

Importance of Glute Training: *Walk · Hike · Jog · Run*



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Outline

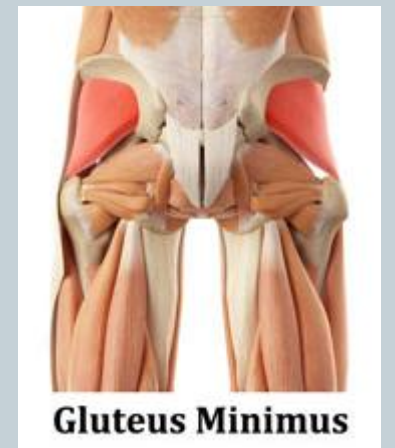
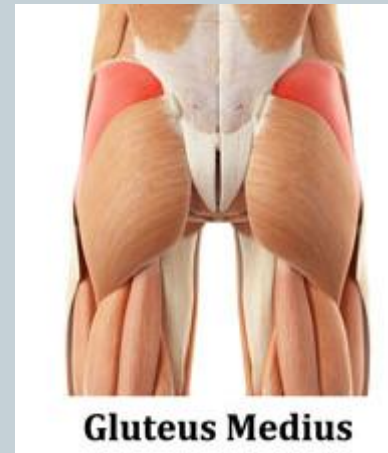


1. Gluteal Muscles: Brief Overview
2. Running and Glutes Relationship
3. Practical Application

Main Gluteal Muscles



- **Gluteus maximus (GMax)**
 - Largest muscle in body
 - Supports knee when leg is extended
 - Stabilization of trunk against flexion
- **Gluteus medius (GMed)**
 - Assists with pelvic and femur stability
- **Gluteus minimus (GMin)**
 - Assists with pelvic stability



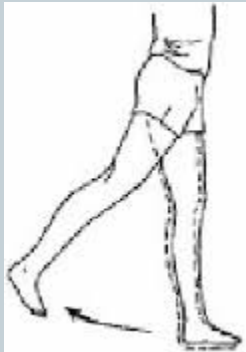
Main Gluteal Muscles: Bodily Movements



- **GMax**

Hip...

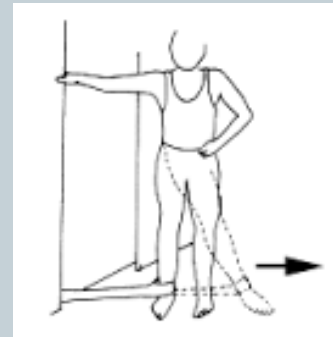
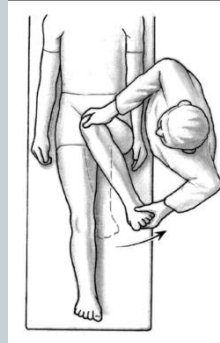
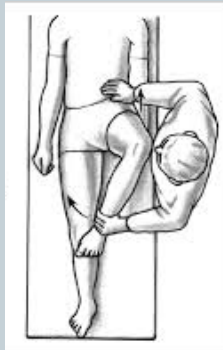
- Extension
- Ext. rotation
- Transverse abduction
- Adduction



- **GMed**

Hip...

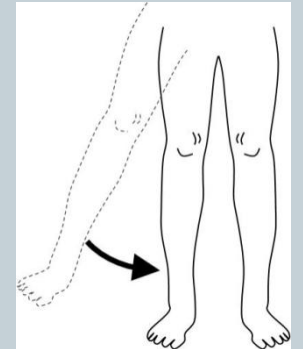
- Abduction
- Transverse abduction
- Int. rotation
- Ext. rotation



- **GMin**

Hip...

