

# Core Muscle Injuries

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## May - OTAs

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- 23yo outside linebacker
- Complains of left sided groin pain during OTAs
- MRI – chronic right sided adductor longus tear
- Conservative care

# August – Training Camp

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- Athlete leaves practice on 4<sup>th</sup> day of training camp complaining of left sided groin pain
- MRI – diagnosed with core muscle injury

# Core Muscle Injury

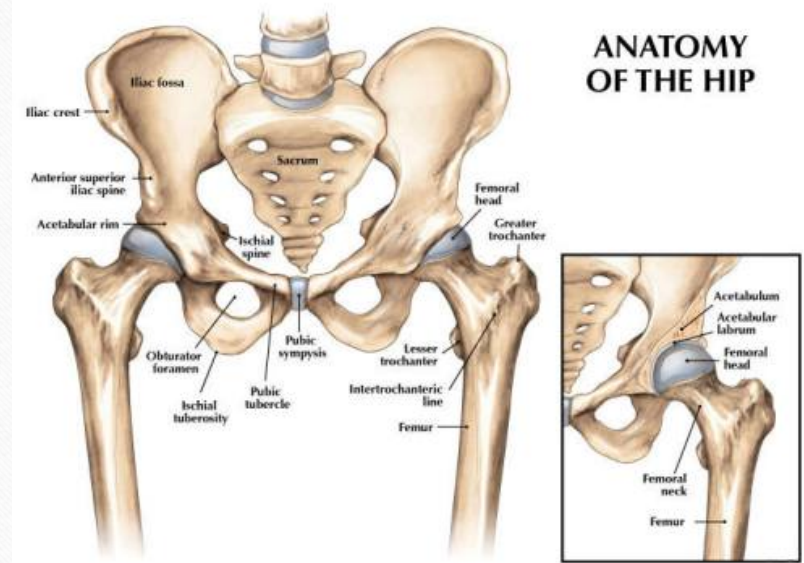
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- Core muscle injuries(or sports hernias) are pelvic musculoskeletal injuries involving the abdominal and pelvic musculature outside the ball-and-socket hip joint

# Anatomy

- Pelvis

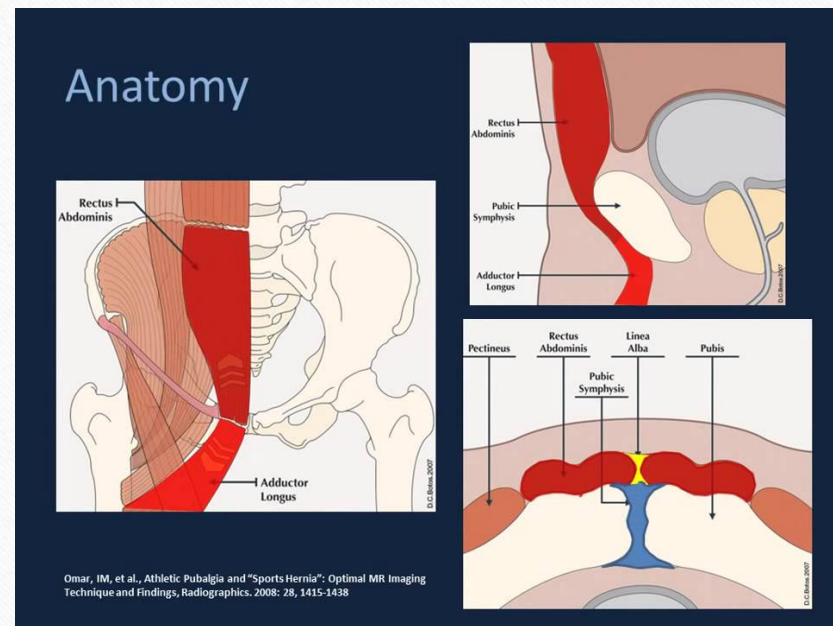
- Innominate bones
- Sacrum, Coccyx
- Hip joint
- Pubic symphysis



