



## OSTEOARTHRITIS AND EXERCISE

**O**steoarthritis, or degenerative joint disease, is the most common type of arthritis, affecting nearly 20 million Americans. The disease gradually wears away the protective covering of the joint ends (articular cartilage). Once this cartilage wears away, it is not recreated and often progresses to painful bone-on-bone contact.

---

### How is osteoarthritis treated?

The best treatment is early intervention with a well-designed exercise program. For people who suffer with osteoarthritis, moderate intensity exercise has been shown to have a protective effect on the articular cartilage. Through proper exercise, nutrition and activity modification, most people are able to perform daily activities with minimal to no difficulty. The key is an active lifestyle.

### How do I develop an appropriate exercise program?

Every person has different goals for an exercise program. For people with osteoarthritis realistic goals include:

- Reduced pain and inflammation
- Improved flexibility and range of motion
- Enhanced muscular strength
- Improved balance and coordination
- Enhanced muscular and cardiovascular endurance
- Loss of excess weight

If you have not exercised in some time, have cardiovascular problems, a family history of heart disease, or are over 40 years old, consult your physician prior to beginning any exercise program.

To determine the best exercises for your particular degree of osteoarthritis, consult an orthopaedic specialist for tests on bone quality, degree of arthritis, location of arthritis, and the bony/joint alignment.

## OSTEOARTHRITIS AND EXERCISE



### What should an exercise program entail?

There are four components to an exercise program:

1. Warm-up
2. Stretching/flexibility
3. Aerobic
4. Anaerobic

Your exercise program should take 30 to 45 minutes to complete and should be performed three to five times a week.

#### Warm-up

A warm-up helps the body get ready to exercise by elevating the heart rate slowly and increasing body temperature. Some warm-up activities include five minutes of mild intensity walking or riding a stationary bike.

#### Stretching/Flexibility

Flexibility is an essential element to joint health and relative to the individual. Everyone's degree of flexibility varies greatly. Stretching should not be painful and should begin with easy stretches being held for 20 to 30 seconds each. Stretches to include in an exercise program are:

- Standing, reach for toes
- Standing diagonal, reach for toes
- Arm across chest
- Hands over head
- Sitting on floor with knees straight, reach for toes
- Using railing or wall for balance, hold ankle behind buttocks
- Standing with one forefoot up on a small step, gently push heel to the floor

#### Aerobic Exercises

A stationary bicycle may provide the best aerobic exercise for an arthritic patient. It is easy on the joints and maintains flexibility, motion, and strength. Begin with five minutes on the bicycle and gradually increase by one minute or two per week. Other activities to incorporate that won't injure the joints include:

- Water aerobics
- Walking either outside or on a treadmill
- Elliptical trainers

#### Anaerobic Exercises

Strength training is beneficial for the prevention and treatment of osteoarthritis. Light to moderate resistance exercise is best, such as:

- Laying down straight leg raises
- Sidelying hip abduction/adduction
- One-half squat
- Knee flexion
- Calf raises
- Step lunges
- Arm circles
- Abdominal crunches

Do not use heavy weights as they may cause more wear and tear of the joint.



## OSTEOARTHRITIS AND EXERCISE

### What could prevent me from doing my exercise program?

If any of the following occur, reduce or stop the exercise and consult your physician:

- Increased joint pain
- Swelling
- Increased stiffness
- Dizziness
- Light headedness
- Shortness of breath

### Summary

With all exercise programs, start slowly and gradually increase duration and activity intensity. Begin with light exercises and do not over do it in the first couple of weeks. Create a program that you enjoy and want to continue. Integrating your exercise program into your daily routine will help you progress and improve.

### Expert Consultant

Dan Solomon, MD