

Lower Limb Exertional Compartment Syndrome

Table 2: Differential Diagnoses of Exercise-Associated Leg Pain^{19, 20}

Diagnosis	Distinguishing History	Physical exam	Key Diagnostic Testing
Popliteal Artery Entrapment Syndrome (PAES)	<ul style="list-style-type: none"> ● Insidious severe leg and foot claudication ● Lower extremity numbness, paresthesias, discoloration to pallor, and thermal changes 	<ul style="list-style-type: none"> ● Calf hypertrophy ● Pedal pulse aberrations with dorsiflexion / plantar flexion 	Vascular studies: ABI, duplex ultrasonography, MR angiography
Peripheral Arterial Disease (PAD)	<ul style="list-style-type: none"> ● Exercise induced ● Resolution quickly following (<5 mins) 	<ul style="list-style-type: none"> ● Decreased pulsations ● Trophic changes ● Decreased cap refill 	Vascular studies
Medial Tibial Stress Syndrome (MTSS)	<ul style="list-style-type: none"> ● Pain located over inner, distal 2/3s of tibia ● absence of other findings (feelings of fullness, paresthesias, etc) 	<ul style="list-style-type: none"> ● Tenderness to palpation along posteromedial tibia ● Localized edema 	MRI, bone scan
Stress Fracture	<ul style="list-style-type: none"> ● Focal pain ● Persistent during rest 	<ul style="list-style-type: none"> ● Localized tibial pain with palpation ● Worsened with hopping 	XR, MRI, Bone scan
Fascial Hernia	<ul style="list-style-type: none"> ● Palpable muscle herniations ● Absence of other symptoms 	<ul style="list-style-type: none"> ● Visible defects, +/- tenderness 	MRI, ultrasound
MSK disorder (strain, tendon injury, etc)	<ul style="list-style-type: none"> ● Localized pain ● Aggravates with stretching 	<ul style="list-style-type: none"> ● Often reproducible with targeted physical exam maneuvers 	MRI, ultrasound
Nerve entrapment/ mononeuropathy/ polyneuropathy	<ul style="list-style-type: none"> ● Paresthesias or sensory deficits ● Lack of control 	<ul style="list-style-type: none"> ● Objective sensory changes ● Weakness 	EMG/NCS