



Exercise and Arthritis

Physically active individuals are healthier, happier and live longer than those who are inactive and unfit. This is especially true for people with arthritis. Yet, arthritis is one of the most common reasons people give for limiting physical activity and recreational pursuits. Inactivity, in addition to arthritis-related problems, can result in a variety of health risks, including Type II diabetes, cardiovascular disease and [osteoporosis](#).

In addition, decreased pain tolerance, weak muscles, stiff joints and poor balance common to many forms of arthritis can be made worse by inactivity. For many older people with arthritis, joint and muscle changes due to aging can make matters worse. Therefore, for the person with arthritis, the right kind of exercise is very important.

Fast facts

- Physical activity is made up of daily tasks, both occupational and leisure activities that are usually affected by arthritis. Exercise or planned physical activity then becomes that much more important.
- People with arthritis who exercise regularly have less pain, more energy, improved sleep and better day-to-day function.
- Starting off slowly with a few, low-intensity exercises will help to ensure a safe and successful exercise program.

What exercises are helpful and safe?

The three main levels of exercise are 1) therapeutic/rehabilitative; 2) recreational/leisure; and 3) competitive/elite. Finding the right balance is key.

Therapeutic exercises, prescribed by health professionals, address specific joints or body parts affected by the arthritis or arthritis-related surgery. A therapeutic exercise program is often a necessary first step for individuals who have been inactive, have restricted joint motion or muscle strength, are experiencing joint pain or are recovering from surgery such as a joint replacement.

Recreational or leisure activities can range from walking and swimming to cross country skiing and running. Appropriate forms are those that can be done in a controlled and safe manner, have little risk



of injury, and place little stress and loads on affected joints. In most cases, participating in recreational exercise does not do away with the need for therapeutic exercises.

Competitive or elite level activities are performed at higher intensities, for longer durations and require greater skill and training. There are limited reports of people with arthritis continuing or returning to a competitive level of sport participation. However, as a general rule, exercising at this level is not recommended for individuals with inflammatory arthritis or with joint problems that may be adversely affected by the sporting activity (e.g. marathon running with hip or knee arthritis). If you have mild or early arthritis and wish to continue exercising at this level, first talk to your rheumatologist or a physical therapist who has experience in arthritis and knowledge of the specific sport.

Who should exercise?

Everyone! Research shows that people with many forms of arthritis can participate safely in appropriate, regular exercise. Long-term studies have shown that even people with inflammatory arthritis such as [rheumatoid arthritis](#) (RA) can benefit from moderate intensity, weight-bearing activity. Other benefits include less bone loss and small-joint damage associated with RA and no increase in pain or disease activity. For individuals with osteoarthritis (OA) in the knee or elsewhere, research suggests programs that combine strengthening and aerobic exercise, reduce symptoms, improve joint motion and function, enhance coordination and balance, and control body weight. Regular moderate exercise even has been found to improve cartilage health in individuals at risk for developing knee OA. Having weak thigh muscles (quadriceps) is a risk factor for both developing OA in the knee and having greater disability.

What exercises are best?

There are four major types of exercise that make up all exercise programs, regardless of the level of participation. Each can have a positive effect on reducing arthritis-related pain and disability.

Flexibility exercises: Both range-of-motion (ROM) and stretching exercises help to maintain or improve the flexibility in affected joints and surrounding muscles. This contributes to better posture, reduced risk of injuries and improved function.

ROM exercises usually are performed 5-10 times on a daily basis. People with RA may find doing ROM exercises in the evening helps reduce joint stiffness the next morning. It is recommended that stretching exercises be done at least 3 days a week with each stretch being held for about 30 seconds.



Aquatic exercise is a safe form of aerobic exercise.



While ROM exercises are more common in therapeutic programs, stretching activities are important in all levels of exercise. Recreational activities such as yoga incorporate both ROM and stretching movements into their routines.

Strengthening exercises: These more vigorous exercises are designed to work muscles a bit harder. As the muscle becomes stronger, it provides greater joint support and helps reduce loading and stress through the painful joint. Strong muscles, which also contribute to better function, help reduce bone loss related to inactivity, some forms of inflammatory arthritis and the use of certain medications (corticosteroids).

One set of 8-10 exercises for the major muscle groups of the body 2-3 times a week is recommended. Most persons should complete 8-12 repetitions of each exercise. Older individuals may find that 10-15 repetitions with less resistance are more appropriate. The resistance or weight needs to be of sufficient intensity to challenge the muscles without increasing joint pain. Resistance can take the form of lifting a limb against gravity, using hand-held weights or elastic bands, or pushing/pulling against resistance using a weight machine. Even movement against water can provide resistance when done at faster speeds. Gradually increase the amount or form of resistance for ongoing improvements in strength.

Aerobic exercises: Also referred to as cardiorespiratory conditioning, these exercises include activities that use the large muscles of the body in a repetitive and rhythmic manner. Aerobic exercise improves heart, lung and muscle function. For people with arthritis, this type of exercise has benefits for weight control, mood, sleep and general health.

