Physical Activity Guidelines Midcourse Report: Implementation Strategies for Older Adults

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Executive Summary

The benefits of regular physical activity occur throughout life and are essential for healthy aging. Despite this, most older adults (more than 85 percent) are not meeting the recommendations set forth in the Physical Activity Guidelines for Americans (Guidelines), 2nd edition, and physical activity levels often decrease with age. The Physical Activity Guidelines Midcourse Report: Implementation Strategies for Older Adults (Midcourse Report) is an opportunity to reinforce the amounts and types of physical activity Americans need as outlined in the Guidelines and to highlight what works to increase physical activity.

Older adults were selected due to low rates of physical activity, the expanding population of older adults, and the many benefits, both immediate and over time, of physical activity for older adults.

Most older adults face multiple barriers to physical activity. These barriers often relate to older adults’ capabilities, opportunities, or motivation.

- Capability-related barriers include individual attributes such as chronic health conditions, physical or cognitive limitations, and pain.
- Opportunity-related barriers include external factors such as limited access to facilities or equipment, neighborhood characteristics like low-quality sidewalks or poor lighting, and natural limitations like bad weather.
- Motivation-related barriers include personal attitudes and beliefs, such as fear of falling or injury or lack of enjoyment.

Understanding the different barriers older adults face is key to delivering effective and equitable interventions.

The primary audiences for this Midcourse Report are policy makers; physical activity, health, or allied health professionals; health care providers; gerontologists; and others working with older adults. This Midcourse Report summarizes evidence-based settings, strategies, and interventions that these audiences can use to increase physical activity among older adults and reinforce the message that physical activity can begin or restart at any age.

Key Findings

The home, community, and health institution are evidence-based settings where there are opportunities to increase physical activity among older adults through a variety of strategies and interventions.
Additionally, the evidence-based strategies and interventions listed below can be implemented in settings beyond those identified in this report, including wherever older adults spend their time.

What works to increase physical activity among older adults?

- **Community Design**
  - Communities that are designed to make it safe and easy for older adults to walk, bike, or wheelchair roll for recreation, fitness, or transportation

- **Cognitive Behavioral Strategies**
  - Goal setting
  - Self-monitoring
  - Barrier identification and problem solving
  - Increased physical activity knowledge or awareness
  - Social support

- **Physical Activity Counseling**
  - Tailored physical activity advice and guidance (often using the above cognitive behavioral strategies)

- **Exercise Programs**
  - Group-based exercise classes
  - Exercise programs with in-person and at-home components
  - Supervised at-home exercise programs
  - Tailored exercise prescriptions
  - Programs that incorporate multicomponent physical activity, incorporating more than one activity type (aerobic, muscle-strengthen, balance)

- **Lifestyle-Based Physical Activity Programs**
  - Guidance to help older adults self-manage their own physical activity behavior changes
  - Support to empower older adults to find opportunities to increase their physical activity in the way that fits best with their lifestyle

**Taking Action: Everyone Has a Role to Play**

Everyone has a role to play to help increase physical activity levels among older adults. The key findings highlighted in this report can be used across sectors and at the national, regional, local, and on individual levels to help ensure equitable access to physical activity opportunities for all older adults.
Professionals working with older adults in one-on-one settings or small group settings (e.g., physical activity, health, or allied health professionals; health care providers; gerontologists) are in a key position to support older adults in increasing activity levels. Professionals should consider individual factors such as their patient’s or client’s age, gender and health status, self-efficacy, health beliefs about physical activity, perceived barriers to physical activity, skills, social support, and cultural factors to best tailor physical activity recommendations. Professionals working with older adults can:

• Promote the Physical Activity Guidelines for older adults through Move Your Way® resources
• Provide guidance and recommendations to help older adults get more physical activity
• Help older adults transition from programs or care within the health care setting to community programs by providing referrals to physical activity and health professionals or programs and resources that fit their needs
• Support older adults to set physical activity goals, monitor their progress, use problem-solving to overcome barriers to physical activity, and build social support

Organizations (e.g., program administrators and staff affiliated with community, senior, or Tribal centers; health and fitness centers; cardiac rehabilitation facilities; hospital lifestyle and wellness centers; parks and recreation departments) are uniquely positioned to create conditions for older adults to participate in physical activity through programming and interactions at various facilities and locations. Organizations can:

• Provide physical activity programs that reduce barriers (e.g., cost, transportation) to participation for older adults
• Regularly assess program reach, and work to increase numbers and reduce attrition
• Review, plan, and implement programs with an equity lens to ensure programs are inclusive and welcoming to older adults of all backgrounds and abilities
• Give support and guidance for creating home-based physical activity programs

Community Leaders (e.g., community health workers, civic associations, housing authorities, and those involved in public works, urban planning, and transportation) influence the design and atmosphere of public spaces that can be used for physical activity. This includes the built environment (e.g., places designed or built by people like buildings, community design, transportation infrastructure, parks and trails). Community leaders can:
• Make communities more walkable and wheelchair accessible by supporting policies and engaging in master planning to create or enhance enjoyable activities and friendly routes to everyday destinations
• Create or enhance public transportation opportunities that are accessible to older adults with mobility limitations
• Consider both subjective (e.g., perceptions of safety from traffic or crime) and objective (e.g., street intersections per square mile) measures when making improvements to the built environment
• Collaborate with academic institutions or public health organizations to evaluate community design and land use interventions
• Encourage community engagement by including input from community members in planning activities. Input can be gathered, for example, by needs assessments that identify safety concerns and other physical activity needs and preferences in communities
• Utilize resources from Active People, Healthy NationSM to create more active communities

Policy Makers and Decision Makers (e.g., local and state government officials; public facility management, including schools, parks; health system administrators; health insurance companies) are responsible for creating laws, rules, regulations, codes, and funding at various levels of the government; corporate policies; and institutional rules and policies. These can all be used to support and promote more physical activity for older people. Policy makers and decision makers can:

• Consider physical activity and the specific needs or circumstances of older people when designing communities and developing policies, such as zoning and land-use ordinances and subdivision guidelines, comprehensive (or master) plans, transportation and transit policies, roadway design and Complete Streets policies, Safe Routes for All, shared use agreements, Vision Zero, and recreation and open space plans and policies
• Incorporate assessment of physical activity into health care provider visits through electronic health records (i.e., Physical Activity as a Vital Sign)
• Increase coverage for physical activity counseling at health care provider visits and referrals for community services
• Use national surveillance data to identify underserved populations and disparities among older adults who may need more support to be physically active and track population-level physical activity data through Healthy People physical activity objectives
Introduction

Physical activity has many health benefits. It can have immediate benefits, including reduced anxiety, improved sleep, lower blood pressure, and better insulin sensitivity. Regular physical activity can also reduce the risk of all-cause mortality, cardiovascular disease, type 2 diabetes, several types of cancer, dementia, and depression.

