Osteoarthritis

Diagnose clinically, treat function not films · exercise outperforms every drug · and most of what patients are already taking does not work

Retire "bone on bone"
it makes outcomes worse

DIAGNOSE IT CLINICALLY *tests exist to exclude alternatives, not to confirm OA*

THE CLINICAL SIGNATURE

Over 45 with activity-related pain that eases with rest, worsening through the day, **morning stiffness under 30 minutes** (inflammatory arthritis runs over an hour), bony enlargement, crepitus, restricted range, **little or no warmth**. **No imaging or labs required.** A hot, boggy, swollen joint is not plain OA and needs another explanation.

JOINTS THAT FIT, AND THAT DO NOT

OA favors: knees, hips, first CMC (thumb base), first MTP, DIPs (Heberden) and PIPs (Bouchard), cervical and lumbar spine. ⚠ **MCPs, wrists, elbows, ankles and shoulders argue AGAINST OA** and toward inflammatory arthritis (RA), **hemochromatosis** (classically 2nd and 3rd MCPs) or CPPD. Wrong joints plus prolonged stiffness or systemic features = serologies and referral, not an OA label.

⚠ DO NOT MISS

Septic arthritis: hot acutely swollen joint with fever is an aspiration, not an OA visit. **Crystal disease**: gout and CPPD strike the same joints that get OA, so aspirate the acutely inflamed joint. **Referred pain**: hip OA presents as *groin* pain and knee pain can be referred from the hip, so examine the joint above and below. Consider AVN with steroids, alcohol or sickle cell.

IMAGING: LESS THAN YOU THINK *and the words you use matter clinically*

Question	Answer
⚠ **Do films grade the problem?**	**No. Radiographic severity and symptoms correlate poorly in BOTH directions**: severe changes with no pain and disabling pain with modest films are both common. **Management follows function, not radiology**, and films do not need repeating
When to X-ray	Diagnostic uncertainty, atypical presentation, or **surgical referral** (the surgeon needs films; the diagnosis does not). Weight-bearing views for knees: joint space narrowing, osteophytes, subchondral sclerosis and cysts
MRI	**Almost never indicated** for suspected OA: it finds meniscal tears and cartilage lesions that are near-universal with age, rarely changes management, and drives anxiety and low-value surgery
⚠ **Language is treatment**	**Retire "bone on bone."** It persuades patients the joint is destroyed and that movement will damage it further, producing the fear-avoidance and deconditioning that make pain and function worse. Say instead that **activity does not damage the joint and strengthening protects it**
Labs	**Normal in OA** and ordered only to chase an alternative: ESR/CRP, RF/anti-CCP, uric acid where the story fits. A normal panel does not need repeating in established disease
Risk factors worth naming	Age, **obesity**, **prior joint injury** (post-traumatic OA can appear decades later), female sex, joint-loading occupations, and malalignment. The modifiable ones are also the treatment targets, which is why the risk-factor conversation and the management plan are the same conversation

TREATMENT IN EVIDENCE ORDER *the non-drug measures are not the warm-up act*

Step	Detail
Exercise (first, and best)	**The single most effective intervention in OA, drug or otherwise.** Strengthening, aerobic and range-of-motion all work, and **the best program is the one the patient sustains**. OA is whole-joint failure including periarticular weakness and deconditioning, which is why exercise treats it. **Counsel explicitly that activity does not damage the joint**: that belief is the main barrier
Weight loss	For overweight patients with knee or hip OA: **~5% improves symptoms, with more benefit at larger losses**, partly because each pound removed subtracts several pounds of force across the knee. Pair with PT, **walking aid held on the OPPOSITE side**, braces for unicompartmental disease, appropriate footwear, self-management education. Tai chi has good evidence
Topical NSAIDs *first-line drug for knee and hand*	**Comparable analgesia to oral NSAIDs at the knee with a fraction of the systemic GI, renal and cardiovascular risk**, which matters most in exactly the older, renally impaired, anticoagulated patients who have OA. Work best in superficial joints (knee, hand), less well at the deep hip. **Substantially underprescribed**
Oral NSAIDs	Most effective oral class, at the **lowest effective dose for the shortest period**, with explicit GI (add a PPI if high risk), renal, blood pressure, heart failure and anticoagulant assessment. **Acetaminophen has modest at best benefit** in OA: reasonable as adjunct, not as the headline therapy
Injections and adjuncts	**Intra-articular glucocorticoid gives weeks of relief**: best used to unlock a rehab program or cover a flare; frequent repeat injections in the same knee are discouraged. **Duloxetine** helps chronic OA pain, especially with widespread pain or depression. **Opioids are NOT recommended** for chronic OA pain: small benefit, substantial harm, no functional advantage
Hand OA specifics	**First CMC (thumb base) OA responds well to a thumb spica orthosis**, which is cheap, evidence-supported and routinely forgotten; add hand exercises and joint-protection education from OT. **Topical NSAIDs are first-line here too.** Consider **erosive OA** when DIP and PIP disease is unusually inflammatory with a "gull-wing" radiographic appearance: it behaves more aggressively but is still not rheumatoid arthritis

WHAT DOES NOT WORK, AND WHEN TO OPERATE *patients arrive already committed to some of these*

⚠ NOT RECOMMENDED

Glucosamine and chondroitin (no meaningful benefit over placebo). **Hyaluronic acid injections** for knee OA (marginal at best). **PRP and stem cell injections** (unsupported, often expensive out of pocket). **Arthroscopy for degenerative meniscal tears or knee OA** (no better than sham or conservative care, and still a common low-value referral). The productive conversation **names what does work** rather than only listing what does not.

WHEN TO REFER FOR SURGERY

Total joint arthroplasty is among the most effective operations in medicine for the right patient: persistent pain and functional limitation despite an adequate trial of the measures above, with meaningfully impaired quality of life. **The trigger is symptoms and function, not the radiograph**, so "the X-ray looks bad" is not by itself a criterion. **Optimize first**: weight, glycemic control, smoking cessation and prehabilitation improve outcomes and lower complications.

PEARLS & PITFALLS

- **OA is whole-joint failure, not simple wear and tear**: cartilage, subchondral bone, synovium and periarticular muscle all participate, which is exactly why load, alignment, weight and strength are modifiable.
- **Hip OA presents as groin pain**, and knee pain may be referred from the hip. Examining only the painful joint is how the wrong joint gets treated.
- **The most valuable prescription is often the explanation.** Reframing a frightening radiology report converts a patient who avoids walking into one who can be rehabilitated.
- **An acutely hot joint in a patient with known OA is not "a flare" until septic arthritis and crystals are excluded** by aspiration.

References: ACR/Arthritis Foundation guideline for the management of osteoarthritis of the hand, hip and knee · OARSI guidelines for the non-surgical management of knee, hip and polyarticular osteoarthritis · AAOS clinical practice guideline on surgical management of osteoarthritis of the knee.