Safe forms of aerobic exercise include walking, aerobic dance, aquatic exercise, bicycling or exercising on equipment such as stationary bikes, treadmills or elliptical trainers. Daily tasks and leisure activities such as mowing the lawn, raking leaves, playing golf or walking the dog also are aerobic if carried out at a moderate intensity level.

Current recommendations for aerobic activity are to do 150 minutes of moderate intensity exercise a week, preferably spread out over several days. You can accumulate this amount of exercise in several 10-minute bouts over the course of the day or week for similar health benefits as sustained exercise sessions. This provides greater options in scheduling aerobic exercise sessions, and allows those individuals with greater pain and fatigue to do shorter sessions within their personal tolerance level. Moderate intensity is the safest and most effective exertion level for aerobic exercise. This means the exerciser can speak normally (Talk Test), doesn't get short of breath or over-heated, and can carry on the activity for a sustained period of time in comfort.

Body awareness exercises: A fourth—and less recognized, though very important—group of exercises is referred to together as body awareness exercises. These include activities to improve posture, balance, joint position sense (proprioception), coordination and relaxation. While some of these improvements can be achieved through the first 3 types of exercise, problems in these areas often require different exercises. Tai chi and yoga are examples of recreational exercises that incorporate elements of body awareness.



When a joint and its surrounding muscles are affected by arthritis, or if a joint has been replaced, the result is often impaired coordination, position awareness, balance and an increased risk of falling. A health professional experienced in arthritis exercise prescription can determine which of these exercises will help improve your overall functioning and reduce the risk of injury.

When to exercise

Finding the right time of day to exercise will help you establish a routine and obtain the greatest benefits. For those with a lot of morning stiffness, gentle ROM exercises may be helpful, but getting to a fitness class may be too difficult. If fatigue is a problem, breaking up the exercise program into several short bouts during the day may be more manageable. Trouble sleeping at night? Avoid doing aerobic exercises within 2 hours of bedtime; however, stretching and relaxation exercises may help with sleep.

It is important to be aware of any changes in your arthritis symptoms such as periods of more joint pain and stiffness. You may need more rest and less exercise during these times.

Where to exercise

The best place to exercise is a personal choice. Some people prefer to exercise in the comfort, convenience and privacy of their own home with an exercise DVD or video such as the Arthritis Foundation's *Take Control with Exercise*. Others enjoy the social aspect of getting out of the house and attending a class or gym in the community. A community-based program offers greater options than exercising at home and, for some people, the support and guidance offered by an instructor or fitness trainer provides the needed motivation to stick with a program.

Aquatic or pool-based exercise is another good option for people with arthritis. The buoyancy effects of water result in less stress on the weight-bearing joints and marked pain relief for many people with arthritis. The Arthritis Foundation's Aquatic Program is a good starting point to learn appropriate exercises in the pool. [Check with your local Arthritis Foundation chapter for arthritis exercise programs in your community.]

How to get started

Starting a regular exercise program can be very challenging. Understanding the benefits of exercise for people with arthritis and having the support and guidance from your rheumatologist will help. Physical and occupational therapists can suggest exercises that are safe and customized to your specific needs, teach you how to monitor your body's response to exercise, and modify your exercise routine as needed.

Make an exercise plan or contract including when, how often and for how long you will exercise. Other tips to help you stay motivated are:



Tai chi and yoga are examples of recreational exercises that incorporate elements of body awareness.



- Set realistic short- and long-term goals, and reward yourself when you have achieved them.
- Exercise with a friend or family member.
- Keep an exercise log or chart your progress on a calendar.
- Identify problems or obstacles that are likely to get in the way of your exercise program, and plan ahead how you will deal with them.
- Choose activities that are convenient, relatively inexpensive and fun!

Discuss your exercise program and any concerns you have with your rheumatologist and/or other arthritis health professionals on a regular basis. With their support and guidance, you will be able to build regular physical activity and exercise into your daily routine and reap the benefits of an active and healthy lifestyle.

Points to remember

- Having several exercise options and locations keeps you from becoming bored and provides alternatives on those days when getting out of the house seems impossible.
- Recent American College of Rheumatology (ACR) [guidelines](#) suggest that exercise should be one of the mainstays of treatment for OA of the hip and knee.

To find a rheumatologist

For a listing of rheumatologists in your area, [click here](#).

Learn more about [rheumatologists](#) and [rheumatology health professionals](#).

For more information

The American College of Rheumatology has compiled this list to give you a starting point for your own additional research. The ACR does not endorse or maintain these Web sites, and is not responsible for any information or claims provided on them. It is always best to talk with your rheumatologist for more information and before making any decisions about your care.

Arthritis Foundation

www.arthritis.org

The Arthritis Society

www.arthritis.ca

National Institute of Arthritis and Musculoskeletal and Skin Diseases

[www.niams.nih.gov/hi/topics/arthritis/arthexfs.htm" target="blank"](http://www.niams.nih.gov/hi/topics/arthritis/arthexfs.htm)

American Academy of Orthopaedic Surgeons

<http://orthoinfo.aaos.org>

American Physical Therapy Association

www.apta.org



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