Exercise and Physical Activity for Older Adults

Staying Active as You Age

From the National Institute on Aging, National Institutes of Health



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Use the Table of Contents to help find things quickly. You will also find terms in bold, such as **physical activity**. Find how to say these words and what they mean in the "Words To Know" section starting on page 28.

What's Inside

Physical activity, which includes **exercise**, is essential for healthy aging — and it's never too late to start. Exercise is a form of physical activity that is planned, structured, repetitive, and performed with the goal of improving health or fitness. Read this booklet to learn about exercise and physical activity as you age.

This booklet will help you learn:

- Benefits of being active
- Types of exercise and physical activity
- Tips to be active safely
- How to make movement a part of your life

Importance of Physical Activity for Older Adults



Physical activity can be beneficial at any stage of life. Staying active can be an opportunity to participate in activities you enjoy, spend time with friends and family, get outdoors, improve fitness, and maintain a healthy weight. Additionally, being physically active as an older adult may improve your health and health-related quality of life. Active older adults also tend to live longer!

Functional Ability and Fall Prevention

Physical activity improves **physical function**, making it easier to perform tasks of daily living, including household chores, getting into or out of a bed or chair, and moving around the house. This increased functional ability can help maintain independence and support independent living for older adults.

Movement and exercise may offer protection against osteoporosis (a bone disease) and age-related loss of muscle mass, strength, and function, also known as sarcopenia. The health and functional ability of bones and muscles is especially important for older adults, who are at higher risk for falls and fall-related injuries. Improved physical function can reduce the risk of falling and likelihood of serious injury if there is a fall.

Disease Risk and Chronic Health Conditions

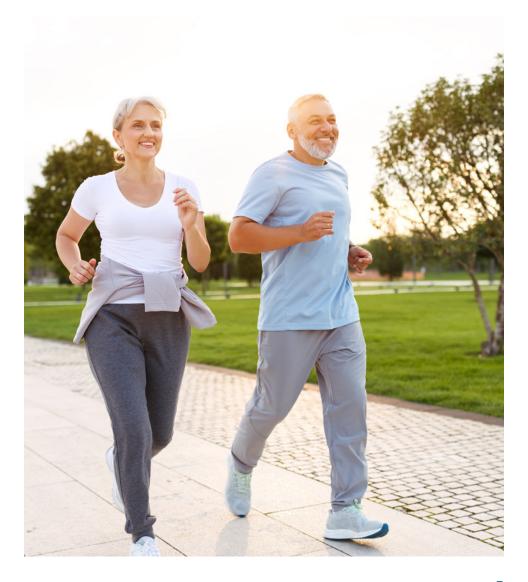
Physical activity can help to prevent certain diseases and chronic health conditions that are common among older adults. Older adults who are physically active have a lower risk of:

- Cardiovascular disease (including heart disease and stroke) and death caused by it
- High blood pressure
- Type 2 diabetes
- High cholesterol
- Obesity
- Cancers of the bladder, breast, colon, endometrium, esophagus, kidney, lung, and stomach
- Dementia (including Alzheimer's disease)
- Depression

Being active can also help to slow or manage chronic disease and to delay death. For older adults who are managing a diagnosis, exercising with chronic conditions can improve quality of life and reduce the risk of developing new health conditions.

Mental and Emotional Health

Physical activity supports emotional and mental health in addition to physical health. Physical activity can help reduce feelings of depression and anxiety, improve sleep, and benefit overall emotional well-being. It may also improve or maintain some aspects of **cognitive function**, such as memory, attention, and ability to shift quickly between tasks. Older adults who exercise with others get the added benefit of social connection as well.



Marie and Carl's Story



Marie joined a water aerobics class at the fitness center near her home. At age 66, she now has more energy than ever and can move more easily with less back pain. For her husband Carl, being able to do the things he enjoys when he retires and having the strength to lift his grandchild motivate him to exercise. He lifts weights twice a week and joins Marie for water aerobics. They also like to go on walks together.

Three Types of Exercise and Physical Activity

Older adults need a mix of physical activities to stay healthy. Research has shown that it's important to get all three types: **aerobic**, **muscle-strengthening**, and **balance**.

Doing one type of exercise can help improve your ability to do the others, and variety can help reduce boredom and risk of injury. There are also activities that incorporate multiple types of exercise, such as **yoga**, dancing, or water aerobics. No matter your age, you can find activities that meet your fitness level and needs and help improve your overall health!



