



Physical Activity for Older Adults: Tips for getting started and staying active

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If exercise could be packed in a pill, it would be the single most widely prescribed and beneficial medicine in the nation.”

Robert N. Butler, M.D., Founding Director, National Institute on Aging, Founder the International Longevity Center

Regular physical activity is essential for healthy aging, and most adults aged 65 years and older can safely participate in regular physical activity [1]. Although physical activity will not stop the aging process, it can provide many positive benefits. This article reviews the benefits of physical activity in older adults and provides updated physical activity recommendations and tips for how to start and stay active for life.

Health Benefits of Physical Activity for Older Adults

Increase Your Chances of Living Longer

Strong evidence demonstrates that older adults who participate in a regular physical activity program reduce their risks of death from heart disease, which is the leading cause of death in the United States, and stroke. Regular physical activity can also lower the risk of developing some types of cancer..

Reduce Risk of Type 2 Diabetes and Metabolic Syndrome

Regular physical activity can reduce the risk of developing type 2 diabetes and metabolic syndrome. Metabolic syndrome is a combination of unfavorable health conditions, including excess fat around the waist, high blood pressure, abnormal cholesterol

levels, and high blood sugar. Having just one of these conditions does not mean you have metabolic syndrome, but it increases the risk of disease. If two or more of these conditions are present, the risk of developing type 2 diabetes increases. If you already have type 2 diabetes, regular physical activity can help control blood glucose levels. Both diet and physical activity play critical roles in controlling body weight [2].

Enhance Quality of Life

Regular physical activity has been shown to promote independent living, helping older adults maintain abilities such as climbing stairs and grocery shopping, and delaying disability. Physical activity keeps your bones, joints and muscles strong and healthy. The leading cause of disability for older adults is falling, which often leads to death, sedentary behavior, impaired function and lower quality of life among older adults [3]. Some studies show that being physically active, at a healthy weight, and not smoking, can delay disability for about 8 years compared to older adults with higher-risk lifestyle factors [4]. Physical activity programs aimed at fall prevention that consist of balance, strength/resistance, flexibility, and endurance training have been shown to reduce the risk of falls and moderate to severe functional limitations in older adults [5].

Promote Social Interaction

Daily physical activity and health promotion can provide social support and companionship among family, friends, and community members. The formation of a social support group created by attending physical activity programs or exercise classes not only provides motivation to be physically active, but also a network of friends. For older adults, the benefits of participating in physical activity programs go beyond physical improvement: they also develop a sense of belonging among participants in a community. Physical activity reduces feelings of sadness or depression while fostering positive attitudes and helping older adults retain or gain self-confidence [6].



Figure 1: Walking with Friends

Improve Brain Health

In addition to the health and social benefits, regular physical activity may improve memory and cognitive function among older adults. According to Prevention and Risk of Alzheimer's and Dementia (http://www.alz.org/research/science/alzheimers_prevention_and_risk.asp), regular physical activity may lower the risk of developing Alzheimer's and some other types of dementia. Physical activity may directly benefit brain cells by increasing blood and oxygen flow to the brain. Also, physical activity can significantly reduce the risk of heart disease and diabetes, which are risk factors for developing Alzheimer's and other forms of dementia

Physical Activity Guidelines for Older Adults

The Physical Activity Guidelines for Americans recommend that older adults, including those at risk for falls, incorporate three main types of activities: aerobic activities, muscle-strengthening activities, and balance training [7]. Guidance for doing each type of activity is provided in the following section – how intense, how many days a week, for how long, etc.

Aerobic activity, which is also called endurance or cardiac activity, uses the body's large muscle groups in a rhythmic manner. Examples of aerobic activity include walking, jogging, cycling, dancing, swimming, and tennis.

How intense? Older adults can meet the guideline by performing moderate-intensity or vigorous-intensity activities,

or a combination of both. Moderate-intensity activity produces noticeable increases in breathing and heart rates, while vigorous-intensity activity produces large increases in breathing and heart rates. The intensity of activity should depend upon the person's level of fitness.

The "Talk Test" can be used for measuring a workout's intensity. In general, if you are able to talk comfortably while performing an activity, you are in the lower range of intensity. If you are able to talk, but not sing, you are doing moderate-intensity activity. If you are not able to say more than a few words without pausing for a breath, you are doing vigorous-intensity activity. For the talk test to be effective, you must speak loudly [8].

How many days a week and for how long? Aerobic physical activity should be performed at least 3 days a week to help reduce the risk of injury and avoid excessive fatigue. The duration depends on your initial fitness level and what you can comfortably achieve. At first, try to do aerobic activity for up to 10 minutes at a time, but the exact duration should depend on how it feels to you. Avoid too much strain, and slowly and progressively work your way up to doing more and more at a time. These activities can be divided throughout the day or week (example: brisk 10-minute walks twice a day, every day of the week).

