HEALTH BASICS

Cracking joints

Cracking joints is the popping, clicking, or grinding noise that can happen when a joint moves.

WHAT IT IS
Noise produced when a joint or nearby tissue moves

WHERE IT COMES UP
Painless movement, deliberate knuckle cracking, or joint assessment

WHY IT MATTERS
Pain or swelling changes whether assessment is needed

WHAT IT IS NOT
Not a disease or diagnosis

WHO TO ASK
Primary care clinician or physiotherapist

HOW IT IS CHECKED
History and joint examination; imaging only when indicated

Overview

Cracking joints means hearing or feeling a pop, click, snap, or grinding sensation when a joint moves. It is not a disease or a diagnosis.

You may notice it when deliberately pulling a finger, standing up, climbing stairs, exercising, or turning your neck. The medical term crepitus is sometimes used for crackling or grinding felt during movement.

Many joint sounds are painless and do not affect movement. In those situations, nothing needs to be treated. A sound matters more when it begins after an injury or comes with pain, swelling, heat, stiffness, locking, or loss of function.

Different sounds can come from different structures. A single pop from a knuckle is not necessarily produced in the same way as a knee that clicks with every step.

How it works

Most freely moving joints contain synovial fluid , a slippery liquid that helps the joint surfaces

move smoothly. The joint is enclosed by a capsule.

When a finger joint is pulled or bent, pressure inside the capsule can fall quickly. This allows a gas-filled cavity to form in the fluid, producing the familiar pop. Real-time magnetic resonance imaging (MRI) has shown this cavity forming as the joint surfaces separate. Researchers continue to study exactly which part of this process creates the sound.

The same joint usually cannot be cracked again immediately. It needs time for pressure and dissolved gases in the joint fluid to return to their earlier state.

Sounds that repeat with each movement may have another cause. A tendon or ligament can move over a nearby bone and then snap back into place. This can happen around the hip, knee, ankle, shoulder, or wrist. Tendons connect muscles to bones, while ligaments connect bones to other bones.

A knee may also make fine crackling sounds as the kneecap and nearby tissues move. Joint surfaces are not perfectly silent, even when healthy. The noise alone cannot show whether cartilage is damaged.

Why it matters for your health

Painless joint cracking with normal movement is usually not a reason for concern. Studies of habitual knuckle cracking have not found a clear link with hand osteoarthritis. Osteoarthritis is a condition in which a whole joint, including cartilage and bone, changes over time.

The evidence about deliberate knuckle cracking is limited and mainly observational. This means researchers have compared people's habits rather than assigning them to crack or not crack their joints for many years. The available evidence is reassuring, but it cannot answer every question about every joint.

Context is important. Knee crepitus has been associated with a greater chance of developing painful knee osteoarthritis in some long-term research. That does not mean the noise causes osteoarthritis or that everyone with noisy knees will develop it. A clinician considers the sound together with pain, stiffness, swelling, age, previous injuries, and physical examination findings.

A new sound after an injury may be useful information. For example, a pop at the time of a twisting knee injury followed by swelling or instability can occur with damage to a ligament, meniscus, or other joint structure. The sound itself does not identify which structure, if any, was injured.

What can go wrong

Joint noises can occur alongside several conditions or situations:

Arrange a routine appointment if cracking repeatedly comes with pain, stiffness, swelling, reduced movement, locking, or a joint that gives way. It is also reasonable to seek advice if the sound is new and persistent, or if you feel the need to crack a joint repeatedly because it remains uncomfortable.

Seek same-day urgent medical help for a joint that becomes hot, swollen, and painful, particularly with fever, chills, or feeling generally unwell. These features can occur with a joint infection, which needs prompt treatment.

After an injury, seek emergency care for an obvious deformity, a limb that becomes numb, pale, or cold, or severe pain with an inability to use the limb. Local services may direct you to an emergency department or urgent injury service.

- Osteoarthritis: Grinding or crackling may occur with pain, stiffness, or reduced movement, but noise alone does not establish the diagnosis
- Tendon movement: A tendon can snap over bone, as in snapping hip; this may be painless or irritating
- Ligament, meniscus, or cartilage injury: A sudden pop may accompany an injury, especially when followed by swelling, locking, or instability
- Inflammatory arthritis: Joint inflammation can cause pain, warmth, swelling, and stiffness
- Joint infection: A hot, swollen, painful joint with fever or feeling unwell needs urgent assessment
- Joint replacement issues: Artificial joints can make some noise, but a new sound with pain, swelling, or reduced function should be assessed

What you can do

If a joint makes noise without pain, swelling, or loss of function, the practical answer is usually nothing. You do not need a test simply because a joint cracks.

Do not force a joint beyond its comfortable range to produce a sound. Stop if deliberate cracking causes pain. Forceful neck or back manipulation is different from casually cracking a knuckle and should not be attempted by another untrained person.

If you are concerned, keep a brief record of:

A clinician can examine the joint's movement, strength, stability, warmth, and swelling. There is no single test for "joint cracking." An X-ray, ultrasound scan, or MRI may be considered when the history and examination suggest arthritis, an injury, or another structural problem. Imaging

is not routinely needed for an isolated painless noise.

Useful questions include: "Does the examination suggest an injury or joint condition?" and "Would activity changes, physiotherapy, or imaging add useful information?"

- Which joint makes the sound
- Whether it happens once or with every movement
- Any recent injury or change in activity
- Pain, swelling, stiffness, locking, or giving way
- Movements that trigger or relieve the problem

Common questions

Does cracking my knuckles cause arthritis?

Current research has not shown a clear association between habitual knuckle cracking and hand osteoarthritis. The studies are limited, so this conclusion is strongest for ordinary knuckle cracking rather than forceful manipulation of every type of joint.

Why can I not crack the same knuckle again straight away?

After the joint pops, its internal pressure and gas cavity need time to reset. Until that happens, pulling the joint again may not produce another pop.

Why do my knees crack on stairs or during squats?

The kneecap, tendons, and other tissues move as the knee bends under load. This can produce clicks or crackling. Painless sounds with full function often need no action. Pain, swelling, locking, or giving way is a reason to arrange an assessment.

Does a loud sound mean more damage?

Not necessarily. Loudness does not reliably show whether a joint is damaged. What happened at the time, and whether there is pain, swelling, instability, or reduced movement, is more useful.

Is the sound always caused by bones rubbing together?

No. It may come from a gas cavity forming in joint fluid or from a tendon or ligament moving over another structure. Sound alone cannot identify its source.

Should I try to stop cracking my joints?

There is no established need to stop painless knuckle cracking solely to prevent arthritis. Avoid forcing a joint, and stop if the action causes pain or leaves the joint uncomfortable.

Sources

- Kawchuk GN, Fryer J, Jaremko JL, et al. Real-Time Visualization of Joint Cavitation . PLOS ONE . 2015;10(4):e0119470.
- deWeber K, Olszewski M, Ortolano R. Knuckle Cracking and Hand Osteoarthritis . Journal of the American Board of Family Medicine . 2011;24(2):169-174.
- Castellanos J, Axelrod D. Effect of Habitual Knuckle Cracking on Hand Function . Annals of the Rheumatic Diseases . 1990;49(5):308-309.
- Lo GH, Strayhorn MT, Driban JB, et al. Subjective Crepitus as a Risk Factor for Incident Symptomatic Knee Osteoarthritis . Arthritis Care & Research . 2018;70(1):53-60.
- American Academy of Orthopaedic Surgeons. Snapping Hip . OrthoInfo.
- National Health Service. Joint Pain .
- National Health Service. Septic Arthritis .