

OA · Osteoarthritis And Chronic Pain

OA (osteoarthritis) is wear-and-tear joint damage. Treatment centers on exercise, weight loss, topical NSAIDs or oral anti-inflammatory pills, physical therapy, and joint replacement when the others no longer work.

THE ONE-LINE TRUTH

The slippery cartilage cushion wears away, and the bone underneath gets thick, hard, and bumpy.

The chain — how it unfolds

1. Cartilage wears away and bone rubs on bone. — why: Years of use, prior injury, or excess weight break down the cartilage's protein scaffold faster than cells can repair it, leaving rough, thinned cartilage or bare bone.
2. Pain with movement (use-dependent pain). — why: Nerve endings in the bone, joint capsule, and synovium fire when bone impacts bone without a cushion, and inflammatory chemicals from damaged cartilage irritate those nerves.
3. Morning stiffness (gel phenomenon) lasting less than 30 minutes. — why: After rest, synovial fluid thickens and the joint 'gels'; a few minutes of movement pumps fresh fluid in and loosens things up — this is much shorter than the hour-plus stiffness in rheumatoid arthritis.
4. A crackling feel or sound (Crepitus) (crunching or grinding sounds and sensation). — why: Rough cartilage and bone surfaces scrape against each other instead of gliding smoothly, producing a grinding noise and vibration you can feel under your hand.
5. Reduced range of motion. — why: Pain makes you avoid full bending or straightening; over time, the joint capsule shrinks, muscles tighten, and bone spurs block movement — so the joint literally cannot move as far.
6. Joint swelling (effusion) — mild, bony-hard enlargement. — why: A small amount of extra synovial fluid accumulates from low-grade inflammation, and the bone spurs themselves make the joint look and feel larger and knobbier.
7. No fever, no whole-body illness. — why: Osteoarthritis is a local mechanical and metabolic problem in one or a few joints — it is not an infection or a systemic autoimmune disease, so you do not get fever, weight loss, or feeling sick all over.

8. Deformity in advanced disease (e.g. varus knee, Heberden's nodes in fingers). — why: Uneven cartilage loss and bone remodeling shift the joint alignment; in the knee, the inner cartilage often wears faster, bowing the leg inward (varus deformity). In finger joints, bone spurs at the tips form visible bumps (Heberden's nodes).

Spot it — what you see, and why

- Joint pain that gets worse with use and feels better with rest: The cushioning cartilage (the smooth padding at the ends of bones) wears away over time, so bones rub closer together when you move the joint, causing pain. Resting gives inflamed tissue a break.
- Morning stiffness that lasts less than 30 minutes: Fluid and mild swelling build up in the joint overnight when you're still. Once you start moving, the joint warms up and the fluid circulates, so stiffness fades quickly.
- Joint swelling that feels bony and hard, not warm or squishy: As cartilage breaks down, the bone underneath tries to repair itself by growing extra bone at the edges (osteophytes, or bone spurs), making the joint look and feel larger and knobby.
- Bony bumps on the fingers—Heberden nodes at the tips, Bouchard nodes in the middle: Extra bone grows at the joint edges where cartilage has worn thin, forming hard lumps you can see and feel under the skin.
- A crackling feel or sound (Crepitus)—a grinding, crackling, or popping feeling when you move the joint: Without enough smooth cartilage to glide on, rough bone surfaces rub and catch against each other, making noise and vibration you can feel.
- Pain and stiffness in the knees, hips, hands (especially the base of the thumb and finger joints), lower back, and neck: These joints carry the most weight or do the most repetitive work over a lifetime, so their cartilage wears out faster than in other joints.

Red flags — act now

- Sudden, severe joint pain with fever or a red, hot, swollen joint—may be infection (septic arthritis) and needs emergency care
- Pain at rest or at night that wakes you up—may be a fracture, bone tumor, or severe inflammatory arthritis
- Rapid loss of function or inability to bear weight—may be a fracture, severe cartilage tear, or joint dislocation
- New numbness, tingling, or weakness below the joint—may mean nerve compression and needs prompt evaluation

Treat it — in this order

1. Weight loss through diet and low-impact aerobic exercise (walking, swimming, cycling) plus muscle strengthening around the joint → Less weight pressing down on worn knee and hip joints means less pain when you move and use them. Stronger muscles around the joint support it and take pressure off the damaged bone. ACR guidelines say this is the most effective first treatment.
2. Topical NSAIDs (like diclofenac gel) rubbed on the skin over hands and knees → The medicine soaks through the skin and lowers swelling right inside the joint, which reduces pain when you move that spot. It works best on joints close to the skin.
3. Oral NSAIDs (like ibuprofen or naproxen) for short periods during flare-ups, at the lowest effective dose → The medicine lowers inflammation inside the whole joint space, which reduces the pain signals your nerves send when you use that joint. It works faster than topical gels.
4. Acetaminophen (Tylenol) up to 3,000 mg per day in divided doses → It blocks pain signals in the brain and spinal cord, which makes mild to moderate osteoarthritis pain less intense. It is safer for the stomach and kidneys than NSAIDs.
5. Intra-articular corticosteroid injection (like triamcinolone) into the painful joint → The steroid reduces inflammation and swelling directly inside the joint space, which quiets pain for weeks to months when the joint is flaring badly.

Your top priorities at the bedside

1. Assess pain level using a 0-to-10 scale and ask which joints hurt during movement and rest — why: Pain assessment guides treatment intensity; pain only with movement suggests early disease treated with exercise and topical creams while constant rest pain signals severe cartilage loss needing stronger interventions like injections or surgery
2. Check the painful joint for warmth, redness, and swelling to rule out infection or inflammatory arthritis — why: A hot red swollen joint may have septic arthritis (bacteria inside the joint) which destroys cartilage within hours and needs emergency drainage; osteoarthritis causes cool mild swelling without redness
3. Teach weight loss strategies including calorie reduction and daily aerobic exercise like walking or swimming for 30 minutes — why: Every pound of body weight creates four pounds of pressure on the knee joint; losing 10 pounds removes 40 pounds of force per step which slows cartilage breakdown and reduces pain without medication