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Overview

- Importance of muscle testing as an assessment tool
- Testing techniques/strategies
- Muscle Tests (Multifidus, TvA, Psoas, Glute max/med, Mid/Low Traps)
- Exercise prescription
- Activation/Integration
- Big Picture Movement patterns
- Q&A

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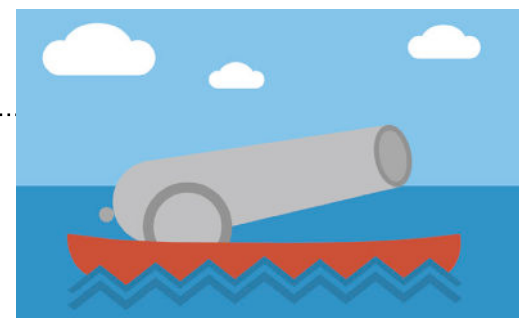
Why Muscle Test?

- As hands off practitioners, muscle testing can provide important information
- May help to correct muscle imbalances, compensatory strategies, patterns and weak areas
- May help to improve alignment and gait mechanics
- Allows for greater understanding of body mechanics

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Poor Stability = Poor Results

- You can't fire a cannon from a canoe (Charles Poliquin)



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Stability

- Ability to manage load effectively
- Ability to maintain strict technique
- Ability to maintain optimal alignment
- Ability to avoid compensatory strategies
- Ability to maintain connection with desired muscle throughout
- Stability isn't necessarily balance

Sarah Zahab

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Testing technique

- Test on exhale
- Light pressure
- Cue vector/mov't 1st & ask to match pressure
- Watch your body position
- Practice

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Tension/Correction

- Many muscles produce actions at most joints
- Focus on muscles often inhibited
- Use assessment and history to guide testing
- Importance of putting tension back into system
- Release tight areas without integration may reduce stability
- Release/mobilize, follow up with correctives then integrate

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MULTIFIDUS

Bilaterally: extends vertebral column

Unilateral: Lateral flexion & contralateral rotation

Provides stiffness, segmental stability and support to spine



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Multifidus Muscle Test

- Dominant/overworking - erectors, cervical extensors, iliacus
- Supine with feet together, hands holding heels
- Cue: press legs into table/floor
- Action: gently lift feet off table/floor

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Multifidus Muscle Test



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Multifidus Activation



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Multifidus Integration - Bird Dog Regression



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Multifidus Integration Bird Dog Regression



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Multifidus Integration Bird dog Progression



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Multifidus Integration Bird dog Progression



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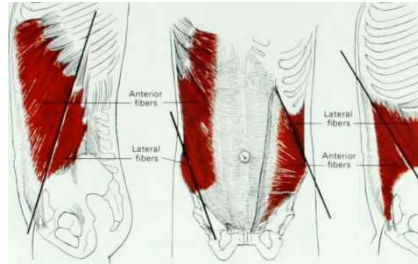
Multifidus Integration Bird dog Progression



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TRANSVERSE ABDOMINUS

- Supports abdominal wall
- Aids in forced expiration & raised IAP
- Provides thoracic & lumbo-pelvic stability



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Transverse Abdominus Muscle Test

- Dominant/overworking - erectors, obliques, iliacus
- Prone; hands @ ankles
- Cue: draw navel in, exhale and press legs to floor
- Action: gently pull ankles upwards

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TvA Muscle Test

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Transverse Abdominus Activation

- Supine activation with exhalation
- Cue: close bookends, wrap in, tighten belt
- Action: use shhh or hiss sound, coordinate with breath & PF

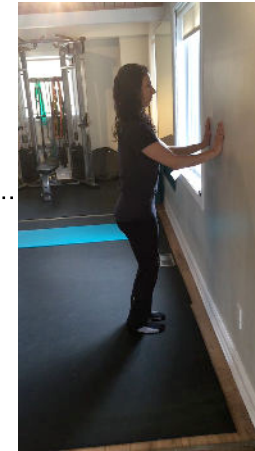
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TvA Integration



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Multifidus Integration Bird Dog Regression



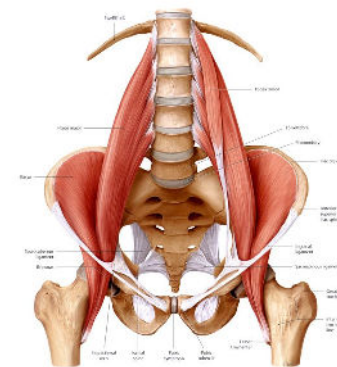
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ILIOPSOAS?