Through the Physical Activity Guidelines for Americans, its associated Move Your Way® communications campaign, and the Active People, Healthy Nation℠ initiative, the U.S. Department of Health and Human Services (HHS) is working to create a culture of health promotion where all Americans can live active, healthy lives. The Physical Activity Guidelines for Americans (which is referred to throughout this report as the Guidelines) emphasizes why and what dose of physical activity is needed for health benefits and briefly touches on the how or where to perform physical activity. This Midcourse Report is an opportunity to reinforce the amounts and types of physical activity Americans need as outlined in the Guidelines, by highlighting the settings, strategies, and interventions that support increases in physical activity for specific populations. HHS releases a Midcourse Report every 10 years between Guidelines updates. In 2013, HHS highlighted youth in the Physical Activity Guidelines Midcourse Report: Strategies to Increase Physical Activity Among Youth.

Older adults were selected for this Midcourse Report due to low rates of physical activity, the expanding population of older adults, and the many benefits of physical activity, both immediate and over time. Promoting physical activity and reducing sedentary behavior for older adults is especially important because this population is the least physically active of any age group, and most older adults spend a significant proportion of their day engaging in sedentary behaviors. By the year 2030, one in every five Americans will be at retirement age, and currently, less than 15 percent of older adults meet the aerobic and muscle-strengthening recommendations of the Guidelines. Older adults are more likely to have chronic diseases and mobility challenges requiring medical care and higher health care costs. Physical activity may allow older adults to live longer independently, be healthier, improve their quality of life, and reduce their need for medical care. It can also help older individuals maintain or improve their health and manage or prevent progression of chronic conditions. As the older adult population is rapidly growing and more people are living longer, physical activity can also be an important contributing factor for improving population health and reducing health care costs.
The Cost of Inactivity.

Older adults have the lowest rates of meeting the Guidelines of any age group and they also have the highest health care costs of any age group.

- **Worldwide:**
  - The World Health Organization predicts that physical inactivity will be responsible for $27 billion of direct health care costs annually (not factoring in productivity losses) between 2020 and 2030.¹

- **United States:**
  - Per person personal health care spending for adults ages 65 and older was $19,098 in 2014, over five times higher than spending per child ($3,749) and almost three times the spending per working-age person ($7,153).²
  - Four out of five of the costliest chronic conditions among adults ages 50 or older can be prevented or managed with regular physical activity.³
  - Approximately 10% of deaths among adults ages 40-69 and 7.8% of deaths among adults ages 70 and older are attributed to physical inactivity.⁴

**References**


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makes it easier to perform activities of daily living, including eating, bathing, toileting, dressing, getting into or out of a bed or chair, and moving around the house or neighborhood. Older adults are at higher risk for falls and injuries following falls. However, physically active older adults are less likely to experience falls than their sedentary counterparts, and if they do fall, they are less likely to be seriously injured. Physical activity can also preserve physical function and mobility, which may help maintain independence and delay the onset of major disability. Additionally, over 85 percent of older adults have one or more chronic conditions, such as type 2 diabetes, cardiovascular disease, osteoarthritis, obesity, or certain types of cancer, and older adults are also at higher risk for dementias including Alzheimer’s Disease. Physical activity interventions for older adults have been shown to help to prevent these diseases or their progression.

Older adults are a varied group with a wide range of functional capabilities and health conditions. All adults experience a loss of physical function with age, but some more than others. This diversity means that some older adults can run several miles, while others struggle to walk a few blocks or take stairs in their homes. Even small amounts of physical activity can improve physical function and health for people with limited functional capabilities.

This report summarizes evidence-based settings, strategies, and interventions that policy makers; physical activity, health, or allied health professionals; health care providers; gerontologists; and others working with older adults can use to support increased physical activity among older adults and reinforce the message that physical activity can begin or restart at any age.

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**Defining Older Adults for This Report**

**Older adults** are those ages 65 and older. This age range is consistent with the definition of older adults in the *Physical Activity Guidelines for Americans* and used for Healthy People objectives. In the United States, ages 65 and older is used as the threshold for Medicare.

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**Developing the Midcourse Report**

The first step in developing the *Midcourse Report* was conducting a systematic literature review to identify what works to increase physical activity among older adults. This literature review was conducted by ICF Next under HHS Contract No. 75N91021A00002, Task Order - 75N91021F00001, in
collaboration with the 2022 Science Board subcommittee of the President’s Council on Sports, Fitness and Nutrition (President’s Council). The Physical Activity and Older Adults Systematic Literature Review will be presented for deliberation at a public meeting of the President’s Council.

HHS based the Midcourse Report primarily on this literature review, though they also considered examples of successful interventions featured in Step It Up! The Surgeon General’s Call to Action to Promote Walking and Walkable Communities and the evidence-based interventions in The Guide to Community Preventive Services (referred to in this report as The Community Guide). Like the Guidelines, the Midcourse Report will be widely promoted through various communications strategies online and in print, such as the Move Your Way® campaign materials for professionals and consumers; the Active People, Healthy Nation℠ initiative; and partnerships with organizations that promote physical activity.

Several limitations of the Physical Activity and Older Adults Systematic Literature Review are worth noting as they influenced the effective settings, strategies, and interventions included in this Midcourse Report. The literature review sought to examine the effectiveness of a variety of locations in which to support increased physical activity among older adults, including communities, assisted living facilities, faith-based settings, health care institutions, and homes/independent living facilities/neighborhoods. Community, home, and health care institutions emerged as key settings.

While the literature review looked at original research articles rather than systematic reviews or meta-analyses, most included studies did not measure or analyze findings based on important demographics. Therefore, this Midcourse Report was unable to discuss how personal characteristics (i.e., ability, age, sex, race/ethnicity, socioeconomic status, health characteristics) influence physical activity participation.

Because of the importance of mental health and social connection, especially for older adults who may live alone, efforts were made to examine these factors in the context of an intervention. Unfortunately, most published studies of interventions for physical activity in older adults did not include mental health, quality of life, well-being, or resilience as outcomes.

Lastly, few studies that examine interventions to increase physical activity among older adults assessed long-term outcomes or how to reduce drop-out rates, so sustained or population-level effects remain uncertain.

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About the Community Preventive Services Task Force
The Community Preventive Services Task Force (CPSTF) issues evidence-based recommendations and findings for prevention strategies, services, and programs, including many aimed at increasing physical activity. These findings are listed in *The Guide to Community Preventive Services (The Community Guide).* The Community Guide uses a science-based approach that relies on systematic literature review methodology to determine whether an intervention works to improve health and prevent disease. CPSTF has issued several recommendations for intervention approaches shown to increase physical activity among older adults, and these are included in this report.


The primary audiences for the *Midcourse Report* are policy makers; physical activity, health, or allied health professionals; health care providers; gerontologists; and others working with older adults. The evidence presented in the *Guidelines* shows that there are immediate and long-term benefits of physical activity for all Americans, including older adults, and that it’s never too late to start being active. The purpose of this *Midcourse Report* is to highlight evidence-based strategies and interventions to support physical activity among older adults in a variety of settings so that they may achieve the benefits of physical activity as outlined in the *Guidelines.*

**Everyone has a Role to Play to Support Older Adults to be Physically Active**

Many people across different sectors have a role to play to support older adults getting more physical activity. The actions and opportunities listed below can be applied across sectors, including those working in health care; government; nonprofit; parks, recreation, and green space; public health; sports and fitness; or transportation. Throughout this report, there are examples that represent different sectors and illustrate how the settings, strategies, and interventions outlined in this report can be utilized to support increased physical activity among older adults. Additional federally supported programs are listed in the Appendix.