Aerobic Activity

Sometimes referred to as endurance or cardio, aerobic activity involves moving the body's large muscles for extended periods of time. This requires the lungs to move more air and the heart to pump more blood and deliver it to the working muscles. During aerobic activity, you will have an increase in your breathing and heart rate.

Being physically active in this way — with consistency over time — will improve your endurance and the health of your lungs, heart, and circulatory system. It can also help lower the risk of many diseases that are common in older adults, such as diabetes, certain cancers, and heart disease.

Gradually build up to at least 150 minutes of **moderate-intensity aerobic activity** (such as brisk walking) each week. If exercising with chronic conditions makes it hard to get the recommended amount of activity, talk with your doctor about what you can do. In general, it's a good idea to be as physically active as you can — even light-intensity activity can be beneficial. Try to be active throughout your day and avoid sitting for long periods of time.

Examples of moderate-intensity aerobic activities that build endurance include:

- Yard work, such as raking leaves or pushing a lawnmower
- Housework, such as mopping or vacuuming
- Dancing
- Swimming
- Bicycling
- Climbing stairs or hills
- Playing pickleball

To test your level of intensity when you're being active, try talking. If you're breathing hard but can still have a conversation easily, it's likely moderate-intensity activity. If you can only say a few words before you have to take a breath, it's vigorous-intensity activity, such as running or jogging. Building up to 75 minutes of vigorous-intensity activity or doing a combination of both moderate- and vigorous-intensity activity can also count toward your aerobic goal.

Safety Tips for Aerobic Activity

- Listen to your body. Aerobic activities should not cause dizziness, chest pain or pressure, or nausea.
- Do a little light activity, such as easy walking, before and after your aerobic activities to warm up and cool down.
- Be sure to drink water. If your doctor has told you to limit your fluids, be sure to check before increasing the amount of fluid you drink while exercising.
- If you are going to be exercising outdoors, be aware of the weather and your surroundings.
- To prevent injuries, use safety equipment, such as a helmet when bicycling, and proper exercise shoes and clothes.
- Talk with your health care provider if you are unsure about a particular activity.

Muscle-Strengthening Activity

Muscle-strengthening exercises, sometimes called strength training or resistance training, are activities that require the muscles to contract, often to lift a heavy object against the pull of gravity. Gradual increases in the amount of weight, number of sets or repetitions, or the number of days a week of exercise will result in stronger muscles.

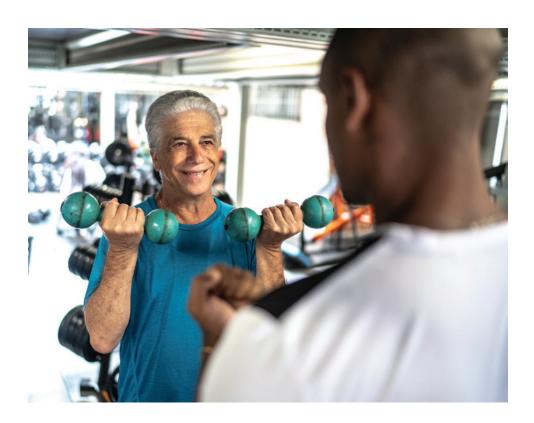
Muscle-strengthening activities improve physical function and can help you stay independent. They also make it easier to perform everyday activities, such as getting up from a chair, climbing stairs, and carrying groceries. This type of exercise is key to maintaining existing strength, slowing the loss of muscle mass, and helping to prevent falls and fall-related injuries.

Try doing muscle-strengthening activities at least two days per week to work the major muscle groups of the body (muscles of the legs, hips, chest, back, abdomen, shoulders, and arms). Avoid working the same muscle group two days in a row to allow for muscle recovery between sessions.

Muscle-strengthening exercises should involve at least a moderate level of intensity or effort and be performed to the point at which it would be difficult to do another repetition. One set of eight to 12 repetitions of each exercise is effective, although two or three sets may be more effective. If you are a beginner, try exercises without weights or resistance bands (stretchy elastic bands that come in varying strengths) until you are comfortable with the movements.

Examples of muscle-strengthening activities include:

- Using resistance bands, weight machines, or hand-held weights
- Lifting your body weight, with exercises such as arm circles, leg raises, pushups, pullups, planks, squats, or lunges
- Carrying heavy items, such as groceries
- Gardening, which may require digging and lifting



Safety Tips for Muscle-Strengthening Activity

- Listen to your body. Overdoing musclestrengthening exercises can cause exhaustion, sore joints, and muscle pain or injury.
- Warm up for muscle-strengthening activity by doing exercises with lighter weight or no weight.
- Don't hold your breath during strength exercises —
 breathe out during the effort and breathe in as you
 relax.
- Avoid "locking" your arm and leg joints in a straight position.
- If you are unsure about doing a particular movement, seek guidance from your health care provider.
- Consider scheduling a session or two with a
 personal trainer or look for a group class at a local
 gym, recreation center, or senior center to learn
 proper form. Free online videos demonstrating
 specific strength exercises can also help.



