



ISTOCK.COM/THILOWS

Pain points

What exactly can help manage knee arthritis? **Jen Murphy** asks the experts

Knee osteoarthritis is a long-term, degenerative condition that can't be reversed. It develops in four stages as cartilage in the joint wears down, eventually leaving the bones to grind against each other and causing symptoms like stiffness, swelling and a persistent ache around the joint.

"Cartilage doesn't have pain receptors, but bone does," said Dr. Yale Fillingham, vice-chair of research at Rothman Orthopaedic Institute in Philadelphia, US.

Many people with the condition live with a lurking dread that any misstep could aggravate it. But as with other forms of chronic pain, experts agree that the best way to manage pain and improve quality of life is moving more, not less.

Exercise helps to lubricate the knee by sloshing around synovial fluid in the capsule that coats the joint and reduces stiffness, said Steffany Moonaz, director of clinical and health services research at Southern California University of Health Sciences, US. "It's like oil, creating more mobility in the joints," she said.

The most effective kind of exercise will vary based

on the individual and how advanced their arthritis is. Someone with stage four, bone-on-bone knee osteoarthritis may feel fine running, while someone with mild cartilage loss could find it intolerable.

Here's how to choose the right regimen for you.

Try aerobic activity

A recent meta-analysis examined 217 trials involving 15,684 participants and six types of exercise to manage knee osteoarthritis. While all of them reduced pain, improved movement and enhanced quality of life, aerobic activity consistently outperformed strengthening, flexibility and mind-body exercises.

"It increases blood flow throughout the body," said Moonaz, which allows nutrients to move, removes waste and decreases swelling. Aerobic exercise can also help you maintain a healthy weight, which helps offload the joints, she added.

People with severe pain should start with low-impact cardio workouts such as swimming or water aerobics, then try activities like cycling, walking or the elliptical machine. If walking is your main form of exercise, try to make it brisk and add hills, Moonaz said.

If you opt for cycling, a recumbent bike can be more comfortable because it doesn't require you to bend your knee and hip as much as an upright bike, she added. But use high resistance. On an upright bike, adjusting the seat to a higher position will put your knees under less strain.

Avoid activities where you have to move quickly and unpredictably, like tennis,

Research suggests strong quadriceps can help offset the symptoms and may even delay the need for a knee replacement

pickleball and soccer, which can put added pressure on an already compromised joint.

Build strength

While cardio is crucial for osteoarthritis, strength training is a close second. The more you strengthen the muscles around your knee, the more you support the joint, said Dr. Fillingham, who helped develop the American Academy of Orthopaedic Surgeons guidelines for man-

aging knee osteoarthritis without surgery.

Research suggests that strong quadriceps in particular can help offset the symptoms and may even delay the need for a knee replacement. And if you do require knee surgery — which more than half of those diagnosed do — having that strength will make recovery easier, Dr. Fillingham added.

He suggested weighted exercises, like squats, lunges and a horizontal leg press.

If you're new to strength training, you could start with straight-leg raises while watching Sunday football, he added. You can even just prop your foot on an ottoman and engage the quad muscle on each leg several times for 5 to 10 seconds at a time.

Some yoga poses, like chair pose and warrior poses, are another good starting place, said Moonaz, who studies the effects of yoga on arthritis. "Mind-body exercises encourage you to slow down and pay attention to alignment and form, which is important when dealing with pain," she said.

Listen to your body

Knee osteoarthritis doesn't have to mean the end of all high-impact exercise, even running. There is no evidence

that running speeds up cartilage loss. Some research shows that it may even have protective effects, said Stuart Phillips, a kinesiology professor at McMaster University in Ontario, Canada.

But running can cause discomfort and aggravate symptoms, particularly if the osteoarthritis is advanced. Poor biomechanics and doing too much, too soon can also flare up symptoms. Many people can tolerate it on softer surfaces than pavement, such as dirt or grass, or by scaling back on mileage. Moonaz recommended talking to an orthopaedist or podiatrist about shoe recommendations about what footwear best supports your joints.

No matter what type of exercise you choose, find something enjoyable and don't try to push through pain. Listen to your body, and modify what you're doing. You may need to squat less deeply or swap out jumping jacks for marching in place. Knee osteoarthritis affects people differently and pain can vary day to day. But any movement is better than no movement.

"The more you move the knee around, the more pliable you keep the tissues around it," Dr. Fillingham said.

NYTNS