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'Popping' Knees Are Not a Sign of Early Arthritis, According to New Study

Analysis by Dr. Joseph Mercola | October 08, 2025

STORY AT-A-GLANCE

- Knee popping, also called crepitus, is common and not always linked to arthritis, so hearing sounds alone does not mean your joints are deteriorating
- A five-year study of young adults recovering from ACL surgery found that noisy knees were associated with early cartilage stress but did not predict long-term decline in function or pain
- Exercise is one of the most effective ways to protect noisy knees, as strengthening the quadriceps, hamstrings, glutes, and calves helps stabilize the joint and reduces strain
- Lifestyle strategies like stretching, weight management, and modifying high-impact movements are often more effective than surgery, which is rarely needed for crepitus
- Collagen from high-quality supplements or bone broth supports cartilage, tendons, and ligaments, offering an extra layer of protection for long-term knee health

Have you ever tried standing up or stretching your legs — only to hear a loud cracking or grinding sound coming from your knees? Interestingly, there's a name for this unique sound — crepitus.[1] Some simply call it their knees "popping."

However, when crepitus happens, especially in the knees, many people assume and worry that it's a sign of arthritis — a condition wherein the joints are inflamed, leading to swelling, stiffness, pain, and gradual loss of movement. The good news is that knee

crepitus doesn't always mean you have arthritis. In fact, a recent study found no strong link between knee sounds and structural joint damage.

New Research Reassures Young Adults About Noisy Knees

A recent study published in the journal Arthritis Care & Research took a closer look at the mechanisms of the knee, particularly the cracking or popping sound that occurs when you move this joint. In particular, they looked at whether knee crepitus is an early warning sign of arthritis or simply a common, harmless byproduct of joint movement.[2,3]

- **The study included 112 young adults with a median age of 28 —** The participants were all recovering from anterior cruciate ligament (ACL) surgery. According to research, this particular group of people has a higher risk of developing arthritis; about half of people who suffer an ACL rupture develop arthritis symptoms and structural joint changes within 10 years — that's roughly 15 years earlier than those without knee injury.

- **The study ran for over five years —** The researchers used magnetic resonance imaging (MRI) scans and patient-reported outcomes to track osteoarthritis signs among the participants. And while the early results suggest a worrying trend, the longer-term follow-up told a different story.

- **Knee crepitus is associated with cartilage damage but not long-term joint damage —** According to the researchers, those with crepitus had 2.5 times greater rates of full-thickness cartilage defects in the kneecap region; they also reported worse pain and poorer function one year after surgery. However, over the next four years, there was no difference in pain or function between those with noisy knees and those with quiet knees.

- **To put it simply, the sound did not predict continued joint decline —** Instead, it was more of an early-phase marker of recovery stress rather than a permanent red flag. Despite starting out with more pain and functional limits after the surgery, those

with crepitus caught up with the quiet-knee group over time. Their pain did not worsen, and their function did not keep declining. Instead, with proper rehab and activity, they improved just as much as their peers.

- **These findings are reassuring especially for active young people who have undergone surgery after sustaining joint injuries —** Having noisy joints and automatically associating them with disease could push you toward aggressive interventions or medications you do not need.

  Dr. Adam Culvenor, head of the Knee Injury Research Group at La Trobe's Sport and Exercise Medicine Research Centre (LASEM), said this study "also highlights the importance of staying active and engaged in rehabilitation to avoid or delay osteoarthritis."[4]

So Why Does Knee Crepitus Occur?

In the video above, Dr. Jeffrey Peng, a nonoperative orthopedist and sports medicine specialist based in San Francisco, provides insights on why knee sounds occur and why they are not always a warning sign. The truth is that about half of the general population (41%, to be specific) experience knee crepitus at some point in their lives. "In most cases, crepitus is harmless and does not indicate a serious problem. Many people experience occasional knee sounds without any pain or long-term issues," he explained.[5]

- **The specifics of crepitus are worth unpacking —** The knee joint is complex, and is made up of bones, tendons, cartilage, ligaments, and synovial fluid. These mechanisms can play a role in why crepitus occurs. For example, the release of gas bubbles leads to knee sounds. These bubbles form and collapse inside the fluid that lubricates your joints. However, the popping sound that comes from it is no more dangerous than cracking your knuckles; it's also painless.

