## Lower Limb Exertional Compartment Syndrome

### Table 2: Differential Diagnoses of Exercise-Associated Leg Pain<sup>19, 20</sup>

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Distinguishing History</th>
<th>Physical exam</th>
<th>Key Diagnostic Testing</th>
</tr>
</thead>
</table>
| Popliteal Artery Entrapment Syndrome (PAES) | - Insidious severe leg and foot claudication  
- Lower extremity numbness, paresthesias, discoloration to pallor, and thermal changes | - Calf hypertrophy  
- Pedal pulse aberrations with dorsiflexion / plantar flexion | Vascular studies: ABI, duplex ultrasonography, MR angiography |
| Peripheral Arterial Disease (PAD)          | - Exercise induced  
- Resolution quickly following (<5 mins)                                               | - Decreased pulsations  
- Trophic changes  
- Decreased cap refill | Vascular studies |
| Medial Tibial Stress Syndrome (MTSS)       | - Pain located over inner, distal 2/3s of tibia  
- absence of other findings (feelings of fullness, paresthesias, etc) | - Tenderness to palpation along posteromedial tibia  
- Localized edema | MRI, bone scan |
| Stress Fracture                            | - Focal pain  
- Persistent during rest                                                                 | - Localized tibial pain with palpation  
- Worsened with hopping | XR, MRI, Bone scan |
| Fascial Hernia                             | - Palpable muscle herniations  
- Absence of other symptoms                                                                | - Visible defects, +/- tenderness | MRI, ultrasound |
| MSK disorder (strain, tendon injury, etc)  | - Localized pain  
- Aggravates with stretching                                                              | - Often reproducible with targeted physical exam maneuvers | MRI, ultrasound |
| Nerve entrapment/mononeuropathy/polyneuropathy | - Paresthesias or sensory deficits  
- Lack of control                                                                             | - Objective sensory changes  
- Weakness                                                                                   | EMG/NCS |

**Legend:**
- ABI: Ankle Brachial Index
- EMG: Electromyography
- NCS: Nerve Conduction Study
- MRI: Magnetic Resonance Imaging
- MR: Magnetic Resonance
- XR: X-ray
- Bone scan: Bone scan examination