Balance-Training Activity

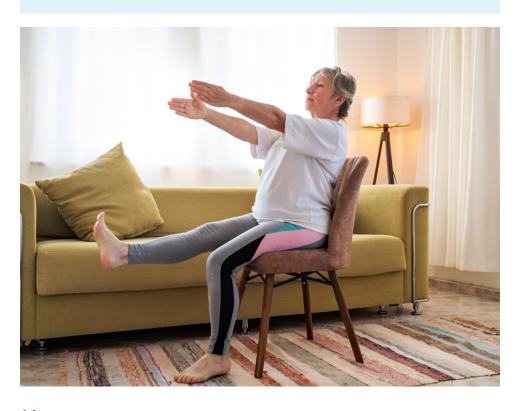
Balance involves maintaining the body's stability while still or in motion. As with muscle-strengthening exercises, balance exercises can help to prevent falls and fall-related injuries. Aim for about three sessions of balance exercises each week.

Examples of balance exercises include:

- Yoga
- Tai chi
- Standing on one foot
- Walking backward or sideways
- Practicing standing from a sitting position
- Using a wobble board

Safety Tips for Balance-Training Activity

- Listen to your body. If you feel unsteady, take action to steady yourself.
- Move slowly and mindfully to prevent falling.
- Have a sturdy chair, person, or wall nearby to hold onto for support.
- Wear comfortable, stable footwear or go barefoot to have grip on the floor or mat.
- If you are unsure about doing a particular movement, seek guidance from your health care provider.





What About Flexibility?

Flexibility is the ability of a joint to move through its full range of motion. Stretching can help maintain and improve flexibility. Moving more freely will also make it easier for you to exercise and perform activities of daily life, such as reaching down to tie your shoes or unloading the dishwasher. Stretch when your muscles are warmed up and after endurance or strength exercises. Remember to breathe, and don't stretch so far that it hurts.

Exercising With Chronic Conditions



Almost anyone, at any age, can do some type of physical activity, even with a chronic condition. In fact, older adults with chronic conditions can benefit from physical activity.

For most people, moderate-intensity activities (such as brisk walking, riding a bike, swimming, weightlifting, and gardening) are safe, especially if you build up slowly. Talk with a doctor about your health condition and create a physical activity plan that works for you. Below, you'll find physical activity guidance for people with certain chronic conditions.

Alzheimer's Disease and Related Dementias

Physical activity reduces the risk of health conditions that can contribute to age-related cognitive decline and may help delay or slow it. In people with Alzheimer's and related dementias, physical activity may improve some aspects of mental processing. It can also help them feel better, maintain a healthy weight, and have regular toilet and sleep habits.

Older adults with mild cognitive impairment might be able to exercise the same way as someone without cognitive impairment, whereas people with dementia may need assistance from a caregiver. If you are a caregiver, try exercising together and adapting activities to make being active easier and more enjoyable. Be realistic about how much activity can be done at one time — several short "mini workouts" may be better than one long session.

Talk with a doctor about what they would recommend for your situation.

Arthritis

Older adults with arthritis, the most common form being osteoarthritis, who are regularly physically active benefit from decreased pain and improved physical function and quality of life. Both aerobic and muscle-strengthening activities contribute to these benefits.

Try doing low-impact activities, such as swimming, walking, and tai chi, which put less stress on your joints. When done safely, being physically active with arthritis shouldn't make the disease or pain worse. Speak with a health care provider about what exercises may work for you.

Chronic Pain

Most people living with chronic pain can exercise safely. Physical activity can also help with pain management, whereas being inactive can lead to a cycle of more pain and loss of function.

It's important to remember to listen to your body when exercising and participating in physical activities. Avoid overexercising on "good days." If you have pain, swelling, or inflammation in a specific area, you may need to focus on another area or rest for a day or two. Talk with a doctor about what exercises and activities might be right for you.

Chronic Obstructive Pulmonary Disease (COPD)

If you have COPD, talk with your health care provider or a pulmonary therapist to find out what they recommend. You may be able to learn some exercises to help your arms and legs get stronger and breathing exercises that can help strengthen the muscles needed for breathing.