- **Another common cause is the movement of tendons or ligaments —** Peng explains that when tendons and ligaments briefly shift over bones, they produce a snapping or clicking sensation. These mechanical shifts are often harmless and tend to

happen during squats, lunges, or even when you stand up. "While this is usually not a sign of damage, it may be a concern if accompanied by pain or feelings of instability," he added.

- **Nevertheless, there are situations when crepitus is a sign of something serious —** This is when crepitus occurs along with cartilage wear, meniscus (a crescent-shaped cartilage) tears, or loose fragments in the joint. In these cases, the noise is joined by pain, swelling, or locking. This is your body's way of alerting you that the joint structure has been disrupted. If crepitus suddenly manifests after an injury, these tears within the joint could be the cause.

  > *"Research has found that the presence of crepitus could signal that structural changes like cartilage damage or bone spurs are happening in the joint. In fact, 81% of people with diagnosed knee osteoarthritis experienced knee crepitus. That's a significant number, which is why it's so often discussed in relation to arthritis,"* Peng explained.

- **Time-related details also matter —** If crepitus stems from normal joint function, the noise may persist but does not lead to degeneration. But if noise results from conditions like osteoarthritis, symptoms can worsen gradually, especially without joint care.

Other Reasons Why Your Knees Are Popping

While arthritis or osteoarthritis are a common reason for noisy knees, the American Academy of Orthopaedic Surgeons (AAOS) states that there are other distinct causes. Below are several examples — they often come with pain and hallmark symptoms, so if you experience any alarming signs aside from the noise, it's best to consult with a physician to pinpoint the specific condition.[6]

- **Aside from knee popping or cracking, arthritis also causes painful stiffness and tightness in your knee —** The pain usually worsens every morning or after prolonged sitting, as well as when there are temperature changes.

- **Meniscus tears often appear because of sports injuries —** Although they can also occur because of degenerative changes. They come with a cracking sound when the injury happens. Your knees may also lock or buckle when you walk or squat; pain may arise when you're doing mundane activities like standing up from a chair or getting out of the car.

- **Ligament injuries and tendon tears form because of sports or traumatic injuries, like a car accident —** When the ligament or tendon ruptures, a sudden popping sound occurs. This comes with painful swelling and buckling of the knees when walking or pivoting.

  With tendon tears, indentations can appear at the top or bottom of the kneecap. The kneecap may also be moving into the thigh, meaning the patellar tendon is torn and no longer attached to the shinbone. The kneecap may also sag, indicating the quadriceps tendon has been torn.

- **If the popping or snapping sound comes from outside of the knee, it could be what's called iliotibial (IT) band syndrome —** This happens when the iliotibial band — a group of tissue that runs from the hip to your knee, located on the outside of your leg — becomes irritated due to constant rubbing. It often occurs in runners, and the pain worsens with activities that involve repetitive bending and straightening of the knee.

- **Less common but still important are conditions like plica syndrome and loose bodies inside the joint —** Plica syndrome causes snapping or popping inside the knee, paired with tenderness and swelling. Meanwhile, loose bodies — tiny pieces of cartilage or bone floating in the joint — cause a cracking or locking sensation, almost as if something is blocking your movement.

- **Fractures of the kneecap are another cause, and require immediate medical attention —** A fracture produces a sharp cracking sound at the moment of injury, along with bruising, swelling, and sometimes visible deformity. This type of noise is never benign and always requires immediate medical help.

In addition, knee noises also occur in people who've already had a knee replacement. In these cases, clunking or clicking sounds often come from the metal and plastic components of the implant making contact. This can sound alarming but often isn't painful or dangerous.

Well-Structured Exercises Will Help Support and Protect Your Knees

In his video, Peng reiterates what the study pointed out — that having noisy knees does not automatically translate to pain or joint disorders in the future, unless they come with pain or mobility issues. He also stresses that while many people refrain from exercising when these symptoms arise, this is actually counterproductive. In fact, proper, regular exercise is one of the best ways to protect your knee health.

