

# Facet Joint Pathology

Facet joints (zygapophyseal joints) are paired synovial joints located between the articular processes of adjacent vertebrae. They are critical for spinal stability and motion but are also a common source of axial pain.

## Types of Facet Joint Pathology

- **Facet Joint Arthropathy (Degenerative)**
  - Most common type
  - Features: cartilage loss, osteophyte formation, joint space narrowing, subchondral sclerosis
- **Facet Joint Syndrome**
  - Clinical diagnosis of pain originating from facet joints
  - Confirmed by medial branch blocks or intra-articular injections
- **Facet Joint Effusion**
  - Fluid in the joint seen on MRI
  - Often associated with acute pain
- **Facet Cyst**
  - Synovial cysts from degenerated joints
  - May cause radiculopathy or spinal stenosis
- **Facet Joint Hypertrophy**
  - Bone overgrowth contributing to foraminal or central stenosis
- **Facet Fracture or Dislocation**
  - Usually post-traumatic
  - Can result in instability or neurologic compromise

## Diagnostic Tools

Modality	Role
MRI	Detects joint effusion, inflammation, adjacent edema
CT	Superior for bony changes: sclerosis, osteophytes
SPECT/CT	Detects increased metabolic activity; identifies active pain generators
Medial Branch Block	Diagnostic and therapeutic; confirms facetogenic pain

## Imaging Clues (MRI)

- T2 hyperintensity within joint (effusion)
- Joint irregularity, narrowing
- Edema in adjacent bone

## Treatment Options

- **Conservative**
  - NSAIDs
  - Physical therapy
  - Postural training
- **Interventional**
  - Intra-articular steroid injections
  - Medial branch nerve blocks
  - Radiofrequency ablation (RFA) of medial branches
- **Surgical**
  - Indicated in instability or refractory pain
  - Options: joint resection, spinal fusion

## Clinical Notes

- Pain is typically axial, worsened by extension/rotation
- Often no clear correlation with MRI alone
- SPECT/CT may reveal metabolically active joints not seen on MRI

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