**Professionals working with older adults in one-on-one settings or small group settings** (e.g., physical activity, health, or allied health professionals; health care providers; gerontologists) are in a key position to support older adults in increasing their activity. Professionals should consider individual factors such as their patient’s or client’s age, gender and health status, self-efficacy, health beliefs about physical
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Meeting the Physical Activity Guidelines

The Physical Activity Guidelines for Americans, 2nd edition, provides key guidelines for all age groups, including older adults. Older adults should follow the key guidelines for adults, but there are also additional guidelines specific to older adults. Older adults should include a combination of aerobic, muscle-strengthening, and balance activities in their weekly routine (Figure 1).

Key Guidelines for Adults

- Adults should move more and sit less throughout the day. Some physical activity is better than none. Adults who sit less and do any amount of moderate-to-vigorous physical activity gain some health benefits.
- For substantial health benefits, adults should do at least 150 minutes (2 hours and 30 minutes) to 300 minutes (5 hours) a week of moderate-intensity, or 75 minutes (1 hour and 15 minutes) to 150 minutes (2 hours and 30 minutes) a week of vigorous-intensity aerobic physical activity, or an equivalent combination of moderate- and vigorous-intensity aerobic activity. Preferably, aerobic activity should be spread throughout the week.
- Additional health benefits are gained by engaging in physical activity beyond the equivalent of 300 minutes (5 hours) of moderate-intensity physical activity a week.
- Adults should also do muscle-strengthening activities of moderate or greater intensity and that involve all major muscle groups on 2 or more days a week, as these activities provide additional health benefits.

Key Guidelines Older Adults

The key guidelines for adults also apply to older adults. In addition, the following key guidelines are just for older adults:

- As part of their weekly physical activity, older adults should do multicomponent physical activity that includes balance training as well as aerobic and muscle-strengthening activities.
- 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.

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.
Healthy older adults who plan gradual increases in their weekly amounts of physical activity generally do not need to consult a health care provider before becoming physically active. However, health care providers and physical activity professionals can help people attain and maintain regular physical activity by providing advice on appropriate types of activities and ways to progress at a safe and steady pace. Older adults with chronic conditions should talk with their health care provider to determine whether their conditions limit, in any way, their ability to do regular physical activity. Such a conversation can also help people learn about appropriate types and amounts of physical activity. In general, people who engage in physical activity can protect themselves by using appropriate gear and sports equipment, choosing safe environments, following rules and policies, and making sensible choices about when, where, and how to be active. Moreover, to reduce risk of injuries and other adverse events, older adults can choose types of physical activity that are appropriate for their current fitness level and health goals. Starting with lower intensity activities and gradually increasing how often, how intense, and how long activities are done, can reduce the risk of injury. This approach can be summarized by the easy to remember phrase: “start low and go slow.”

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**Defining Intensity and Using the Talk Test**

**Intensity** refers to how much work is being performed or the magnitude of the effort required to perform an activity or exercise. Intensity can be expressed either in absolute or relative terms.

- **Absolute intensity** is the amount of energy expended during the activity, without considering a person’s cardiorespiratory fitness.
- **Relative intensity** uses a person’s level of cardiorespiratory fitness to assess level of effort.

Either absolute or relative intensity can be used to monitor progress in meeting the key guidelines. Because older adults expend more energy than younger adults for the same task, such as walking, and because aerobic capacity declines with age, relative intensity is a better guide for older adults than absolute intensity. Certain activities, such as some types of yoga or tai chi, that are considered light-intensity may be perceived as moderate- or vigorous-intensity for some older adults. Relative intensity can be easily gauged by the talk test.
The Talk Test

When using relative intensity, people pay attention to how physical activity affects their heart rate and breathing. As a rule of thumb, a person doing moderate-intensity aerobic activity can talk, but not sing, during the activity. A person doing vigorous-intensity activity cannot say more than a few words without pausing for a breath.

Trends Over Time and Among Different Age Demographics

Older adults in the United States become less active with age. Currently only 7% of adults ages 80 or older met the Guidelines (both aerobic and muscle-strengthening components), compared to 17% of adults ages 65-69 years (Figure 2). The decrease in activity with age is notable because even the oldest adults can benefit from physical activity. Encouragingly, national surveillance suggests that older adults have gotten more active in recent decades: from 1998 to 2018, the prevalence of meeting both the aerobic and muscle-strengthening guidelines increased from 5.5% to 13.9% among adults ages 65 or older. Although this is good news, the prevalence of older adults meeting the Guidelines is still low and is a public health concern. Despite widespread increases across demographic subgroups, significant disparities remain. For example, females, those with fewer years of education, and those with lower incomes each have lower levels of physical activity compared to their peers (Figure 3).

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Benefits of Physical Activity

Most people can benefit from being more physically active on a daily basis and meeting the activity levels described in the Guidelines, but regular physical activity is particularly beneficial for healthy aging. The combination of aerobic, muscle-strengthening, and multicomponent activities can provide substantial health benefits for older adults, including the ability to perform activities of daily living more easily. The benefits of physical activity for older adults are summarized in Table 1. While many of these benefits are relevant to adults of all ages, fall prevention and reduced risk of injury from falls are specific to older adults. Some benefits of physical activity can be achieved immediately, such as reduced feelings of anxiety, reduced blood pressure, and improvements in sleep. Other benefits, such as increased cardiorespiratory fitness, increased muscular strength, decreases in depressive symptoms, and sustained reductions in blood pressure, require regular physical activity over time.

Table 1: Health Benefits Associated with Physical Activity for Older Adults

- Lower risk of all-cause mortality
- Lower risk of cardiovascular disease mortality
- Lower risk of cardiovascular disease (including heart disease and stroke)
- Lower risk of hypertension
- Lower risk of type 2 diabetes
- Lower risk of adverse blood lipid profile
- Lower risk of cancers of the bladder, breast, colon, endometrium, esophagus, kidney, lung, and stomach
- Slowed or reduced weight gain
- Weight loss, particularly when combined with reduced calorie intake
- Prevention of weight regain following initial weight loss
- Improved bone health
- Improved physical function
- Lower risk of falls
- Lower risk of fall-related injuries
- Improved mental and cognitive outcomes including:
  - Improved quality of life
  - Reduced risk of dementia (including Alzheimer’s disease)
  - Improved cognition
  - Reduced risk of depression
  - Reduced long-term feelings and signs of anxiety (trait anxiety) for people with and without anxiety disorders
  - Reduced short-term feelings of anxiety (state anxiety)
  - Improved sleep outcomes (increased sleep efficiency, sleep quality, deep sleep; reduced daytime sleepiness, reduced frequency of use of medication to aid sleep)
Improved sleep outcomes that increase with duration of acute episodes


Most (approximately 85%) older adults have at least one chronic condition, such as type 2 diabetes, cardiovascular disease, osteoarthritis, obesity, or cancer. Physical activity has significant benefits for all older adults and plays a role in preventing and managing the progression of chronic disease and related symptoms. The health benefits associated with regular physical activity for people with chronic health conditions and disabilities are listed in Table 2. The benefits of physical activity largely outweigh the risk of injury and heart attacks, two concerns that may prevent people from becoming more physically active.

