Musculoskeletal pain should not be painful to you! Tips on initial evaluation and treatment.

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- Outpatient and acute care visits for back and knee pain range in the millions annually.
- It is important to distinguish urgent / emergent cases and initiate appropriate initial management.
- Back pain:
  - Identify the anatomy:
    - Region of the spine: cervical, thoracic, lumbar, sacral
    - Spinal versus paraspinal
  - Identify urgency of presentation:
    - Acute trauma / high-risk mechanism
    - Midline tenderness / pain
    - Neurologic findings
      - Saddle anesthesia
      - Progressive weakness / radiculopathy
    - Fevers, night sweats, weight changes
    - Nocturnal pain or pain that awakens from sleep
    - Anorexia, PO intolerance or refusal
    - Severe pain unresponsive to OTC analgesics, rest, activity modification, positional changes
  - Young (<10) usually not true orthopaedic/MSK back pain – consider alternate sources
  - Physical exam maneuvers:
    - ROM
    - Palpate midline spinous processes, transverse processes, paraspinal muscles
    - Do a thorough neurologic exam.
    - Pelvic tilt and poor core engagement is a risk factor for low back pain.
    - For lumbar back pain, evaluate the hips as well.
  - Mechanical back pain: Most common cause of low back pain.
    - PCP Initiated Treatment: Physical therapy, NSAIDs, acetaminophen, activity modification.
    - XR: 2-view STANDING AP + LATERAL full spine → MRI spine wo contrast if symptomatic after 6wk
  - Spondylolysis: Bone stress injuries of the pars interarticularis
    - Pain with extension, rotation, lateral bends.
    - PCP Initiated Treatment: Relative rest and activity modification, referral to Ortho/Sports.
  - Spondylolisthesis: Slippage of a vertebral level on the level inferior
    - PCP Initiated Treatment: Relative rest and activity modification, referral to Ortho/Sports.
  - Discopathies including herniated discs, bulging discs, etc.
    - May present with radicular symptoms over the nerve distribution.
    - Can be acute or chronic.
    - XR may show a loss of intervertebral disc space, MR is diagnostic.
    - Treatment: Relative rest, physical therapy, referral to Ortho/Sports
  - Scoliosis:
    - Screen with Adams Forward Bend.
      - XR diagnostic with Cobb Angle measurement defining curve.
    - Curve size not correlated to degree of back pain.
  - Hold out from activity:
    - Increased pain with activity
    - Positive imaging findings
    - Radicular symptoms

        - Limited motion
        - Unable to perform functional tasks: Squats, Jumps
        - Diagnoses of spondylolysis, spondylolisthesis
- Knee pain:
    - History and physical exam are critical to the right diagnosis
        - HPI:
            - Date/duration of symptoms
            - Mechanism
            - Pain: Specific location, provoking and palliating factors
            - History of effusion, instability, mechanical symptoms
            - Current functional / activity level
        - Knee exam:
            - Inspection
            - Identify effusion
            - Hip and knee ROM
            - Strength testing
            - Special testing for patellar, ligamentous and meniscus pathology
                - Data show Lachman and anterior drawer have similar specificity / sensitivity
            - Functional testing with walking, squats, hops
            - Palpation in a systematic fashion
        - Effusions indicate intra-articular knee injury
            - Hemarthrosis: ACL, patella dislocation, meniscus, fractures, PCL
            - Knee contusions
            - OCD lesions
            - Arthritis
            - Non-orthopedic: crystalline disease, infection, osteonecrosis, malignancy, autoimmune
    - Emergency Department:
        - Septic joint or joint with overlying cellulitis
        - Open fracture / Open joint injury
        - Compartment syndrome
        - Loss of distal pulse/sensation/motor control
        - True knee joint dislocation
    - Orthopaedics / Sports Medicine:
        - All effusions
        - All fractures
        - All XR findings of OCD lesions
        - Patellar tendon ruptures – urgent outpatient follow up
        - Concern for ligamentous or meniscal pathology
        - Patients not improving with conservative treatment
    - Anterior knee pain: patellofemoral syndrome, SLJ syndrome, patellar tendinitis, Osgood-Schlatter disease
        - Most common etiology of outpatient knee pain
        - PCP Initiated Treatment: Physical therapy, NSAIDs, acetaminophen
    - Acute knee injuries (e.g. concern for ACL, meniscus tear)
        - PCP Initiated Treatment: Knee ROM exercises – heel slides, quad sets, straight leg raise, knee extensions ± XR and Refer to Ortho/Sports
    - Knee XR Preferred Views – 4 view XR standard: AP, lateral, sunrise/merchant, tunnel
    - MRI/CT diagnostic for intra-articular pathology, bony injury, often more easily ordered by Ortho/Sports