

Lesson 2 - Good exercises for arthritis

In this lesson, we explore different types of exercises that can benefit people living with arthritis. When you complete this lesson, you will learn about which low-impact aerobic, range of motion, strengthening, or balance exercises are best suited to people living with arthritis. In general, these exercises are gentle on the joints and improve overall fitness.

Please read each section of this lesson carefully, and then when you are ready, take the **Lesson 2 Quiz** to test your new knowledge. The quiz is an interactive and printable PDF.



Key points

1. Low-impact aerobic exercises such as walking, swimming, and cycling are excellent choices for people with arthritis. These activities promote heart health without putting excessive stress on the joints.
2. Mobility/range of motion exercises such as gentle yoga, can help maintain joint motion and reduce joint stiffness.
3. Strengthening exercises, such as strength training and weightlifting, are important for building muscle strength, which supports joint stability.
4. Balance and coordination exercises, such as tai chi or modified Pilates, can help improve overall body control and reduce the risk of falls.



What is aerobic exercise?

According to the National Institute on Aging¹, aerobic (endurance) exercise is a physical activity that uses large muscle groups in your body and improves the health of your heart, lungs, and circulatory system. This type of exercise increases your heart rate and makes you break a sweat. Aerobic exercises are usually categorized into low, moderate, and high intensity aerobic exercises. The Talk Test below can help you determine how intense your workout may be.

Talk Test

This method allows you to gauge your exercise intensity based on your ability to hold a conversation



| Exercise Intensities | | |
|---------------------------------------|--|---|
| Light Can talk and sing | Moderate Can talk but can't sing | Vigorous Have difficulty taking |



Low-impact aerobic exercises

Low-impact aerobic exercises are highly recommended for people with arthritis. These exercises elevate the heart rate and promote cardiovascular health without putting excessive stress on the joints. Walking is a great low-impact activity that can be easily incorporated into daily routines. It helps improve overall fitness and supports joint and bone health. Swimming and water aerobics are also easier on the joints as the buoyancy of water reduces joint stress while providing resistance for muscle strengthening. Research published in the *American Journal of Physical Medicine & Rehabilitation* suggests that water-based exercises significantly improve functional ability and reduce pain in individuals with arthritis ².

Examples of low-impact aerobic exercises include, but are not limited to:

- Swimming (water aerobics and deep water running)
- Bicycling (cycling outdoors or on a stationary bike)
- Walking (outdoors or on treadmill)



Exercise tip: Build up your routine slowly and gradually increase how intense or how long your exercises are. Stretch after an aerobic exercise. Remember to drink water while exercising.



Safety tip: Stop a movement if it causes you pain or you feel prolonged pain after exercising. Keep yourself safe by wearing the proper gears and learning the proper techniques. If an exercise is causing you pain, talk to your health care professional to modify your exercise or activity.



What is mobility (range of motion) exercise?

Mobility is a word used by physical therapists and exercise professionals to describe how much movement you can make with a joint or a part of your body.³ Mobility differs from stretching which is mainly focused on lengthening muscles. Mobility exercise is a physical activity that helps to restore and maintain your joint motion and reduce stiffness, allowing you to move more freely. These exercises can make daily activities, such as doing shoulder checks when you drive or tying your shoelaces, easier. For this lesson, we will focus on active movements that occur when you move your body into certain position and hold the position for varying lengths of time.



Mobility (range of motion) exercises help maintain joint motion and reduce stiffness

Mobility exercises play an important role in maintaining joint motion and reducing stiffness for people with arthritis. These exercises involve moving the joints through their accessible or full range of motion. Please note range of motion exercises should be pain free while the range of motion can potentially increase with practice. Yoga, specifically modified for people with arthritis, can provide both physical and mental benefits. It incorporates mobility, stretching, strengthening, and relaxation techniques that promote joint health and reduce stress. A study published in the journal *Complementary therapies in medicine* found that individuals with arthritis who participated in a yoga program experienced significant improvements in joint pain, functional ability, and quality of life ⁴.



Exercise tip: If you experience swelling or flare in a particular joint, avoid stretching that joint and instead do gentle range of motion exercises, such as moving the joint slowly.



What is strengthening exercise?

Strengthening exercises are exercises which are designed to increase the strength of specific groups of muscles. These exercise help build muscle strength, improve function and quality of movement, reduce risk of injury, and help muscles be more efficient (i.e., less energy or effort is required to do a particular task)⁵.



Strengthening exercises for building muscle strength, which supports joint stability

Strengthening exercises are a key part of an exercise plan for people living with arthritis. This type of exercise helps build muscle strength to increase, improve, and maintain joint stability. Strengthening exercises also improve bone health, which can be affected by inflammation, inactivity, aging, and any long-term use of steroids. Strength training increases muscle strength by making your muscles work against a weight or force. Different forms of strength training include using free weights, weight machines, resistance bands and your own body weight. Strength training can be adapted to suit individual abilities and needs. By gradually increasing resistance, individuals can improve muscle strength without overexerting their joints. Research published in the journal *Clinical rehabilitation* demonstrated that strength training improved muscle strength, physical function, and overall quality of life in individuals with inflammatory arthritis. It is important to note that proper form and technique should be used to avoid joint strain ⁶.

Examples of strengthening exercises include, but are not limited to:

- Core muscle training
- Lifting weights
- Squats, push-ups, and sit-ups
- Walking up stairs



Exercise tip: Start slow and gradually increase how heavy your weight is or how many repetitions you do. A general guide is to increase repetitions until you can do 10-15, then add resistance but start again at a lower repetition and work your way up. Learn the proper techniques and form. Breathe out as you lift or push, breathe in as you relax, but do not hold your breathe.



Safety tip: Stop a movement if it causes you pain. Do not push your limits until you feel you are able to do so safely.



What are balance and coordination exercises?

Balance is the ability to stay upright or stay in control of body movement, and coordination is the ability to move two or more body parts under control in a smooth and efficient manner⁷. These exercises usually involve repetitions or holding a specific position for a short period of time to build your core strength.



Balance and coordination exercises help improve overall body control and reduce the risk of falls

Balance and coordination exercises are beneficial for people living with arthritis as they improve overall body control and reduce the risk of falls. Tai chi, a low-impact exercise combining gentle movements and deep breathing, has been shown to enhance physical function. Canadian and U.S. researchers found that individuals with rheumatoid arthritis who participated in a tai chi program experienced improvements in balance, strength and mobility compared to those in a control group.

Modified Pilates, which focuses on core strength, core stability, and body awareness, can also improve balance and posture⁸. These exercises help people with arthritis maintain their independence and reduce the risk of injuries related to falls.

Examples of balance and coordination exercises include, but are not limited to:

- Pilates
- Toe-heel raises while holding on to a table or chair for support
- Seated or standing leg raises



Exercise tip: Make sure to wear proper footwear with good grip and that you are within arm's reach of a sturdy object or person that can support you if you lose your balance (wall, railing, dining table, or tree).



Safety tip: Avoid distractions as these exercises require you to stay focused and connected to your body and mind.

Additional Learning Resources

- Arthritis At Home: Exercise Snacks with Dr. Jasmin Ma: <https://bit.ly/ArthritisAtHomeExerciseSnacks>
- Arthritis Research UK: Keep Moving: <https://bit.ly/KeepMovingVersusArthritis>
- Too Fit to Fracture exercise booklet: <https://bit.ly/TooFittoFractureBooklet>
- Arthritis Society recommended exercises: <https://bit.ly/ArthritisSocietyRecommendedExercise>
- GLA:D exercises: <https://gladcanada.ca/glad-exercises/>

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