Pulmonary rehabilitation is a program that helps you learn to exercise and manage your disease with physical activity and counseling. It can help you stay active and carry out your day-to-day tasks.

High Blood Pressure

Physical activity can help older adults with high blood pressure reduce or manage their blood pressure and lower the risk of blood pressure continuing to rise. It also helps protect against cardiovascular diseases, including heart disease and stroke.

In people with high blood pressure, doing moderateintensity activity often can help to lower the risk of heart disease. More activity can lead to an even greater benefit. Both aerobic and muscle-strengthening activities are beneficial.

Work with your health care provider as you increase physical activity. Adjustments to blood pressure medication may be needed.

Obesity

If you are overweight or have obesity, don't let that stop you from being physically active. Anything that gets you moving — even if it's for only a few minutes a day in the beginning — is a healthy start. Slowly work up to more. If you have difficulty bending or moving easily, or feel self-conscious, try different activities, such as walking, water exercises, dancing, or weightlifting, to see what works best for you.

Osteoporosis

If you have osteoporosis, talk with your health care provider about physical activity that is safe for you and good for your bone health. A combination of exercise types can help build and maintain healthy bones and prevent falls and fractures. Weight-bearing exercises, such as walking, climbing stairs, or dancing, produce a force on bones that makes them work harder. Including muscle-strengthening and balance exercises is beneficial, too.

Type 2 Diabetes

Physical activity can help older adults manage type 2 diabetes and stay healthy longer. It improves blood glucose levels, can prevent or slow risk factors that contribute to the disease getting worse, and helps protect against the leading cause of death in people with type 2 diabetes — cardiovascular diseases such as heart disease and stroke.

Aim for at least 150 minutes a week of moderate-intensity aerobic activity, plus two days a week of muscle-strengthening activity. Set a goal to be active most days of the week and create a plan that fits into your life. Your health care team can help.

People exercising with diabetes must be especially careful about monitoring their blood glucose, choosing appropriate footwear, and avoiding injury to their feet.



Sidney's Story



About five years ago, Sidney had triple bypass surgery. He didn't exercise much before his surgery, but knew he needed to be more active to stay healthy. He was worried about pushing himself. He started slowly and gradually built up to longer walks outside and on the treadmill at his gym. When his friends mentioned pickleball, he decided to join their league. Being active makes him feel better, and it's good for his heart.

Tips for an Active Lifestyle

Even small amounts of activity throughout the day count toward the 150 minutes of moderate-intensity aerobic activity and two days of muscle-strengthening activities recommended each week for older adults.

Starting and maintaining a change in your routine can be hard. Fortunately, there are strategies to help you increase your physical activity levels. Use these tips to help you get active and stay active.



Take It Slow

It's important to increase your amount of physical activity gradually over a period of weeks to months. To reduce the risk of injury, start with lower-intensity activities that are appropriate for your current fitness level. Then increase the frequency, intensity, and duration of activities over time. Working your way up slowly and steadily can also help to build confidence, motivation, and a regular routine. When there is a break in your routine, perhaps due to illness or travel, work back up gradually.

Older adults who do not have an existing injury or chronic condition, and who plan to gradually increase their amounts of physical activity, generally do not need to talk with a doctor before becoming physically active.

Set Goals and Monitor Progress

Setting goals for your physical activity can encourage you to achieve increased physical activity levels, starting from your current level. Goals are most useful when they are specific and realistic. This type of goal setting can help update a general goal, such as to increase physical activity, into a measurable and actionable goal, such as to go for a 10-minute walk three times per week. Be sure to review your goals regularly as you make progress.

To help meet your goals, you can track and record your physical activity. Doing so daily can provide valuable information about progress toward achieving weekly physical activity goals. You can use a device (for example, a step counter) or keep a written log. Some people choose

to share their activity with a friend, doctor, or exercise professional for further accountability and feedback. Remember to also celebrate successes!

Identify and Overcome Barriers

The first step to help overcome obstacles preventing physical activity is to identify potential barriers for you. Problemsolving, maybe with advice from a doctor or exercise professional, can help address the identified barriers with specific solutions. It's also important to reassess barriers over time, as situations change.

The chart on the next page lists some possible barriers, along with examples of solutions. Apply the same sort of problem-solving to other barriers that might reduce your level of activity.