- Commonly grouped as one muscle
- Only one shared insertion (femur) - differing attachments
- Iliacus crosses one joint, psoas crosses many (6+)
- Psoas often weak, iliacus often strong/dominant
- Each deserving of it's own name and attention

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PSOAS



- Flex & ext rotate hip
- Ant tilt pelvis & assist in adduct abducted hip
- + Laterally flexes spine, contra laterally rotates lumbar spine

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Psoas Muscle Test

- Dominant/overworking - iliacus, QLs, contra-lateral poses
- Supine with leg flexed, abducted and ext rotated; brace opp ASIS
- Cue: press leg up
- Action: gently press ankle down

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Psoas Muscle Test



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Psoas Activation



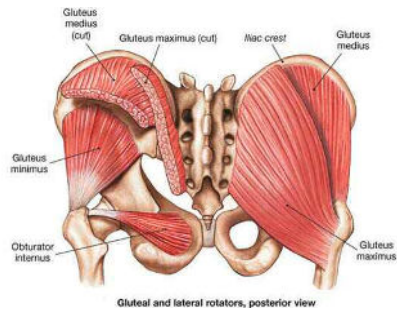
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Psoas Integration



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GLUTEUS MAX/MED



1.Max: Hip extension,
ext rotation, hip abd

2.Med: Hip abduct +
flexion & medial
rotation (ant fibres) &
extension & lateral
rotation (post fibres)

3.Med: Frontal plan
stability

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Glute max Muscle Test

- Dominant/overworking - piriformis, calves, hamstrings, iliacus, lumbar erectors
- 'Supine bent knee; hand under foot; leg off table more glute max' specific
- Cue: press foot down
- Action: gently resist hip extension, pull upwards

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Glute max Muscle Test



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Glute max Activation



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Glute max Integration



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Glute max Integration



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Glute med Muscle Test

- Dominant/overworking - QL, TFL, upper trap, jaw
- Supine hand @ ankle; brace opposite ankle
- Cue: move leg out
- Action: gently resist hip abduction, pull in

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Glute med Muscle Test



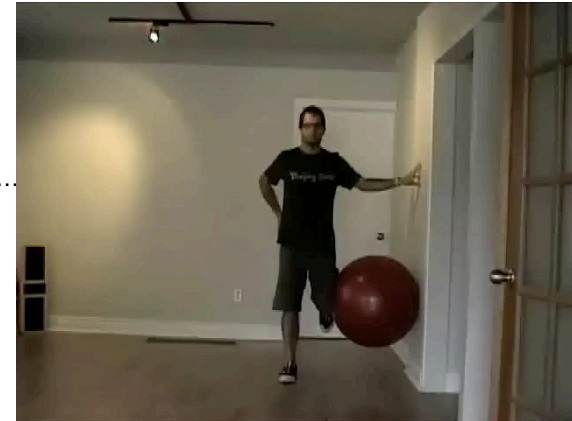
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Glute max Activation



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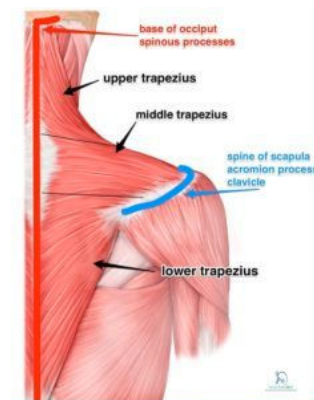
Glute max Integration



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MID & LOW TRAPEZIUS

- Middle: scapular retraction
- Lower: scapular depression & upward rotation of scapula
- Provides scapular stability



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Mid/low trap Muscle Test

- Dominant/overworking - upper traps, lev scap, pec minor
- Mid: test @ wrist with arm extended out
- Low: test @ wrist with arm in high V position
- Cue: press arm down
- Action: gently pull upwards

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Mid Trap Muscle Test

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Low trap Muscle Test

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Low trap Activation



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Mid/low trap Integration



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Progress?

- Release overworking areas
- Activate underworking areas
- Integrate.....
- Less is more
- Regress - Perfect - Progress
- Start at the start

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Patterns

- Address weaknesses, overworking areas together as a pattern
- Identify compensatory strategies.....
- Retrain, re-pattern,
- Ask why? Tight, guarded, etc.
- Add movement correction to help reinforce motor control

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Thank You!

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