

**TABLE 1**  
**Diagnosis and Treatment of Hip Conditions**

<i>Diagnosis</i>	<i>History</i>	<i>Physical findings</i>	<i>Differential diagnosis</i>
Legg-Calvé-Perthes disease	Insidious onset (1 to 3 months) of limp with hip or knee pain	Limited hip abduction, flexion, and internal rotation	Juvenile arthritis, other inflammatory conditions of the hip
Slipped capital femoral epiphysis	Acute (<1 month) or chronic (up to 6 months) presentation; pain may be referred to knee or anterior thigh	Pain and limited internal rotation, leg more comfortable in external rotation; chronic presentation may have leg length discrepancy	Muscle strain, avulsion fracture
Avulsion fracture	Sudden, violent muscle contraction; may hear or feel a "pop"	Pain on passive stretch and active contraction of involved muscle; pain on palpation of involved apophysis	Muscle strain, slipped capital femoral epiphysis
Hip pointer	Direct trauma to iliac crest	Tenderness over iliac crest, may have pain on ambulation and active abduction of hip	Contusion, fracture
Contusion	Direct trauma to soft tissue	Pain on palpation and motion, ecchymosis	Hip pointer, fracture, myositis ossificans
Myositis ossificans	Contusion with hematoma approximately 2 to 4 weeks earlier	Pain on palpation; firm mass may be palpable	Contusion, soft tissue tumors, callus formation from prior fracture
Femoral neck stress fracture	Persistent groin discomfort increasing with activity, history of endurance exercise, female athlete triad (eating disorder, amenorrhea, osteoporosis)	ROM may be painful; pain on palpation of greater trochanter	Trochanteric bursitis, osteoid osteoma, muscle strain
Osteoid osteoma	Vague hip pain present at night and increased with activities	Restricted motion, quadriceps atrophy	Femoral neck stress fracture, trochanteric bursitis
Iliotibial band syndrome	Lateral hip, thigh or knee pain, snapping as iliotibial band passes over the greater trochanter	Positive Ober's test	Trochanteric bursitis
Trochanteric bursitis	Pain over greater trochanter on palpation, pain during transitions from standing to lying down to standing	Pain on palpation of greater trochanter	Iliotibial band syndrome, femoral neck stress fracture
Avascular necrosis of the femoral head	Dull ache or throbbing pain in groin, lateral hip or buttock, history of prolonged steroid use, prior fracture, slipped femoral capital epiphysis	Pain on ambulation, abduction, internal and external rotation	Early degenerative joint disease
Piriformis syndrome	Dull posterior pain, may radiate down the leg mimicking radicular symptoms, history of track competition or prolonged sitting	Pain on active external rotation, passive internal rotation of hip and palpation of sciatic notch	Nerve root compression, stress fractures
Iliopsoas bursitis	Pain and snapping in medial groin or thigh	Reproduce symptoms with active and passive flexion/extension of hip	Avulsion fracture
Meralgia paresthetica	Pain or paresthesia of anterior or lateral groin and thigh	Abnormal distribution of lateral femoral cutaneous nerve on sensory examination	Other causes of peripheral neuropathy
Degenerative arthritis	Progressive pain and stiffness	Reduction in internal rotation early, in all motion later; pain on ambulation	Inflammatory arthritis

\*—PPB = prepubescent.

CBC = complete blood count; ESR = erythrocyte sedimentation rate; ROM = range of motion; CT = computed tomography; MRI = magnetic resonance imaging; NSAIDs = nonsteroidal anti-inflammatory drugs; PT = physical therapy; ORIF = open reduction internal fixation; EMG = electromyography.

PPB\*

ADOLESCENCE

OLDER ADULT

<i>Special tests</i>	<i>Treatment</i>	<i>Referral</i>
Normal CBC and ESR, plain films positive (early with changes in the epiphysis, later with flattening of the femoral head)	Maintain ROM, follow position of femoral head in relation to acetabulum radiographically	Orthopedic surgery
Plain films show widening of epiphysis early, later slippage of femur under epiphysis	Non-weight bearing, surgical pinning	Urgent orthopedic surgery with acute, large slips
Plain films; if these are negative, CT or MRI	Rehabilitation program of progressive increase in ROM and strengthening <sup>8</sup>	Orthopedic surgery if >2 cm displacement
Plain films if suspect fracture	Rest, ice, NSAIDs, local steroid and anesthetic injection for severe pain, gradual return to activities with protection of site	Consider PT
Plain films negative	Rest, ice, compression, static stretch, NSAIDs	Consider PT
Radiograph or ultrasound examination reveals typical calcified, intramuscular hematoma	Ice, stretching of involved structure, NSAIDs; surgical resection after 1 year if conservative treatment fails	Consider PT; orthopedic surgery if resection needed
Plain films may show cortical defects in femoral neck (superior or inferior surface); bone scan, MRI, CT may also be used if plain films are negative and diagnosis is suspected	Inferior surface fracture: no weight bearing until evidence of healing (usually 2 to 4 weeks) with gradual return to activities; superior surface fracture: ORIF	Orthopedic surgery for ORIF
Plain films; if these are negative and symptoms persist, MRI or CT	Surgical removal if unresponsive to medical therapy with aspirin or NSAIDs	Orthopedic surgery
—	Modification of activity, footwear; stretching program, ice massage, NSAIDs	Consider PT
Plain films, bone scan, MRI negative for bony involvement	Ice, NSAIDs, stretching of iliotibial band, protection from direct trauma, steroid injection	Consider PT
Plain films, MRI	Protected weight bearing, exercises to maximize soft tissue function (strength and support), total hip replacement	PT, orthopedic surgery
EMG studies may be helpful, MRI of lumbar spine if nerve root compression is suspected	Stretching, NSAIDs, relative rest, correction of offending activity	Consider PT
Plain films are negative	Iliopsoas stretching, steroid injection	Consider PT
Nerve conduction velocity testing may be helpful	Avoid external compression of nerve (clothing, equipment, pannus)	—
Plain films help with diagnosis and prognosis	Maximizing support and strength of soft tissues, ice, NSAIDs, modification of activities, cane, total hip replacement	PT, orthopedic surgery