**Table 2. Health Benefits Associated with Regular Physical Activity for People with Chronic Health Conditions and Disabilities**

<table>
<thead>
<tr>
<th>Cancer Survivors</th>
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<tbody>
<tr>
<td>• Improved health-related quality of life</td>
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<tr>
<td>• Improved fitness</td>
</tr>
<tr>
<td>• Lower risk of dying from site-specific cancer for breast, colorectal, and prostate cancer survivors</td>
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<tr>
<td>• Lower risk of all-cause mortality for breast and colorectal cancer survivors</td>
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<table>
<thead>
<tr>
<th>People with Osteoarthritis (knee and hip)</th>
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<tbody>
<tr>
<td>• Decreased pain</td>
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<tr>
<td>• Improved physical function</td>
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<tr>
<td>• Improved health-related quality of life</td>
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<tr>
<th>People with Hypertension</th>
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<tbody>
<tr>
<td>• Lower risk of cardiovascular disease mortality</td>
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<tr>
<td>• Reduced cardiovascular disease progression</td>
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<tr>
<td>• Lower risk of increased blood pressure over time</td>
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<table>
<thead>
<tr>
<th>People with Type 2 Diabetes</th>
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<tbody>
<tr>
<td>• Lower risk of cardiovascular disease mortality</td>
</tr>
<tr>
<td>• Reduced progression of disease indicators: hemoglobin A1C, blood pressure, body mass index, and lipids</td>
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<table>
<thead>
<tr>
<th>People with Dementia</th>
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<tr>
<td>• Improved cognition</td>
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<table>
<thead>
<tr>
<th>People with Multiple Sclerosis</th>
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<tbody>
<tr>
<td>• Improved physical function, including walking speed and endurance</td>
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<tr>
<td>• Improved cognition</td>
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<table>
<thead>
<tr>
<th>People with Spinal Cord Injury</th>
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<tbody>
<tr>
<td>• Improved walking function, muscular strength, and upper extremity function</td>
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| People with diseases or disorders that impair cognitive function (including attention deficit hyperactivity disorder (ADHD), schizophrenia, Parkinson’s disease, and stroke) |
Barriers to Being Physically Active

There are several barriers that can influence an individual’s ability to be physically active, and understanding these barriers is key to delivering effective and equitable interventions. Barriers to physical activity differ from individual to individual and are influenced by socioeconomic, cultural, and community factors. For example, some people may not know about or have access to safe places to be physically active, may live in communities that are not conducive to activity, or may have physical or cognitive limitations that create additional barriers. Older adults may have unique concerns related to safety or fear of falling, and many face challenges related to chronic health conditions, mobility, and pain that can impact their perceived or actual ability to engage in physical activity. Neighborhood characteristics like poor-quality sidewalks or insufficient lighting can reduce actual or perceived safety. Additionally, access to specialized facilities or equipment—especially for muscle-strengthening activities—can be costly. Societal expectations about the types of physical activity older adults can participate in may contribute to a lack of social support. In addition to age, other intersecting social identities like ability, race, and gender or sexual identity may influence where older adults feel welcomed or comfortable being physically active. Other common barriers include lack of time, poor weather, and lack of enjoyment. Examples of common barriers to physical activity and potential solutions can be found in Table 3 and are discussed more fully below in the section on cognitive behavioral strategies.

Getting and staying active can be especially difficult as people age, and the barriers that older adults face cannot be addressed with just one strategy or within one setting. The settings, strategies, and interventions outlined in this report can be combined and tailored to different community contexts. Through direct engagement with communities that experience inequities and through continued exploration of barriers, professionals working with older adults, organizations, community leaders, and policy makers and decision makers can use the strategies highlighted in the What Works section to help older adults overcome barriers to physical activity and increase physical activity.
Barriers to physical activity differ from individual to individual and are influenced by socioeconomic, cultural, and community factors.

What Works

This section discusses evidence-based settings (where older adults are getting active), strategies (tactics used to influence behavioral outcomes), and interventions (how older adults are getting active). Examples are embedded within this section to illustrate how older adults are getting physically active in different settings through programs or changes in community design. These spotlights include representation across different sectors and are meant to highlight how the strategies and interventions described in this report can be applied in different settings.

Settings

One way to address the low physical activity levels among older adults is to create opportunities for activity in settings where older adults already spend their time. While physical activity programs and interventions can occur in many locations, such as places of worship or senior housing facilities, the Physical Activity and Older Adults Systematic Literature Review identified the following as effective evidence-based settings:

- Community
- Health institutions
- Home

Community

The community setting can be defined as the places and environment where people in a particular geographic area live or congregate. This can include locations like schools, faith-based organizations, community centers, gyms, and libraries as well as the surrounding infrastructure, like sidewalks, roads, and public transportation. The community environment, as well as programs within the community, can play a role in increasing physical activity levels among older adults. For example, pedestrian, bicycle, and public transportation systems can help older adults access programs and places that provide opportunities for physical activity (e.g., parks, programs offered in community or senior centers).

Interventions that are implemented across communities broadly through programs, practices, and policies can help make physical activity the easy choice and promote thriving, active communities.
Those who could effect change to support more physical activity among older adults in the community setting include program managers, state/city/county officials, Tribal leaders, transportation professionals, community and urban planners, state and local public health professionals, real estate and zoning professionals, school boards and school staff, neighborhood associations, community center program leads, fitness facility owners and staff (e.g. personal trainers), and physical activity and health professionals.

Health Institutions

Many older adults have regular interactions with health institutions, including primary care and specialty care at clinics, hospitals, or assisted living facilities. In the health institution setting, older adults can receive tailored care and specific guidance on the benefits of physical activity for their individualized situation, including considerations of chronic disease risk factors, symptoms, disease status, mobility, and socioeconomic status. Functional independence, a key indicator of health status, is often addressed in a health care provider’s office, offering the opportunity to share specific physical activity recommendations. A benefit of the health institution setting is medical or allied health professional oversight of physical activity programming, which can provide extra assurance to individuals getting started with physical activity, becoming active after a cardiac or other health event that affects their mobility or cardiorespiratory fitness, or during/after cancer treatment.

Those who could effect change to support more physical activity among older adults in the health institution setting include health care providers, geriatricians, allied health professionals, health educators, and health system administrators.

