

OA · Osteoarthritis And Chronic Pain

A plain-English guide for you and your family

WHAT IS HAPPENING

Picture a healthy joint: two bones meet, each capped with smooth, slippery cartilage (like the rubber tip on a crutch) that cushions every step and glides without friction. Around the joint sits a thin lining called the synovium, which makes a slick fluid to keep everything moving smoothly. In osteoarthritis, that cartilage cushion breaks down bit by bit — it cracks, thins, and eventually wears away. Without the cushion, bone rubs directly on bone. The bone underneath reacts by getting thicker and harder (a process called subchondral sclerosis), and bony lumps called osteophytes (bone spurs) grow at the edges, like calluses. The joint space — the gap you see on an X-ray between the two bones — shrinks because the cartilage is gone. All of this causes pain when you move the joint, a little stiffness (especially in the morning or after sitting), crunching or grinding sounds (crepitus), and less range of motion over time. You do not run a fever or feel sick all over, because osteoarthritis is not an infection or a whole-body inflammation — it is mechanical wear in one or a few joints. Every symptom traces back to that one upstream break: the cartilage wore out, the bone changed, and now the joint does not glide the way it used to. None of it is random; each finding is the joint trying to stabilize itself or the direct result of bone-on-bone contact.

What you might feel

- Joint pain that gets worse with use and feels better with rest
- Morning stiffness that lasts less than 30 minutes
- Joint swelling that feels bony and hard, not warm or squishy
- Bony bumps on the fingers—Heberden nodes at the tips, Bouchard nodes in the middle
- A crackling feel or sound (Crepitus)—a grinding, crackling, or popping feeling when you move the joint
- Pain and stiffness in the knees, hips, hands (especially the base of the thumb and finger joints), lower back, and neck
- Reduced range of motion—the joint doesn't bend or straighten as far as it used to
- Joint instability or buckling, especially in the knee

Call the doctor right away if...

- 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

What the care team will do

- Assess pain level using a 0-to-10 scale and ask which joints hurt during movement and rest
- Check the painful joint for warmth, redness, and swelling to rule out infection or inflammatory arthritis
- Teach weight loss strategies including calorie reduction and daily aerobic exercise like walking or swimming for 30 minutes
- Demonstrate proper application of topical diclofenac gel (an anti-inflammatory cream) to hands and knees four times daily
- Teach quadriceps strengthening exercises (straight leg raises while lying down) and hip muscle exercises to support the joint
- Educate about using oral NSAIDs like ibuprofen 400 to 600 mg only during pain flare-ups for the shortest time possible with food
- Monitor for side effects of chronic NSAID use including black tarry stools, decreased urine output, and swelling in the legs
- Prepare patient for intra-articular corticosteroid injection by explaining the procedure reduces inflammation inside the joint capsule for 6 to 12 weeks

Medicines you may be given — and why

Acetaminophen (Tylenol)

Acetaminophen quiets pain signals in the brain and spinal cord. It does NOT reduce swelling in the joint — it only dials down how much pain you feel. Think of it like turning down the volume on a painful alarm, but it doesn't fix the worn cartilage or calm the inflammation that's causing the alarm to ring in the first place.

Topical NSAIDs (diclofenac gel, ibuprofen gel)

Topical NSAIDs are rubbed directly onto the skin over the painful joint (usually hands or knees). The medicine soaks through the skin and into the joint, where it blocks the chemicals that cause swelling and pain. Because you rub it on instead of swallowing it, very little gets into the bloodstream, so the stomach and kidneys stay safer than with pills.

Oral NSAIDs (ibuprofen, naproxen, diclofenac)

Oral NSAIDs are pills that travel through the stomach into the bloodstream and reach the painful joint from the inside. They block the chemicals that cause swelling and pain throughout the body. They work faster and stronger than topical gels, but because they go everywhere in the body, they also carry more risk to the stomach, kidneys, and heart.

Intra-articular corticosteroid injections (triamcinolone, methylprednisolone)

A doctor injects a powerful anti-swelling medicine directly into the painful joint. The steroid calms down the inflamed lining of the joint (the synovium) and reduces fluid buildup. This gives fast relief — often within a few days — but it only lasts weeks to months, not forever. It's meant for flare-ups, not daily control.

Duloxetine (Cymbalta)

Duloxetine raises the levels of two brain messengers — serotonin and norepinephrine — in the spinal cord and brain. These messengers help the brain's natural pain-blocking system work better, so pain signals from the worn joint get dampened before they reach your awareness. This is especially helpful for chronic osteoarthritis pain that has become constant and hard to control with joint-focused treatments alone.

Tramadol

Tramadol works in two ways: it binds weakly to opioid receptors in the brain and spinal cord (like stronger opioids do, but with less power), and it also raises serotonin and norepinephrine levels, which help block pain signals. It's used cautiously in osteoarthritis when other pain medicines haven't worked well enough and you need something stronger than acetaminophen or NSAIDs but want to avoid full-strength opioids.

Where this information comes from

- American College of Rheumatology (ACR) 2019 Osteoarthritis Guidelines
- Osteoarthritis Research Society International (OARSI) 2019 Guidelines
- American Academy of Orthopaedic Surgeons (AAOS) 2021 OA Management
- Cochrane Musculoskeletal Group

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