# Anatomy

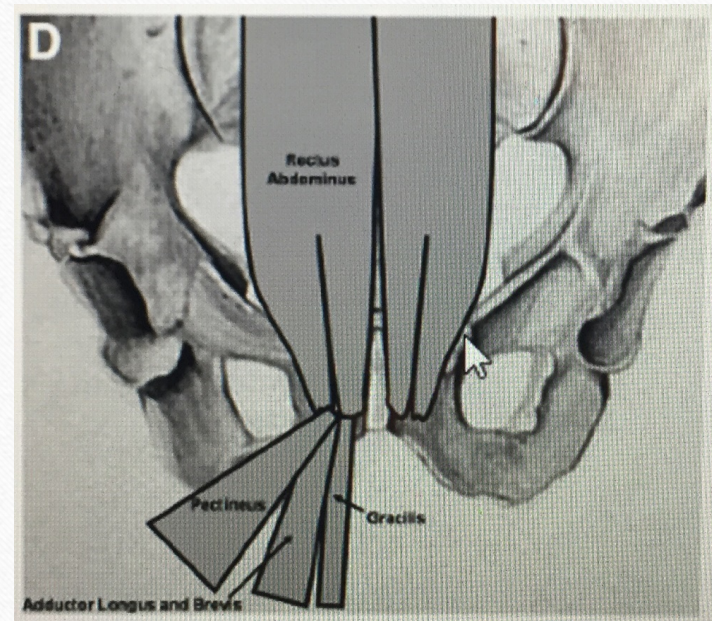
- “Pubic Joint”

- Anterolateral abdominal muscles
- Thigh adductor muscles



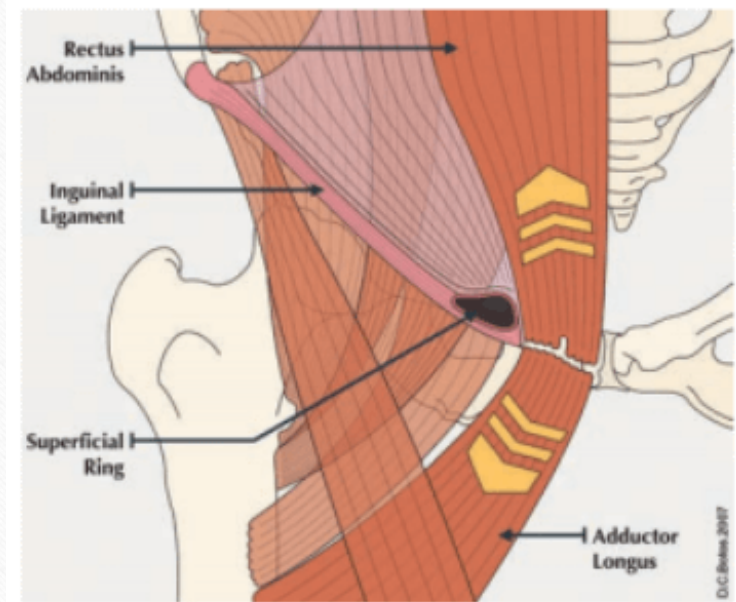
# Anatomy

- “Pubic Joint”
  - Anterolateral abdominal muscles
  - Thigh adductor muscles



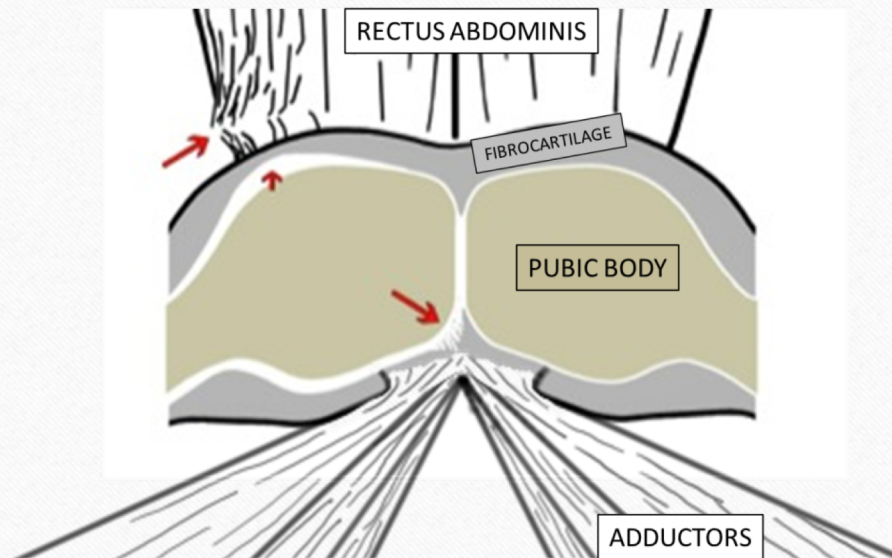
# Anatomy

- Disruption to either the superior or inferior component of the pubic joint leads to abnormal biomechanical forces on the opposing component leading to instability, inflammation and/or muscle injuries