Barrier	Solution
Bad weather or poor air quality	 Find opportunities to walk indoors at a mall, grocery store, or bigbox store. Look for physical activity programs you can access through technology at home, such as doing an online group fitness class through SilverSneakers or the YMCA.
Cost and expensive equipment	 Try free online videos. Use items you already have at home (such as books or detergent jugs for muscle-strengthening activity). Find ways to add physical activity to your day without special equipment. For example, do household chores, garden, dance, or play with your grandchildren.
Too tired or low energy	Plan activity for parts of the day you feel most energetic. Many older adults feel less fatigue during and after physical activity.
Lack of motivation, enjoyment, or confidence	 Consider working with a personal trainer either individually or in a small group to learn proper form and engage in physical activity with personalized guidance. Try finding social support and accountability by working out with a buddy or joining a virtual community.

Build Social Support

Group-based physical activity, such as exercise classes, walking groups, or "exercise buddy systems," not only gets you moving, but also provides opportunities for social engagement, friendship, and emotional support. Social support from friends and family can increase motivation and be a key part of success for older adults working toward increasing their activity levels. Encouragement and social interaction work well with physical activity!

Engage in a Variety of Activities

Activity can be done through exercise, chores, errands, walking or biking for transportation, or leisure-time physical activity. Consider trying both indoor and outdoor activities. Finding multiple ways to build enjoyable activity into your life and participating in activities you enjoy as you age can offer opportunities to increase physical activity.



Points To Remember

- Deciding to be physically active at any age is a positive choice for your well-being and has many important health benefits.
- Older adults benefit from including a combination of aerobic, muscle-strengthening, and balance activities.
- Many activities, from exercise programs to household tasks, can count toward the recommended 150 minutes of moderate-intensity aerobic activity and two days of muscle-strengthening activities each week.
- Talk with a doctor about exercising with chronic conditions and how existing health issues may affect your ability to do regular physical activity. Be as physically active as your abilities and health allow.
- Making physical activity a habit can help promote a healthy lifestyle that lasts.

Words To Know

Aerobic physical activity

(ayr-OH-bik FIH-zih-kul ak-TIH-vih-tee)
Moving the body's large muscles for extended periods of time, requiring the lungs to move more air and the heart to pump more blood and deliver it to the working muscles. Sometimes called endurance or cardio.

Balance

(BAL-uhns)

Maintaining the body's stability while still or in motion.

Cognitive function

(KOG-nih-tiv FUNK-shuhn)

The performance of mental processes, such as memory, language, and problem-solving, that helps you think, learn, and remember.

Exercise

(EK-suhr-sighz)

A form of physical activity that is planned, structured, repetitive, and performed with the goal of improving health or fitness.

Flexibility

(fleck-suh-BIL-uh-dee)

The ability of a joint to move through the full range of motion.

Moderate-intensity aerobic activity

(MAH-duh-ruht-in-TEN-sih-tee ayr-OH-bik ak-TIH-vih-tee)

The level of activity in which, generally, you're breathing hard but can still have a conversation easily. Activities such as brisk walking, riding a bike, swimming, weightlifting, and gardening.

Muscle-strengthening physical activity

(MUH-sul-STRENKTH-uh-ning FIH-zih-kul ak-TIH-vih-tee)

Activity that requires the muscles to contract, often to lift a heavy object against the pull of gravity. Sometimes called strength training or resistance training.

Physical activity

(FIH-zih-kul ak-TIH-vih-tee)

Any bodily movement produced by skeletal muscles that requires energy.

Physical function

(FIH-zih-kul FUNK-shuhn)

The ability to perform day-to-day activities that require physical effort, such as climbing stairs or grocery shopping. Sometimes called functional ability.

Tai chi

(ty chee)

A "moving meditation" that involves shifting the body slowly, gently, and precisely, while breathing deeply.

Yoga

(YOH-guh)

A mind and body practice that typically combines physical postures, breathing exercises, and relaxation.

For More Information

MedlinePlus

National Library of Medicine www.medlineplus.gov

Centers for Disease Control and Prevention (CDC)

800-232-4636 cdcinfo@cdc.gov www.cdc.gov

Office of Disease Prevention and Health Promotion (ODPHP)

240-453-8280 odphpinfo@hhs.gov odphp.health.gov

National Council on Aging

571-527-3900 **www.ncoa.org**

SilverSneakers

866-584-7389 www.silversneakers.com

YMCA

800-872-9622 www.ymca.org

To Learn More About Health and Aging

National Institute on Aging Information Center 800-222-2225 niaic@nia.nih.gov www.nia.nih.gov

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