

Exercising with Osteoarthritis



Around 27 million Americans have osteoarthritis (OA), a degenerative joint disease. Ongoing loss of cartilage causes joint pain and reduced range of motion. This often leads to physical disability and reduced quality of life.



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There are several risk factors for OA. They include old age (about 80 percent of adults over age 65 are affected), being female, and overweight and obesity. Previous injury, muscle weakness, and joint laxity are also risk factors. Weight-bearing joints, like knees and hips, are at greatest risk. We cannot change some risk factors, like age or gender. But we can change other factors to reduce the risk of OA.

Exercise with OA can be difficult and painful, which leads to less activity. This then causes joints to become stiffer and less flexible. Surrounding muscles become weaker. This leads to even less activity. Exercise can help. It decreases joint swelling and pain. It helps you maintain a healthy weight. As a result, this reduces pressure on your joints and improves cartilage and bone tissue health. Exercise improves overall function. The key is to stay active and choose activities you enjoy.

Evidence suggests both aerobic and strength exercise helps people with OA. So try to do both. If you are just starting out, do more aerobic exercise. This will also help you lose weight. Over time, add resistance workouts. Doing both types will bring even more benefits for your pain and joint stiffness. It will also help your overall health and fitness.

Getting Started

- Talk with your doctor before you start an exercise program. Ask about any changes to your medications or concerns in becoming more active.
- Take all medicines prescribed by your doctor.
- Select low-impact and non-impact activities. Walking, swimming, water exercise and cycling are good choices.
- A long warm-up and gradual cool down may help you avoid additional joint pain.
- Divide your activity into many short sessions during the day. Try three 10-minute sessions to start. Set goals by time rather than distance.
- Start slowly. Over time, add to the intensity and length of your workouts. Take frequent breaks as needed. Adjust your workouts based on your symptoms.
- Start by exercising on your own. Begin walking or another form of activity that you can add to your daily routine.
- Invite others to join you. Exercising together is more fun and increases the chance you will continue. Dogs make great walking partners!
- Look for programs in your community. You could also contact an appropriately credentialed exercise professional* to help you. All you really need, though, is a good pair of shoes to get started walking.
- Select shoes and insoles that absorb shock.
- Using a pedometer or other device to track your exercise. Slowly work toward a goal, like maybe 10,000 steps per day.

Aerobic Exercise Programs

The American College of Sports Medicine and the Centers for Disease Control and Prevention recommend at least 150 minutes per week of moderate-intensity aerobic activity, 75 minutes of vigorous aerobic activity, or an equivalent combination of both for adults. They also suggest muscle strengthening twice a week. Follow the FITT principle to design and implement a safe and effective program you will enjoy. F = frequency, I = intensity, T = time, and T = type. There are no established FITT guidelines for people with OA. Use the FITT guidelines for apparently healthy adults, but adjust for your own pain, stability, and functional limits.

- Frequency – Be active on most days of the week but at least three to four days.
- Intensity – Exercise at a moderate level. Use the “talk test” to help you monitor. For example, even though you may notice a slight rise in your heart rate and breathing, you should be able to carry on a conversation while walking at a moderate pace. As you walk faster, you will begin to breathe faster and have difficulty talking. At that point, you’ve achieved moderate intensity or “somewhat hard.” Vigorous exercise causes a large rise in heart rate and breathing. At this intensity it would become difficult to talk. Most people would rate this as “hard to very hard.”
- Time – Exercise 30 to 60 minutes per day. You can do it all at once or break it up into a few sessions of at least 10 minutes each. Multiple, shorter sessions may help reduce joint pain.
- Type – Exercise in the water to reduce joint stress. It also improves cardiovascular fitness. Do activities you enjoy and will do regularly in your new, more active lifestyle. Add variety depending on the day or the season to keep your program more enjoyable.

Aerobic Exercise Cautions

- If you have been inactive for a long time, start with shorter sessions (10 to 15 minutes). Add five minutes to each session, increasing every two to four weeks. Over time, build up to being active at least 30 minutes a day on most days of the week.
- Expect some discomfort after your workouts. However, you should not be in pain. If pain is greater two hours after exercise than it was before, reduce the length and intensity of your next session.
- Total exercise time is more important than intensity. If you exercise at too high an intensity, you may not be able to exercise very long. High-intensity exercise also increases your risk of injury.
- Avoid vigorous, highly repetitive activities. This is especially true for people with unstable joints.
- Avoid overuse and repetitive stress injuries by alternating types of exercise over consecutive days.
- Drink plenty of fluids before, during, and after exercise.

Resistance Exercise Programs

Evidence suggests that light- to moderate-intensity resistance training is a good addition to your program. Muscle atrophy often accompanies OA. Resistance training helps reverse atrophy. It also strengthens the muscles surrounding the joint. This reduces the risk of injury and more joint damage. Resistance training helps in other ways, too. It increases or maintains the amount of muscle. It improves your ability to function. And it also promotes overall good health.

- Frequency – At least two to three days per week. Plan a day of rest between sessions.

- Intensity – Light to moderate. Light intensity is weight you can lift 15 to 20 times. Moderate intensity is weight you can lift 10 to 15 times.
- Time – This depends on the number of exercises you do. In general, do one to three sets of 10 to 15 repetitions.
- Type – Exercise all major muscle groups but concentrate more on muscles surrounding the affected joints first. This will help strengthen and stabilize them. Exercise in the water with light resistance to reduce stress on the joints. Water exercise conditions muscles through a full, pain-free range of motion. Exercise with a machine or with free weights. There is little difference between them. Don’t belong to a gym or health club? No problem. You can do the same exercises at home with lighter weights, resistance bands, or your body as the resistance. Try push-ups or sit-ups.

Resistance Exercise Cautions

- Avoid holding your breath when lifting. This can cause large changes in blood pressure. That change may increase the risk of passing out or developing abnormal heart rhythms. This is especially true if you also have high blood pressure.
- Start with 10 to 15 repetitions. Build up to 15 to 20 repetitions before you add another set.

Other Types of Exercise

Stiffness and pain cause joints to be less flexible. Thus, exercise often is avoided. Maintain flexibility by using the joint. Also, do activities that stretch the muscles across the joint. Otherwise, unused muscles will shorten and limit range of motion.

- Do flexibility exercises every day.
- Do dynamic flexibility exercises for all major muscle groups. This increases their range of motion.
- Avoid over stretching.
- Yoga, Pilates and tai-chi help improve strength and flexibility. They also help you relax and reduce pain.

Design your exercise program for the most benefit and the fewest risks to your health or physical condition. Contact an appropriately credential exercise professional* to work with you and your doctor. They can help you establish realistic goals. And together, you can design a safe, effective, and enjoyable program to meet your needs and goals.

For more information, visit www.exercisemedicine.org or e-mail eim@acsm.org.

*A listing of exercise professionals can be found at www.usreps.org and EIM Credentialed professionals can be found through the ACSM ProFinder (<http://bit.ly/1Mq6ldN>).

Referral Instructions