> *"Regular movement and strength training support the knee joint. It helps reduce strain on cartilage, and it leads to improved function. Rather than stopping exercise, focus on good form, muscle balance, and controlled movements,"* Peng advised.

- **Surgery is rarely needed for knee crepitus —** Instead, the biggest benefits were seen in people who stayed active, managed their weight, and followed knee-friendly strengthening routines.
- **However, making modifications to your workout may be needed —** This is important, especially if certain activities lead to pain or discomfort. Peng recommends reducing the weight load or switching to lower impact exercises like cycling or swimming, which will help protect your knees while retaining their strength.
- **Strengthening the surrounding muscles and improving mobility are also essential —** He advises focusing on workouts that target the quadriceps, hamstrings, glutes, and calves. Doing so will "help stabilize the knee joint and minimize excessive

movement that may contribute to crepitus." Stretching the hamstrings, hip flexors, and quadriceps will also ease knee popping.

- **Peng recommends listening to your body to avoid unnecessary strain —** Most low-impact exercises are safe, but doing high impact or high stress movements could lead to discomfort. Making modifications to movements like deep squats or full squats is advised.

> *"Resistance training supports the knee joint by reducing strain on cartilage and improving overall mechanics. However, overloading weak muscles too quickly or using poor technique can lead to discomfort,"* Peng said.
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> *"If certain movements cause pain, modifying them, such as reducing squat depth or lowering resistance, can help protect the joint while still building strength."*

What About Supplements for Knee Health?

Collagen, chondroitin, and glucosamine are examples of supplements recommended for strengthening the knee. In particular, I recommend collagen, as it provides structural support and strength not just to your tendons, ligaments, and cartilage, but also your skin and bones.[7,8,9]

- **Collagen is a major component of cartilage —** In fact, it accounts for about 30% of the total protein in your body. **Collagen** is crucial for repairing soft tissue, muscle and connective tissue, all of which tend to get weaker and less elastic with age.

- **For knee problems, a high-quality organic and/or grass fed collagen supplement at a dose of 50 grams a day can be very beneficial —** Collagen supplements can be either unhydrolyzed (undenatured) or hydrolyzed (denatured). The processing that most collagen supplements undergo to become hydrolyzed can result in questionable byproducts that are best avoided.

- **Homemade bone broth is another great source of collagen —** Bone broth contains several nutrients that are beneficial for joint health, including collagen, gelatin, glucosamine, and chondroitin. It also contains amino acids such as glycine and proline, which have anti-inflammatory properties that help reduce joint pain and inflammation.

Noisy knees aren't always a cause for concern, but if you notice any other symptoms like pain or stiffness, then these are red flags that your knees need extra attention. I recommend reading my article "Common Knee Problems and How to Address Them" for more information.

Frequently Asked Questions About Knee Popping (Crepitus)

Q: What does it mean if my knees pop or crack when I move?

A: Most of the time, knee popping — called crepitus — is harmless and comes from gas bubbles in joint fluid or tendons shifting over bone. Noise alone is not a sign of arthritis or joint damage.

Q: Does noisy knees mean I'm developing arthritis?

A: No. Research shows that while people with noisy knees after injury may report more pain early in recovery, long-term outcomes are no different from those without noise. Arthritis risk depends more on structural damage, inflammation, and lifestyle factors than sound.

Q: When should I worry about knee noises?

A: You should pay attention if the popping comes with pain, swelling, stiffness, or locking of the joint. These symptoms suggest structural issues such as cartilage

wear, meniscus tears, or ligament injury that need medical attention.

Q: What can I do to protect my knees if they make noise?

A: Staying active is key. Strength training for your quadriceps, hamstrings, glutes, and calves stabilizes the joint. Stretching tight muscles, modifying high-impact movements, and managing your weight all help reduce stress on your knees.

Q: Are supplements helpful for noisy knees?

A: Collagen is especially valuable because it supports cartilage, tendons, and ligaments. Bone broth is a natural source, while high-quality collagen supplements help strengthen soft tissues and improve joint resilience over time.

Sources and References

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