How much total activity a week? The general recommendation for older adults is to accumulate 150 minutes (2 hours and 30 minutes) of moderate aerobic activity **per week**. Additional minutes of activity may provide additional health benefits to older adults, as long as it is not excessive.

Muscle-strengthening activity is considered the most important component of health-related physical activity for older adults, as it counteracts the loss of muscle mass that accompanies aging. Examples of muscle-strengthening activities include resistance exercises (lifting weights, using resistance bands, and body weight exercises, such as pushups and sit-ups), climbing stairs, carrying heavy loads, and heavy gardening, which can include activities such as pushing a wheelbarrow, lifting bags of mulch, and shoveling.

The general recommendation for muscle-strengthening activity includes training each of the six major muscle groups (legs, abdominals, back, chest, shoulders, and arms) at least twice a week at moderate intensity. When resistance training is used for strengthening muscle, the selected resistance/weight (intensity) should permit the completion of 8-12 repetitions for 1 to 3 sets.

There is no specific amount of time recommended for the duration of muscle-strengthening activity, but exercise should be performed to the point at which it would be difficult to do another repetition without stopping. When exercise becomes easier, the number of repetitions and/or amount of weight can be increased. As an individual progresses, the intensity can continue to be increased to facilitate improvement in muscular strength and endurance [9].

Balance activity can make it easier to walk on uneven surfaces and help prevent falls. Examples of balance exercises are backward walking, sideways walking, walking on heels or toes, standing on one leg while waiting in line, and standing from

a sitting position. The guidelines recommend older adults do balance training three or more days a week and do standardized exercise from a program demonstrated to reduce falls, such as tai chi.

Flexibility activity (stretching) does not have a recommended guideline. However, it should be an important part of everyday activities. Flexibility exercises should be performed with every aerobic and strength workout with each stretch held for 10 to 30 seconds to the point of tension but not pain. This not only improves flexibility and fitness, but can also help prevent muscle injuries during aerobic and strength exercises.



Figure 2: Stretching

Tips for getting started:

- Prior to beginning any exercise program, older adults should check with their physician to make sure it is safe to start.
- Remember to start slowly and increase gradually to prevent injury and have better training outcomes. Try spacing workouts into 10-15 minute sessions twice a day.
- Inactive older adults can start out with episodes of activity of less than 10 minutes.
- Make sure you stretch slowly and take time to warm up and cool down while exercising.
- If you have a dog, take it for a walk at least twice daily.
- Make short-term goals to increase your level of physical activity, such as “attend new activity class over the next week or two.”
- Stay hydrated by drinking water every 10-15 minutes.
- No matter which physical activities you choose to do, remember to have fun with it!

Key Guidelines for Older Adults [7]

The following Guidelines are the same for adults and older adults:

- All older adults should avoid inactivity. Some physical activity is better than none, and older adults who participate in any amount of physical activity gain some health benefits.
- For substantial health benefits, older adults should do at least 150 minutes (2 hours and 30 minutes) a week of moderate-intensity, or 75 minutes (1 hour and 15 minutes) a week of vigorous-intensity aerobic physical activity, on an equivalent combination of moderate- and vigorous-intensity aerobic activity. Aerobic activity should be performed in episodes of at least 10 minutes, and preferably, it should be spread throughout the week.
- For additional and more extensive health benefits, older adults should increase their aerobic physical activity to 300 minutes (5 hours) a week of moderate-intensity, or 150 minutes a week of vigorous-intensity aerobic physical activity, or an equivalent combination of moderate- and vigorous-intensity activity. Additional health benefits are gained by engaging in physical activity beyond this amount.
- Older adults should also do muscle-strengthening activities that are moderate or high intensity and involve all major muscle groups on 2 or more days a week, as these activities provide additional health benefits.

The following Guidelines are just for older adults:

- When older adults cannot do 150 minutes of moderate-intensity aerobic activity a week because of chronic conditions, they should be as physically active as their abilities and conditions allow.
- Older adults should do exercises that maintain or improve balance if they are at risk of falling.
- Older adults should determine their level of effort for physical activity relative to their level of fitness.
- Older adults with chronic conditions should understand whether and how their conditions affect their ability to do regular physical activity safely.

Tips for staying active for life:

- Commit to your exercise schedule until it becomes your daily routine.
- Choose activities that you enjoy and think of how you can incorporate them into a physical activities routine (e.g., talking to your friends while walking, moving while listening to music, or window shopping while walking).
- Add more physical activity to your daily life (e.g., choose stairs over the elevator, lifting weights while watching TV, perform balance training while standing in lines).
- Keep a log and celebrate your successes. Write down your physical activities in a diary and reward yourself for accomplishments.
- Find new friends in exercise classes or take classes with a buddy or spouse.

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