# Anatomy



# Evaluation

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- History
- Physical examination
  - Palpation
  - Resistance testing
  - ROM
  - Special tests

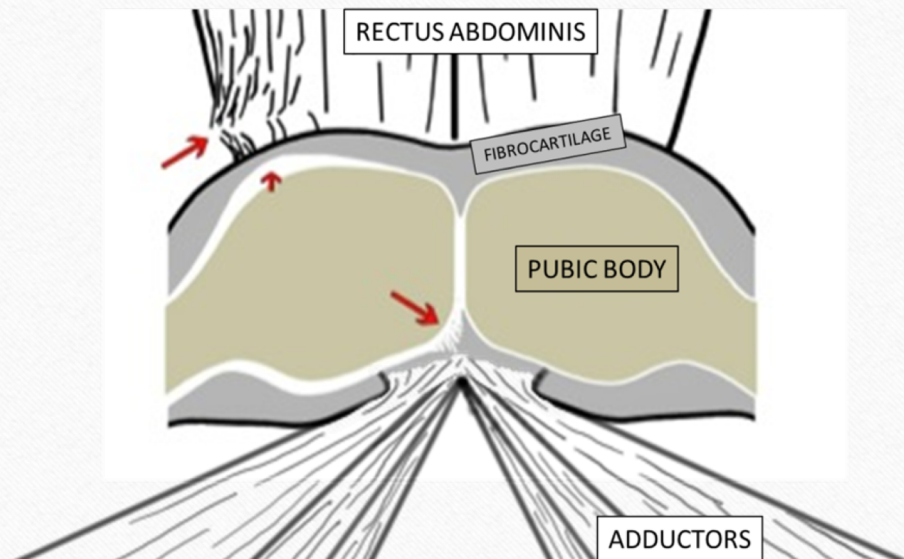
# Treatment Options

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- Conservative treatment
- Steroid injections
- Hernia mesh repair
- Adductor tenotomy
- Core muscle repair

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# August – Preseason

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- Conservative approach for 4 weeks
- Core muscle repair
- Surgery September 8<sup>th</sup>

# September – Regular Season

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- Week 1
  - Walking
  - Abdominal bracing, bridges, clams, isometrics
  - Calf raises
  - Stationary bike

# September – Regular Season

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- Weeks 2-3
  - Gentle massage, stretching
  - McGill curls ups, planks
  - Resistance band exercises
  - Monster walks, side steps, lunging
  - Balance exercises
  - Elliptical, jogging

# October – Regular Season

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- Week 4
  - Pool exercises, pool running
  - Step ups, squats
  - Agilities
  - Upper body lifting
  - Alter-g running



# October – Regular Season

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- Weeks 5-6
  - Cutting, figure 8s, jumping
  - Straight ahead running
  - Lower body lifting
  - Football related activities

# October – Regular Season

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- Week 7
  - Athlete was cleared to play football
  - Discussion with medical staff athlete and coaches regarding return
  - Athlete returns to field activities

# November – Regular Season

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- Week 8-10
  - Reintegration into practice
- Week 11
  - Taken off IR
  - Participates in game
  - Plays the rest of the season

# Concomitant and Differential Diagnosis

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- Osteitis pubis
- Stress fractures
- Acetabular labral tear
- Inguinal hernia
- Nerve Entrapment
- Strains
- Avulsions

# Conclusion

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- History
- Evaluation
- Imaging

# References

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- Palisch A, Zoga AC, Meyers WC. Imaging of athletic pubalgia and core muscle injuries: clinical and therapeutic correlations. *Clin Sports Med*. 2013; 32:427-447.

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