Home

Many older adults spend much of their time at home for a variety of reasons. Being physically active at home can remove several barriers like those related to bad weather or lack of transportation. Older adults can be physically active at home no matter the season, the weather, or time of day. If there are others living in the household, they could provide support through motivation and encouragement or by joining in to be active together. In addition to the familiarity of one’s physical space, there is a comfort to trying new physical activities in private (e.g., streaming a group fitness class like Zumba or Pilates) instead of in a public group setting.
Those who could effect change to support more physical activity among older adults in the home setting include individuals, family members/caregivers, home health care providers, property managers, and neighborhood associations.

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Community Preventive Services Task Force (CPSTF) Recommendation for Home-based Interventions

CPSTF recommends structured home-based exercise interventions for older adults to help them limit physical inactivity and improve or maintain physical fitness. Home-based physical activity for people ages 65 and older can improve balance, muscular strength, power, and endurance components. Home-based interventions provide guidance about how to be physically active and aim to motivate older adults to engage in physical activity. Interventions may also encourage participants to walk in place or outdoors to promote aerobic fitness.

CPSTF recommends home-based interventions that include the following components:

- Specific exercises, initial instruction on routines, and limited or periodic supervision
- Exercise sessions two or more times per week
- Exercises targeting improvements in strength (e.g., muscle strength, muscle power, and muscle endurance), balance, or both (i.e., multimodal)
- Low-cost equipment for exercises (e.g., hand weights, mats, towels) or exercises that make use of resources already in the home (e.g., chairs)


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Home and Community Combined

While the home provides an easily accessible setting for getting active, the addition of a community-based component provides additional opportunities to increase physical activity. This combined setting includes community-based organizations and facilities, like local community centers, which provide information, guidance, and encouragement to do activity at both the center location and at home. Many group-based physical activity programs take place in community settings such as recreation centers, senior centers, and faith-based organizations and are often led by trained volunteers or physical activity professionals who can support and encourage participants. The additional accountability of participating
in group-based activity at a community-based organization, as well as the social aspect, may contribute to the effectiveness of combining the home and community-based setting to increase physical activity.

Those who could effect change to support more physical activity among older adults in the combined group-based activity at a community-based organization, as well as the social aspect, may contribute to the effectiveness of combining the home and community-based setting to increase physical activity.

Those who could effect change to support more physical activity among older adults in the combined home and community setting include individuals, family members/caregivers, property managers, neighborhood associations, community center program leads, fitness facility owners and staff (e.g., personal trainers), and physical activity and health professionals.

Home and Health Institution Combined

Encouraging activity in both home-based and health institution-based settings can reinforce physical activity behaviors among older adults. The combination of these settings allows programming from the clinic to be translated to the home and creates opportunities for program staff to provide additional at-home support during or after a health-setting-based program. This can make it easier for older adults to practice new physical activity behaviors on their own and incorporate new habits into their lifestyle, while still receiving ongoing support. Such an approach can provide a transition between a structured, supervised program where participants “graduate” and continued physical activity at home.

Those who could effect change to support more physical activity among older adults in the combined home and health institution setting include individuals, family members/caregivers, property managers, neighborhood associations, geriatricians, allied health professionals, health care providers, health educators, and health system administrators.

Strategies

Strategies (tactics used to influence behavioral outcomes) that facilitate physical activity for older adults can target the community at large or individuals. Policy makers; physical activity, health, or allied health professionals; health care providers; gerontologists; and others working with older adults can use these strategies to improve the health and function of older adults in their communities.

Community Design

Population-level strategies go beyond direct programming or interventions. These strategies involve policy, systems, and environmental approaches, such as those related to transportation and neighborhood environments, that make physical activity opportunities available, safe, and easily accessible for all people. This contrasts with strategies focused on the individual, which often require someone to enroll in a program or intervention for a specific amount of time.
One strategy that has been shown to increase physical activity among older adults is making communities more walkable through community design. Researchers have found that people who live in walkable neighborhoods are more active than people who do not live in walkable neighborhoods. Walkable neighborhoods make it safer and easier for community members to walk, bike, or wheelchair roll for recreation, fitness, or transportation. Elements of community design that improve walkability include the availability of and access to everyday destinations, street connectivity and quality, and social and aesthetic components. Walkable neighborhoods include easy access to a mix of destinations, such as homes; health institutions; parks, trails, and recreational facilities; food outlets; and cultural centers. Such neighborhoods also have connected networks of “activity-friendly routes” like safe and accessible high-quality sidewalks, curbs, and intersections; multi-use trails; safe bicycle infrastructure; and convenient public transit. For example, intersections may include clearly marked crosswalks, curb cuts that remove the need to step up onto a sidewalk from the road, and walk signals with audio and visual prompts that allow sufficient crossing time for older adults. These features help people, especially those using mobility devices or who have a mobility impairment, to safely cross the street. Wide sidewalks with sufficient lighting that are free of trip hazards such as cracks or overgrowth, can also improve walkability and create safer and smoother paths for older adults who use wheelchairs and other assistive devices and people who are pushing strollers. Walkable communities can also feature social or aesthetic components, such as benches, public art, public gathering spaces, shade, and landscaping, and functional components like access to bathrooms and safe and free drinking water.

Other opportunities to create more activity-friendly communities include creating safe routes for bicycles. This includes keeping bicyclists and pedestrians separate from vehicular traffic. It also includes ensuring multi-use trails have enough room for different users to share the space, so older adults can feel comfortable and safe alongside people riding bicycles or using micro-mobility devices, such as scooters. Physical activity and walkability considerations can be included in policies like zoning and land-use ordinances and subdivision guidelines, comprehensive (or master) plans, transportation and transit policies, roadway design and Complete Streets policies, Safe Routes for All, shared use agreements, Vision Zero, and recreation and open space plans and policies. Increasing physical activity through community design has the potential, when thoughtfully carried out in partnership with the community, to facilitate physical activity for everyone, regardless of age or ability.
The Community Preventive Services Task Force (CPSTF) recommends creating or improving transportation infrastructure to promote active commuting by connecting people from where they live to destinations where they go. The recommendation supports implementing policies and activities to connect pedestrian, bicycle, or public transportation networks (sometimes referred to as activity-friendly routes) to everyday destinations such as homes, healthcare institutions, shops, parks, and other places.

For older adults, this may mean walking a dog to a dog park or walking grandchildren to school on well-maintained sidewalks; using a bicycle route separated from vehicular and pedestrian traffic (a complete street) to go to a local coffee shop for breakfast (or other retail businesses); or taking available and accessible public transportation to a senior center or doctor’s office.


Cognitive Behavioral Strategies

Individual-level cognitive behavioral strategies can equip older adults with the knowledge and behavioral capability to engage in physical activity. These strategies may be even more effective if multiple strategies are employed together as part of interventions like physical activity counseling or as a part of a formal physical activity program. Cognitive-behavioral strategies include approaches such as increasing physical activity knowledge or awareness, goal setting, self-monitoring, barrier identification and problem solving, and social support. These strategies can be delivered via a variety of modes, including in-person; via phone; through virtual counseling, such as through embodied conversational agent (ECA) technology (i.e., animated computer characters that simulate face-to-face counseling); or through print or text materials. These approaches often begin with an assessment of current physical activity levels and development of incremental goals to increase physical activity.

