement
 - Used as Diagnostic Tool
 - Experienced Practitioners
 - Should be used in conjunction with "playing"
 - Heavily Calcified
 - Neurologically impaired
 - Gravity aggravated conditions





- Part II
 - Sensing Movement
 - Develop Self-Intuition
 - Get AquaStretched
 - Self-palpation/Stretching
 - Awareness of Posture
 - » Wall angels



- Get heavy but light on your feet
- Let the initiation begin
 Develop a sensitivity to change in motion
 - » Try closing your eyes









AquaStretch: Accenting

The external force created by the facilitator to emphasize and or intensify the amount of stretch into the patient/ client's end range during intuitive movement.

Accentuating the Accent

As Pt/Client "unwinds",

- Feeling for End Range
 - Going with the flow
- Maintaining the Stretch
- Develop a Sensitivity to Appropriate Release
 - Increase communication between client/facilitator
 - Restricted Movement



Clinical Pearl: Watch the Client's movement and position just prior to "Freezing"

"Newbie" Mistakes

 Proprioceptive encroachment



Facilitator *Un*intentional - intentional movement



"Newbie" Mistakes

 Misuse or lack of use of weights



Forgetting to use the weight belt



"Newbie" Mistakes

Forgetting to allow the client to "play"



Confusing flexibility with Speed



"Newbie" Mistakes

- Over-Gripping
 - Firm grip, loose wrist



- Releasing grip too early
 - Missing secondary adhesion release



Review: The Fascial Adhesion Theory



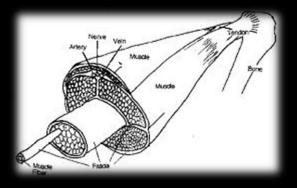
Getting through the Fascial Forest

Fascia (Fa-Sha)

- Connective tissue
 - Surrounds muscles
 - groups of muscles
 - blood vessels
 - Nerves
 - Binds some structures together, while permitting others to slide smoothly over each other
- Fasciae is layered throughout the body
 - Superficial to deep







The Fascial Adhesion Cycle

Inflammation: Acute: Formation of adhesions to stabilize injured site.

Chronic: Layers of adhesions begin to form at and away from initially injured site

Pain and Stiffness

Maladapted ROM/ Compensated movement pattens

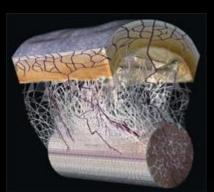
Biomechanical mal-alignment

Limited Range of Motion

Possible Nerve Impingement

Reaching Deep Layers of Adhesions

- Cue patient/client for slower movement
- Increase Stretch Resistance
- Increase/Decrease Buoyancy
- Increase the Accent
- Change Pressure/Grip
- Apply Different Vector forces on an adhesion
- Encourage relaxation





Review of Starting Positions and Grips

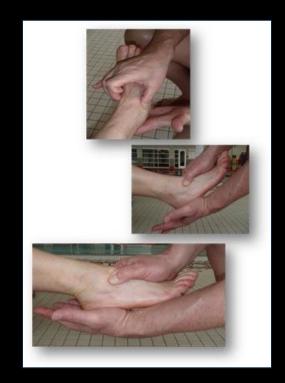


Wall Hang



Foot Grip





Ankle Grip

Review of Starting Positions and Grips



Wall Hang







Review of Positions and Grips



One Leg Standing

Foot Grip with Traction



Review of Positions and Grips



Two Heavy Feet

- Assume the Position
 - "Cops"
- Inferior pressure on SI joint





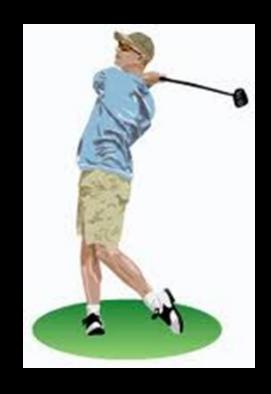
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 - i.e., lift boxes/bags improperly, move as if "20 years ago"
- AquaStretch Fitness
- Independent/Group Exercise Classes

Aquatic Rehab & Wellness Center

- AquaStretch Physical Therapy
- AquaStretch Wellness Program
- AquaStretch Fitness
 - Reduces Soreness from overtraining
 - Alleviates pain in early stages of exercise programs
 - Improving compliance
 - Compress training
 - Enhance Sports Performance
 - Get loose before competition
 - Decrease muscle tension and improve sleep



Independent/Group Exercise Classes

Aquatic Rehab & Wellness Center

- AquaStretch Physical Therapy
- AquaStretch Wellness Program
- AquaStretch Fitness Program
- Independent/Group Exercise Classes
 - Independent Aquatic Exercise
 - Senior group exercise class



THANK YOU QUESTIONS?



JESSICA HUSS PT DPT AQUATIC REHAB & WELLNESS CENTER