

Diagnosis and Management of Non-Traumatic Anterior Knee Pain

Condition	Evidence-Based Management
1. Patellofemoral Pain Syndrome (PFPS) (includes chondromalacia patellae, plica syndrome, quadriceps tendinopathy, patellar tendinopathy/Jumper's Knee/infrapatellar tendinopathy, IT band syndrome) <ul style="list-style-type: none"> ○ Signs/Symptoms: Retropatellar/peripatellar pain with squatting, stairs, jumping. ○ Exam: Pain with squatting, stairs, jumping; positive tests (patellar, compression, grind). 	Core: <ul style="list-style-type: none"> ○ Education: Explain condition and positive prognosis. ○ Address Psychosocial Factors: E.g. use CBT for fear-avoidance, stress, anxiety. ○ Maintain Activity: Encourage movement; avoid rest/immobilization. ○ Self-Care: Promote home exercise, good nutrition, sleep, stress management, healthy weight, no smoking/substance abuse. ○ Social/Work Activities: Encourage participation as tolerated. ○ Exercise Therapy: <ul style="list-style-type: none"> ➤ Early: Gentle strengthening (isometric, hip-focused) and ROM exercises. ➤ Progression: Functional exercises (squats, lunges) as symptoms improve. ○ Ongoing follow-up: To align with treatment goals. ○ Criteria for discharge: E.g., achieved goals, worsening symptoms. Optional: <ul style="list-style-type: none"> ○ Manual Therapy: Mobilization/soft tissue techniques + exercise. ○ Heat/Cold Therapy: Cold for inflammation, heat for stiffness. ○ Taping: Patellar/kinesiotaping for short-term pain relief. ○ Foot Orthoses: For short-term relief in biomechanical issues (e.g., pronation). ○ Medications: Consult medical provider. Short-term NSAIDs.
2. Knee Bursitis (prepatellar, infrapatellar, suprapatellar, pes anserine) <ul style="list-style-type: none"> ○ Signs/Symptoms: Anterior/medial knee pain, swelling, redness. ○ Exam: Point tenderness over affected bursa; no warmth to touch. 	
3. Osgood-Schlatter Disease <ul style="list-style-type: none"> ● Signs/Symptoms: Pain and swelling at tibial tuberosity, often in adolescents. ● Exam: Tenderness and swelling over tibial tuberosity; pain with kneeling, running, jumping. 	
4. Hoffa's Syndrome (Infrapatellar Fat Pad Impingement) <ul style="list-style-type: none"> ● Signs/Symptoms: Anterior knee pain, especially with extension. ● Exam: Tenderness around fat pad; pain with knee extension. 	
5. Osteoarthritis (OA) <ul style="list-style-type: none"> ● Signs/Symptoms: Pain with activity, stiffness after rest, crepitus, swelling. ● Exam: Joint line tenderness, bony enlargement, decreased ROM, crepitus with movement, and possibly effusion. 	
Red Flags: Immediate Referral to Emergency Care	
1. Deep Vein Thrombosis (DVT): Throbbing pain in calf/thigh, entire leg swollen, active cancer, recent immobilization, major surgery, shortness of breath, chest pain. 2. Infection: Severe pain, erythema, edema, warmth around knee, fever, recent trauma/surgery.	
Referral to Medical Provider	
1. Peripheral Arterial Disease (PAD): Leg pain/cramping, cold extremities, weak/absent pulses, numbness, history of vascular problems. 2. Inflammatory Arthritides (e.g., rheumatoid arthritis): Morning stiffness > 1 hour, symmetrical joint pain, swelling, deformity, systemic symptoms (e.g., fatigue, weight loss). 3. Referred Pain: <i>From hip conditions:</i> Slipped Capital Femoral Epiphysis (SCFE): Limp, toe-out gait, leg length discrepancy (adolescence). Hip OA: Hip pain/stiffness, reduced hip ROM, groin pain. <i>From lumbar radiculopathy:</i> Radiating pain/numbness/tingling/weakness in leg, positive straight leg raise test, low back pain. 4. Tumor (i.e., Giant Cell Tumor): Noticeable lump, worsening pain with movement, swelling, possible constitutional symptoms (e.g., fatigue, weight loss). 5. Peripheral Neuropathy (e.g., saphenous neuritis/gonalgia paresthetica): Pain to touch, aggravated by limb movement, burning/tingling sensation.	
Orange Flags (Psychiatric Disorders): Major depression, personality disorders, PTSD, substance addiction and abuse. Action: Refer to appropriate provider/psychiatric specialist.	Yellow Flags (Psychosocial Factors): Fear of movement, poor recovery expectations, depression, anxiety, work-related or family issues, litigation or compensation claims, maladaptive coping mechanisms. Action: Address these as part of conservative care, co-manage, or refer to an appropriate provider.