Modes of Delivery for Physical Activity Strategies and Interventions

Delivery modes have a direct impact on the potential for large-scale implementation. They can influence the cost, acceptability, feasibility, reach, and effectiveness of interventions. There are several effective methods to deliver physical activity messaging and programming.
Face-to-face (in-person or virtual) approaches and phone calls are one way to support older adults in increasing physical activity levels. In-person interventions can occur in a variety of settings, such as the health institutions setting, congregate living facilities, or the home, and are a common way to deliver supervised physical activity programs and counseling. Moreover, with face-to-face interactions, a participant can receive direct feedback on their performance of an activity. Phone calls are another way to reach older adults and provide education or motivational support for physical activity. Virtual counseling or text message check ins can remove transportation barriers to meeting in-person.

Print materials can complement in-person or phone contact. Print materials can provide information on the benefits of physical activity, the importance of physical activity, behavior change tips, ways to address barriers, and suggested activities in which to engage. They can be tailored to the physical activity levels of individuals, such as those just getting started or working to build up physical activity levels over time. They also allow an individual to re-read the content later rather than remembering what was shared during the appointment.

Physical Activity Knowledge or Awareness. Knowledge and awareness of the health benefits of physical activity, how much physical activity is needed, and the role of physical activity in healthy aging can increase motivation and reduce barriers to physical activity. Providing information on different aspects of physical activity, such as how to do specific muscle-strengthening physical activities (i.e., skill building), can increase one’s confidence or self-efficacy in doing the activity. Sharing information about physical activity programs, especially those tailored to older adults, can help encourage older adults to learn more about physical activity.

Goal Setting. Goal setting around physical activity can encourage older adults to achieve desired physical activity levels, starting from current levels. Goal setting may utilize S.M.A.R.T. goals – goals that are specific, measurable, achievable/attainable, realistic/relevant, and time-bound. This type of goal setting can help an individual take a general goal (e.g., increasing physical activity) into a tangible action item (e.g., going for a ten-minute walk three times per week). Older adults should increase their physical activity gradually and set goals in line with their current abilities. To reduce risk of injury, it is important to increase the amount of physical activity gradually over a period of weeks to months and in alignment with a person’s abilities and fitness.
Self-Monitoring. Self-monitoring is a strategy used to track and record physical activity. Self-monitoring can encourage older adults to work towards achieving physical activity goals and provides regular feedback. Physical activity self-monitoring can be done using a device (e.g., pedometer, wearable tracker, mobile app) or a written instrument (e.g., physical activity log, journal, diary, worksheet) with information kept by the participants or shared with a health care provider or physical activity professional. Since the Guidelines recommends a weekly instead of daily target, tracking progress throughout the week can provide valuable feedback on progress toward achieving overall physical activity and fitness goals. Personalized reports on physical activity and sedentary behavior may help maintain increases and prevent decreases in physical activity over time.

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**Physical Activity Monitors**

Physical activity monitors, such as pedometers or accelerometers, can be effective tools to help increase physical activity among older adults when used as part of a physical activity intervention. Physical activity monitors can help individuals focus on physical activity goals and monitor their own physical activity in real time. Many commonly owned devices like activity trackers, smart watches, and smart phones contain accelerometers and can be used to monitor physical activity or steps.

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Barrier Identification and Problem Solving. Barriers, both real and perceived, can reduce physical activity. Barrier identification is an important first step to help individuals overcome obstacles preventing the adoption or maintenance of physical activity behaviors. Problem solving can help address identified barriers to physical activity by enabling an individual to come up with tangible and specific solutions (see Table 3). Both barrier identification and problem-solving skills are typically practiced through physical activity assessments and counseling, often at the start of a physical activity program. These activities can increase older adults’ confidence so they can be more physically active. Over time, it is important to reassess barriers, especially during different times of year when weather or when lifestyle changes (e.g., retirement, increased travel, caregiving, or birth of a grandchild) may present different challenges.
### Table 3. Examples of Barriers and Potential Solutions for Older Adults

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Example of Barriers</th>
<th>Potential Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal (e.g., physical state and well-being, thoughts, feelings, or emotions)</td>
<td>Too tired/not enough energy</td>
<td>Plan physical activity during periods of the day when you feel most energetic.</td>
</tr>
<tr>
<td></td>
<td>Fear of falling</td>
<td>Sign up for group exercise class or training that includes balance components where there will be some form of support or supervision.</td>
</tr>
<tr>
<td></td>
<td>Joint pain</td>
<td>Start slow and with activities that you are most confident with (e.g., chair exercises for support with balance or walking in place to limit trip hazards).</td>
</tr>
<tr>
<td></td>
<td>Lack of knowledge or confidence with muscle-strengthening physical activities</td>
<td>Work with a health care provider to develop a pain management plan. Try activities that may minimize discomfort, such as water aerobics.</td>
</tr>
<tr>
<td></td>
<td>Bad weather</td>
<td>Find opportunities to walk indoors, such as at a mall, airport, grocery store, or a big-box store.</td>
</tr>
<tr>
<td></td>
<td>Expensive equipment</td>
<td>Use inexpensive equipment (e.g., resistance bands) or things you might find in a home (e.g., books) for muscle-strengthening activity.</td>
</tr>
<tr>
<td></td>
<td>No close gym facility</td>
<td>Find ways to add physical activity to the day without specific equipment, such as gardening, dancing, or playing with grandchildren. Consider walking or bicycling to do errands.</td>
</tr>
</tbody>
</table>

**Social Support.** Social support from friends and family can increase motivation and promote physical activity participation. Social support can be fostered through group interaction (e.g., by joining physical activity classes or programs designed for older adults) as well as through physical activity counseling, where participants can learn about different types of social support and identify strategies to build support networks. Walking groups or “buddy systems” where older adults are encouraged to participate in physical activity with others can provide friendship and emotional support for older adults working towards increasing physical activity levels. A form of social support can be provided by health care providers while assessing patient’s physical activity levels and through follow-up appointments. Health care providers can also provide referrals to physical activity, health, or allied health professionals and community-based programs.
Interventions

In this report, interventions are defined as formal programs designed to influence physical activity outcomes by combining behavior change strategies and/or a set of physical activities to complete under supervision or independently.

Physical Activity Counseling

Physical activity counseling is a common and effective feature of physical activity interventions. This can be led by physical activity, health, or allied health professionals. Physical activity counseling can be done in-person, virtually, or via the phone, and can include a variety of individual-level cognitive-behavioral strategies such as goal setting, self-monitoring of physical activity behavior, barrier identification and problem-solving, social support, and building physical activity knowledge or awareness. When offered in the health care setting, physical activity counseling can provide guidance related to the individual’s specific health status. Providing in-person counseling along with printed resources can further improve physical activity levels.

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The U.S. Preventive Services Task Force (USPSTF) recommends behavioral counseling interventions, including nutrition and physical activity counseling, to promote a healthy diet and physical activity for adults at increased risk of cardiovascular disease (grade B). Health care providers are recommended to provide this service to patients since it has been found to improve health outcomes. The Affordable Care Act requires private insurers and Medicare to cover preventive services identified by the USPSTF with a grade A of B.