- Abduction
- Transverse abduction
- Int. rotation



Running and Glutes: “Don’t Run Your Butt Off”



- **Gluteal muscles are one of the power muscles for running**
 - Propels the body forward through hip extension
 - Increase speed = Increase glutes utilization (sprinting is best!)
- **Joint stabilization and mobility**
 - Provides pelvic girdle and femur stability and mobility for controlled multidirectional movements
 - Protects knee when leg is extended
 - Stabilization of the trunk during flexion



Tyson Gay
100- and 200-m dashes

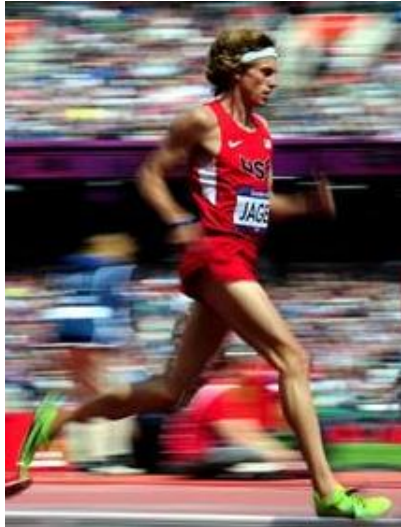


Gardner, Akinosun, Felix, and Bartoletta
100-m relay



Justin Gatlin
100-m dash

versus



Evan Jager
3000-m steeplechase



Bernard Lagat
5000 m

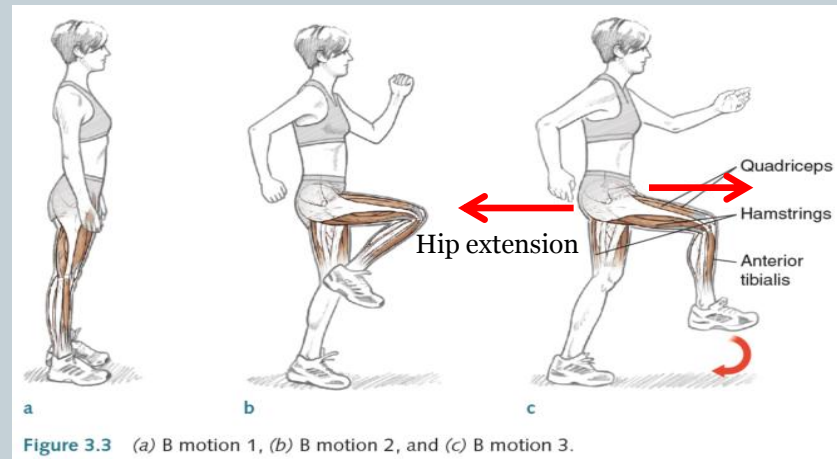
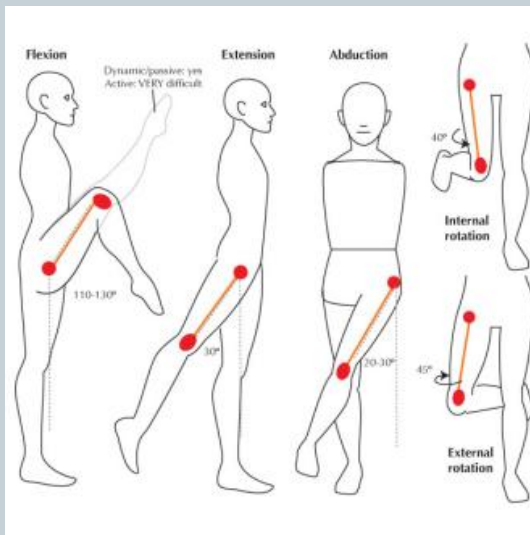


Emma Coburn
3000-m steeplechase

Running and Glutes: “Don’t Run Your Butt Off”

