Chapter 4
Clinical Assessment of Foot & Toe Injuries

Objectives
- Identify common foot & toe injuries based on their presenting history
- Discuss the inspection phase of the evaluation process as it relates to the presenting history
- Discuss anatomical or biomechanical factors associated with these common foot & toe injuries

History
- Location of pain
  - bony vs. soft tissue
  - localized vs. diffuse
- Onset of pain
  - acute vs. chronic
- Mechanism of injury
  - trauma (macrotrauma)
    - rotational force
    - compressive force
    - tensile force
    - valgus or varus
  - overuse (microtrauma)

History
- Changes in
  - playing surface
  - running distance
  - running duration
  - shoes
- Do they wear orthotics?

History
- Location of pain
  - Heel
    - posterior aspect
      - Achilles tendon strain/tendinitis
      - retrocalcaneal bursitis
      - Haglaund’s deformity (pump bump)
      - injury to os trigonum
History

- Location of pain
  - Heel
    - posterior aspect
      - Achilles tendon strain/tendinitis
      - retrocalcaneal bursitis
      - pump bump
      - injury to os trigonum

History

- Location of pain
  - Heel
    - posterior aspect
      - Achilles tendon strain/tendinitis
      - retrocalcaneal bursitis
      - pump bump
      - injury to os trigonum

History

- Location of pain
  - Heel
    - posterior aspect
      - Achilles tendon strain/tendinitis
      - retrocalcaneal bursitis
      - pump bump
      - injury to os trigonum

History

- Location of pain
  - Plantar surface of heel
    - plantar fasciitis
    - rupture of plantar fascia at origin
    - heel spur (medial aspect)

History

- Location of pain
  - Plantar surface of heel
    - plantar fasciitis
    - rupture of plantar fascia at origin
    - heel spur (medial aspect)

c/o sharp stabbing pain on first step in morning
Hurts more at the beginning of a run
### History

<table>
<thead>
<tr>
<th>Location of pain (plantar surface of heel)</th>
<th>Onset</th>
<th>MOI</th>
<th>Playing surface</th>
<th>Running distance/duration</th>
<th>Shoes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plantar fasciitis</td>
<td></td>
<td></td>
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<tr>
<td>Rupture of the plantar fascia</td>
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<tr>
<td>Heel spur</td>
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<tr>
<td>Injury to the ligament</td>
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</tbody>
</table>

### History

- **Location of pain**
  - Medial aspect of heel
    - Sustentaculum tali
    - Flexor hallucis

### History

- **Location of pain**
  - Lateral aspect of heel
    - Peroneal tubercle

### History

- **Location of pain**
  - Dorsal aspect of midfoot
    - Medial cuneiform
    - Middle or intermediate cuneiform
    - Lateral cuneiform

### History

- **Location of pain**
  - Dorsal aspect of midfoot
    - Fracture (Fx)
    - Sprain
    - Strain/inflammation of tendon insertion sites
    - Tarsal coalition

### History

- **Location of pain**
  - Dorsal aspect of midfoot
    - Medial cuneiform
    - Middle or intermediate cuneiform
    - Lateral cuneiform
### History

<table>
<thead>
<tr>
<th>Location of pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metatarsals</td>
</tr>
<tr>
<td>specifically on a metatarsal (base, shaft, or head)</td>
</tr>
<tr>
<td>• fx</td>
</tr>
<tr>
<td>• Inflammation of tendon insertion site</td>
</tr>
<tr>
<td>between metatarsals</td>
</tr>
<tr>
<td>• neuroma</td>
</tr>
<tr>
<td>• intrinsic muscles</td>
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</tbody>
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<tr>
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<tbody>
<tr>
<td>Medial arch</td>
</tr>
<tr>
<td>Midfoot sprain</td>
</tr>
<tr>
<td>Inflammation of tendon insertion sites</td>
</tr>
<tr>
<td>• Posterior tibialis tendonitis</td>
</tr>
<tr>
<td>• Fx – navicular</td>
</tr>
<tr>
<td>Tarsal tunnel syndrome</td>
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</tbody>
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<th>Location of pain</th>
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<tbody>
<tr>
<td>Lateral aspect of foot</td>
</tr>
<tr>
<td>Fx – base of 5th metatarsal</td>
</tr>
<tr>
<td>• cuboid</td>
</tr>
<tr>
<td>Inflammation of tendon insertion sites</td>
</tr>
<tr>
<td>• Peroneal brevis</td>
</tr>
<tr>
<td>• Peroneal tertius</td>
</tr>
<tr>
<td>Midfoot sprain - cuboid</td>
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</tbody>
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<td>plantar aspect of foot</td>
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</tr>
<tr>
<td>muscle/tendon strain</td>
</tr>
<tr>
<td>sesmoiditis</td>
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</tbody>
</table>