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Community Preventive Services Task Force (CPSTF) Recommendation for Digital Health Interventions

CPSTF recommends digital health interventions to increase physical activity among adults 55 years and older. Digital health interventions include one or more of the following to deliver guidance and support tailored to an individual’s activity level, age, and health status:

- Web-based interactive content (e.g., virtual coaching)
Draft for Public Comment

- Telephone sessions with intervention providers or automated voice messages and reminders
- Text messages and reminders
- Apps with goal-setting, activity tracking, and reminder functions


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Exercise Programs

Structured exercise programs help older adults engage in specific exercises for a set amount of time. Exercise is a form of physical activity that is planned, structured, repetitive, and performed with the goal of improving health or fitness. All exercise is physical activity, but not all physical activity is exercise. Exercise programs can be group-based or tailored to a specific individual’s needs. Programs can be led by physical activity, health, or allied health professionals, or trained recreation leaders. Supervision, whether in group-based exercise programs or individual exercise programs, can support participant confidence and provide specific guidance on various types of exercise. Personalized exercise programs can be tailored to the individual’s physical activity and fitness goals, physical function, health conditions, current physical activity or fitness level, and readiness to change behaviors. Personalized exercise programs often include a prescribed or packaged set of exercises for participants to complete.

Exercise programs for older adults should include multicomponent physical activity by addressing two or more domains of physical activity, including aerobic, muscle strengthening, or balance. Programs may also include functional training, and/or flexibility.

***Start Call Out box***

Exercise is a form of physical activity that is planned, structured, repetitive, and performed with the goal of improving health or fitness. All exercise is physical activity, but not all physical activity is exercise.

***End Call Out box***

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What Is Multicomponent Physical Activity?
For older adults, multicomponent physical activity is important to improve physical function and
decrease the risk of falls or injury from a fall. Multicomponent physical activities can be done at home or
in a structured group setting. Many studied interventions combine all types of exercise (aerobic, muscle-
strengthening, and balance) into one session, and this has been shown to be effective. A
multicomponent physical activity program could include walking a dog (aerobic), doing bicep curls
(muscle-strengthening), and standing on one foot (balance). Recreational activities such as dancing,
yoga, tai chi, gardening, or sports can also be considered multicomponent because they often
incorporate multiple types of physical activity.

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Lifestyle-based Physical Activity Programs

Lifestyle-based interventions use cognitive-behavioral strategies and behavior change theories to help
older adults self-manage their own physical activity behavior changes. These interventions often include
physical activity counseling or advice and help older adults to decide how they want to engage in
physical activity throughout their day. With lifestyle-based physical activity programs, older adults can
be supported and empowered in their efforts to find opportunities to increase their physical activity that
work best in their lifestyle, for example, by taking the stairs when available, playing pickleball with
friends, or by carrying groceries.

Conclusion

It’s never too late to be physically active and to achieve the benefits of an active lifestyle. Moving more
and sitting less are important for individuals of all ages. Especially for older adults, being physically
active provides a range of benefits such as improving quality of life, reducing risk of and progression of
chronic diseases, and increasing functional ability, which can support independent living. Currently less
than 15% of older adults meet the Physical Activity Guidelines for Americans, representing a significant
physical, mental, societal, and economic burden. It is important to remember that all activities, whether
light-, moderate-, or vigorous-intensity “count.” Encouraging older adults to start slow and gradually
increase physical activity can help build confidence, motivation, and a routine of regular physical
activity. Older adults can be physically active in a variety of settings, including the community, home,
and health institutions. There are many strategies and interventions, both individual and group-based,
outlined in this report, as well as policy, systems, and environmental changes which can positively affect
older adults and the entire community in supporting more physical activity. Measuring the effectiveness
of strategies and interventions is key to continually building the list of “what works” to get older adults moving. The key is for policy makers; physical activity, health, or allied health professionals; health care providers; gerontologists; and others working with older adults to partner, plan, and implement ways to connect older adults where they live to destinations where they can access safe opportunities to be physically active. Together, we all can support older adults to be physically active in a variety of settings and to connect them to programs, places, and environments where being physically active is the easy choice.
Glossary

Audiences Used in this Report

- **Allied health professionals** are individuals who are involved in the delivery of health, rehabilitation, and related services distinct from medicine and nursing (e.g., physical therapists, occupational therapists, physiotherapists, exercise physiologists, respiratory therapists, recreation therapists)

- **Health care providers** are individuals who provide medical care and treatment (e.g., physicians, geriatricians, physician’s assistants, nurse practitioners, nurses)

- **Health professionals** are individuals who deliver health programs and services distinct from medical care (e.g., public health professionals, health and wellness specialists, health coaches, community health workers, health educators)

- **Physical activity professionals** are individuals who facilitate and lead physical activity programs in community-based settings such as health and fitness facilities, recreation centers, and senior centers (e.g., personal trainers, fitness instructors, certified exercise professionals, trained recreation leaders, program managers)

**Aerobic physical activity** is activity in which the body’s large muscles move in a rhythmic manner for a sustained period of time. Aerobic activity, also called endurance or cardio activity, improves cardiorespiratory fitness. Examples include brisk walking, running, swimming, and bicycling.

Aerobic activity has three components:

- Intensity, or how hard a person works to do the activity. The intensities most often studied are moderate (equivalent in effort to brisk walking) and vigorous (equivalent in effort to running or jogging)

- Frequency, or how often a person does aerobic activity (e.g., minutes per week)

- Duration, or how long a person does an activity in any one session

**Exercise** is a form of physical activity that is planned, structured, repetitive, and performed with the goal of improving health or fitness. All exercise is physical activity, but not all physical activity is exercise.
Intensity refers to how much work is being performed or the magnitude of the effort required to perform an activity or exercise. Intensity can be expressed either in absolute or relative terms. Because older adults expend more energy than younger adults for the same task, such as walking at a given speed, and because aerobic capacity declines with age, relative intensity is a better guide for older adults than absolute intensity. Certain activities, such as some types of yoga or tai chi, that are considered light intensity for younger adults may be moderate- or vigorous-intensity for older adults when measured by relative intensity.

- **Absolute.** The absolute intensity of an activity is determined by the rate of work being performed and does not consider the physiologic capacity of the individual. For aerobic activity, absolute intensity typically is expressed as the rate of energy expenditure (for example, milliliters per kilogram of body weight per minute of oxygen being consumed, kilocalories per minute, or METs; see MET definition below). For muscle-strengthening activities, intensity frequently is expressed as the amount of weight lifted or moved.
  - Light-intensity activity is non-sedentary waking behavior that requires less than 3.0 METs; examples include walking at a slow or leisurely pace (2 mph or less), cooking activities, or light household chores.
  - Moderate-intensity activity requires 3.0 to 5.9 METs; examples include walking briskly or with purpose (2.5 to 4 mph), mopping or vacuuming, or raking the yard.
  - Vigorous-intensity activity requires 6.0 or more METs; examples include walking very fast (4.5 to 5 mph), running, carrying heavy groceries or other loads up stairs, shoveling snow, or participating in a strenuous fitness class. Many adults do no vigorous-intensity activity.