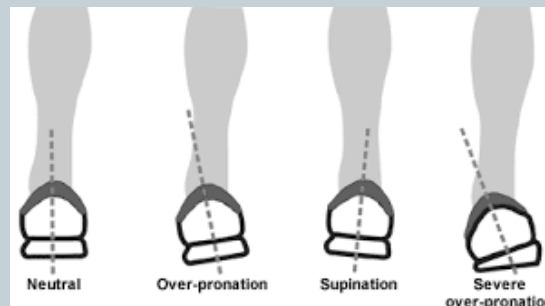
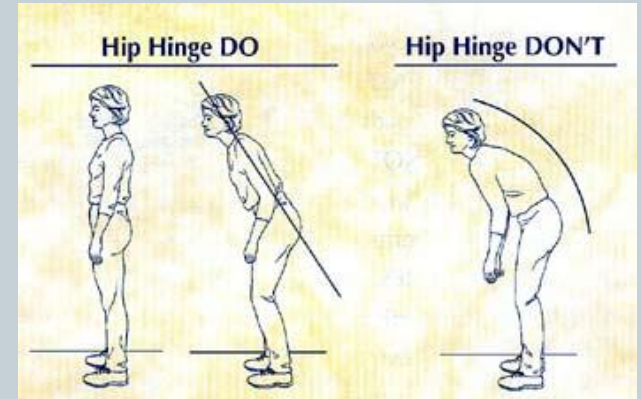


- Running = Flexion-dominant exercise
- Sitting at work = Flexion-dominant activity
- Muscle weakness and imbalance (Rt/Lt, Front/Back)
 - ✦ Tight in the hips and weak in the backside (posterior chain muscles) = contributors to overuse injuries



Signs of Weak Glutes

- Knee pain
- Faulty mechanics
 - Anterior knee shift (knees coming forward)
 - Knee valgus (knees collapsing inward)
 - Lack of hip hinge
 - Difficulty pushing knees out
- Lack of soreness after training legs
- Weak ankles and feet
 - Excessive pronation during running or squatting
- Tight hip flexors
- Muscular imbalance
- Hip Drop



Common Running Injuries



- **IT Band Syndrome**

- Weakness hip stabilizing muscles (glutes)- 80% of gluteus maximus attaches to IT band (Donatelli 2007)
- Excessive knee valgus and hip rotation (strong glutes help)

- **Piriformis Syndrome**

- External hip rotation; tight piriformis = gluteal muscles inhibition

- **Hamstring issues:**

- Glutes not firing in conjunction with hamstrings during hip extension and knee flexion

- **Shin splints:**

- Lack of stability at the pelvis or at the feet

- **Patellofemoral Pathology (example: “Runner’s Knee”):**

- Delayed activation of glute medius- ↑ hip adduction and greater stress on patellofemoral joint

- **Low back pain:**

- Glutes attach to low back
- Weak posterior chain muscles

How Do I Work/Activate My Glute Muscles?



- Best types of exercises: **Bodyweight**
 - Use a variety of exercises
- Why *only* bodyweight?
 - Complete muscular contraction is difficult to attain at heavy loads.
 - However, this does **NOT** mean you should never perform weighted exercises.

Frequency of Training



- **Short answer: 2-6 times per week**
 - Exercises with larger range of motion take longer to recover compared to shorter range of motion
 - ✦ Lunge > Band Side Walks
 - Exercises that emphasize eccentric movements take longer to recover compared to non-eccentric emphasized
 - ✦ Squats > Hip Thrusts
- **Spread out 15 sets for a muscle over several workouts during the week rather than all in one sessions**

Categories of Glute Exercises



Variable	Pumpers	Activators	Stretchers
Repetition/Weight	High rep Low weight	Moderate rep Moderate weight	Low rep High weight
Range of Motion	Short	Short	Large
Recovery required	1-2 days	2-3 days	3-4 days
Examples	Clams Lateral band walks Glute bridge Hip extension	Hip thrust Back extension Pull-throughs Step-ups	Squat Lunge Bulgarian split squat Deadlift

- **Need to save time?!?!?**
 - Combine types!
 - Example: Squat with band or hip thrust/glute bridge with band
- **Runners:** Skip static stretching before runs and perform 3 glute exercises

Now what?



- Incorporate into your workout regime!
- Get creative and mix it up!
 - HANDOUT! 😊
- Programming: What to include throughout week?
 - Variety!
 - At least one hip thrust movement
 - Back extension-type exercise
 - Variations in squatting
 - Variations in deadlift
 - Open chain hip extension (ex: hip abduction, kickbacks)

References



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Questions?!?!?!?



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#1 Resource for glute training and
development information

THANK YOU! 😊