

HOW TO MODIFY EXERCISES FOR THOSE WITH ARTHRITIS

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For those living with arthritis, it's hard to know whether exercise is helpful or harmful. Many people stop exercising altogether to avoid pain, but this can sometimes make the pain worse. So, rather than becoming sedentary, we can choose low-impact exercises or make modifications to our current routines to help us stay active and mobile in the long run.

It may seem counterintuitive, but exercise can actually *reduce* joint pain, affirming that movement can serve as medicine. Whether we're practicing yoga, going for a bike ride, or simply taking a walk, when we exercise, we increase our circulation, and endorphins are released, which serve as natural pain relievers. Also, exercise promotes the production of synovial fluid in joint cavities, offering lubrication and reduction of friction between bones.

"It is important to seek evaluation by a physician if you are experiencing acute or chronic musculoskeletal pain, which can have many different causes," says Chantal Nguyen, MD, sports medicine researcher at Stanford University. "After establishing a diagnosis, an individualized treatment or therapy plan led by a physician or physical therapist can help safely reduce joint pain long-term."

THREE MAIN FITNESS GOALS FOR PEOPLE OVER 50

Dr. Nguyen conducted research at Stanford to assess the best exercises for adults in midlife and beyond. She recommends that older adults choose a variety of exercises that **promote these three aspects of fitness: endurance, balance, and strength**. She also offers modifications to meet these three fitness goals in a joint-healthy way.

1. Increase Cardiovascular Endurance

Our cardiorespiratory function declines with age, so it's important to include aerobic activities in our exercise routines. For those with arthritis, Dr. Nguyen recommends low-impact exercises that get your heart rate up for 150 minutes per week (i.e., 30 minutes a day for 5 days a week). But, even a daily walk around the block can be helpful.

How to modify cardiovascular exercises for joint health:

- If jogging on concrete hurts, jogging indoors, on a treadmill, or on a track with a cushioned surface can be helpful.
- If jogging on a softer surface still hurts, explore lower-impact activities such as walking, biking, or aquatic therapy.
- If jumping rope hurts, bounce on a rebounder.
- Remember to warm up the joints before exercising and do a cool-down stretch afterward.
- Applying ice to arthritic joints after exercise can also help reduce inflammation, swelling, and pain.

"For those with joint pain, it can be difficult to advise a uniform exercise prescription. Someone with mild or moderate arthritis can likely participate in daily activities to improve endurance, but someone with severe arthritis may be more limited due to more pain or symptoms with activity," says Dr. Nguyen. "Regardless, modifications can always be made to make movement easier, including slowing the pace of your walks or using equipment such as walking sticks to help offload pressure."

2. Improve Balance, Flexibility, and Proprioception (to prevent falls)

People with arthritis may have decreased coordination and reaction time, therefore have a higher risk of falling and potentially breaking a bone. One study of older adults with knee osteoarthritis found that Tai Chi improved lower body strength, balance, and flexibility, all of which can reduce the risk of falling.

Tai Chi can also improve proprioception, the ability to feel where your body is in space. Since we focus on the flexion and extension of our joints during Tai Chi exercises, the mind-body connection and overall body awareness improve, decreasing our risk of falling when something unexpected arises in our surroundings.

How to modify balance, flexibility, and proprioception exercises to decrease fall risk:

- If you can't balance on one leg for more than one minute, increase core strength with Pilates while lying down on a mat.
- If power yoga hurts your joints, try more gentle versions, such as restorative, Yin, or chair yoga to improve flexibility.
- If daily meditation to support the mind-body connection doesn't work for you, try a "moving meditation" such as gentle yoga or Tai Chi.

"Core strength, a sense of balance, and lower extremity proprioception and strength can help prevent falls in older adults, especially when there are unpredictable perturbances in the environment," says Dr. Nguyen. "Tai Chi improves balance, flexibility, and proprioception, and Pilates improves core strength, so performing these two exercises every week in adjunct can be a good approach to prevent falls in older adults."

3. Build Muscle Strength

As we age, we naturally lose muscle mass; therefore, strength training is essential to maintain balance, mobility, and overall health. Strength training is especially important for those with arthritis because well-conditioned muscles can offload pressure from joints and consequently reduce joint pain.

"Strengthening muscles surrounding joints can definitely decrease the overall pressure and pain that joint experiences, allowing older adults to be more mobile," says Dr. Nguyen. "It's important to remember that muscle mass is harder to build as we age, so even if your muscles don't appear larger after weeks of training, stick with it—you are indeed getting stronger and can improve strength over time."

Building muscle strength around arthritic joints can help reduce pain. Here are specific exercises to strength train in a joint-healthy way:

- If you have shoulder, hand, or wrist pain, try resistance band exercises instead of dumbbells to strengthen the upper body. Dr. Nguyen also recommends aquatic therapy to improve range of motion and strength without the use of weights.
- If you have back pain, Dr. Nguyen recommends strengthening abdominal muscles. She recommends holding plank pose (on hands or forearms) rather than doing crunches to prevent strain on the discs or joints of the spine.
- If you have hip pain, try lower impact exercises to strengthen the hip muscles.
- If you have knee pain, Nguyen recommends starting with isometric (static contraction) exercises to strengthen the hip and thigh, improving functional movement and stability.

"Squats can be a wonderful form of exercise for individuals with arthritis. There are many ways to modify squats while still strengthening your legs, such as starting slowly, using a chair to support your body, and limiting the depth of your squat to reduce risk of injury," says Dr. Nguyen.

LISTEN TO YOUR BODY AND START SMALL

Dr. Nguyen says that some discomfort in the joints while exercising can be normal for those with arthritis, and we can use pain as our guide to determine the intensity of our workouts.

"It is important to compare what your baseline pain is versus your pain with any type of activity. An easy way to keep track of this is to grade your pain on a 1-to-10 pain scale at rest and then assess what the pain level becomes with a specific activity. If you are experiencing significantly more pain with a certain movement, it might be best to see a physician and obtain a referral to a physical therapist, who can help provide you with safe, individualized exercises," says Dr. Nguyen.

Dr. Nguyen also recommends that we take several movement breaks throughout the day. For example, every couple of hours we could stand up and stretch, do several squats, walk around the block, or bounce on a rebounder. These short movement breaks, aka exercise snacks, keep the body in motion so that joints don't get stiff.

"For those with arthritis, consistently doing gentle-to-moderate exercises throughout the day can be cumulatively more effective than an intense hour at the gym," says Dr. Nguyen. "Keeping our bodies moving in a safe and healthy way is one of the best things we can do for our health as we get older."