- **Relative intensity** takes into account or adjusts for a person’s cardiorespiratory fitness. For aerobic exercise, relative intensity is expressed as a percentage of a person’s aerobic capacity (VO\textsubscript{2}\text{max}) or VO\textsubscript{2} reserve, or as a percentage of a person’s measured or estimated maximum heart rate or heart rate reserve. It also can be expressed as an index of how hard the person feels he or she is exercising (for example, on a 0 to 10 scale).

**Multicomponent physical activity** is physical activity that includes more than one type of physical activity, such as aerobic, muscle strengthening, and balance training. Programs may also include gait,
coordination, and physical function training. Examples of multicomponent activities include ballroom dancing and water aerobics.

Muscle-strengthening activity (strength training, resistance training, or muscular strength and endurance exercise) is physical activity, including exercise, that increases skeletal muscle strength, power, endurance, and mass. Muscle-strengthening activity has three components:

- Intensity, or how much weight or force is used relative to how much a person is able to lift;
- Frequency, or how often a person does muscle-strengthening activity; and
- Sets and repetitions, or how many times a person does the muscle-strengthening activity, like doing a push-up or lifting a weight (e.g., 3 sets of 12 repetitions each set). Sets and repetitions for strength training are comparable to duration for aerobic activity.

Older adults (for the purposes of this report) are those ages 65 and older. This age range is consistent with the definition of older adults in the Physical Activity Guidelines for Americans and used for Healthy People 2030 objectives. In the United States, ages 65 and older is used as the threshold for Medicare.

Physical activity is any bodily movement produced by the contraction of skeletal muscle that increases energy expenditure above a basal level. In the Guidelines, physical activity generally refers to the subset of physical activity that enhances health.
Appendix. Federally Supported Physical Activity Initiatives and Resources for Older Adults

U.S. Department of Health and Human Services (HHS)

Administration for Community Living

- Resources will be added for final version

Agency for Healthcare Research and Quality (AHRQ)

- **TAKEHeart Initiative.** The AHRQ TakeHeart Initiative is designed to increase patient participation in cardiac rehabilitation after cardiovascular events like heart attacks, heart failure, angioplasty, and heart surgery. ([https://takeheart.ahrq.gov/](https://takeheart.ahrq.gov/))

Centers for Disease Control and Prevention (CDC)

- **Active People, Healthy Nation™:** Active People, Healthy Nation is a CDC-led initiative to help 27 million Americans become more physically active by 2027. Resources include evidence-based strategies to increase physical activity, including through community design, information on how multiple sectors can engage, and facts on the benefits of physical activity. ([https://www.cdc.gov/physicalactivity/activepeoplehealthynation/index.html](https://www.cdc.gov/physicalactivity/activepeoplehealthynation/index.html)) Specific resources highlighting older adults include:
  - Information on how much physical activity older adults need. ([https://www.cdc.gov/physicalactivity/basics/older_adults/index.htm](https://www.cdc.gov/physicalactivity/basics/older_adults/index.htm))
  - Ways older adults can include physical activity in their daily life. ([https://www.cdc.gov/physicalactivity/basics/adding-pa/activities-olderadults.htm](https://www.cdc.gov/physicalactivity/basics/adding-pa/activities-olderadults.htm))
  - Fact Sheet on older adult physical activity levels ([https://www.cdc.gov/physicalactivity/inactivity-among-adults-50plus/modules/Adults_need_more_PA_factsheet_March2022_508.pdf](https://www.cdc.gov/physicalactivity/inactivity-among-adults-50plus/modules/Adults_need_more_PA_factsheet_March2022_508.pdf))
• Podcast on the importance of physical activity for older adults
  CDC_944#/media/id/405188]
• Mall Walking Resource Guide: Mall walking programs or indoor walking programs in
  mall-like settings that can address many barriers facing older adults.
  [https://www.cdc.gov/nccdphp/dnpao/docs/uwmallwalkingguideweb508tagged.pdf]
• **Arthritis-Appropriate, Evidence-Based Interventions (AAEBI) - Osteoarthritis Action Alliance**
  (OAAA): The OAAA currently engages in a CDC-funded review of evidence-based interventions
to identify community-based programs that meet criteria to be recognized as AAEBI. The most
recent list of AAEBI programs includes several physical activity interventions, including
EnhanceFitness.  [https://oaaction.unc.edu/aaebi]
• **Compendium of Effective Fall Interventions: What Works for Community-Dwelling Older Adults:** The compendium highlights specific interventions for which there is published evidence
of the intervention’s ability to reduce falls among community-dwelling older adults. Out of 41
(multifaceted, clinical, home modification, and exercise) interventions, 15 are single
intervention exercise interventions.
• **Disability & Health Resources for Facilitating Inclusion and Overcoming Barriers:** Resources to
  assist in creating and using inclusion strategies to improve the health, well-being, and
  participation of people with disabilities in all aspects of life.
  [https://www.cdc.gov/ncbddd/disabilityandhealth/disability-resources.html]
• **Division of Population Health (DPH), Physical Activity for Arthritis:** This DPH website provides
  resources and guidance on physical activity for individuals with arthritis.
  [https://www.cdc.gov/arthritis/basics/physical-activity/index.html]
• **Increasing Physical Activity Among Adults with Disabilities:** Resources for doctors and other
  health professionals outlining how to increase physical activity among adults with disabilities.
  [https://www.cdc.gov/ncbddd/disabilityandhealth/pa.html]
• **MyMobility Plan:** MyMobility Plan, a set of resources supported by CDC, provides older adults
  with information, guidance, and tips on how to stay safe, mobile, and independent as they age.
The mobility planning tool has three parts: Tips to manage health and mobility, a home safety checklist for fall prevention, and a plan to stay mobile in the community. (https://www.cdc.gov/transportationsafety/older_adult_drivers/mymobility/index.html)


- Older Adult Falls Program: This collection of effective fall interventions is designed to help public health practitioners, senior service providers, clinicians, and others who want to address falls among older adults in their community. The website also provides a program guide designed for community-based organizations interested in implementing their own evidence-based fall prevention programs. (https://www.cdc.gov/homeandrecreationalsafety/falls/programs.html)

- Preventing Falls: A Guide to Implementing Effective Community-Based Fall Prevention Programs: A related “how-to” guide designed for community-based organizations who are interested in program planning, developing, implementing, and evaluating their own evidence-based fall prevention programs. (https://www.cdc.gov/falls/programs/community_prevention.html)


National Institutes of Health (NIH)


Office of Disease Prevention and Health Promotion

- Physical Activity Guidelines for Americans: The Physical Activity Guidelines is an essential resource for health professionals and policy makers. It includes recommendations for Americans
ages 3 years and over — including people at increased risk of chronic disease — and provides evidence-based advice on how physical activity can help promote health and reduce the risk of chronic disease. ([https://health.gov/our-work/nutrition-physical-activity/physical-activity-guidelines/current-guidelines](https://health.gov/our-work/nutrition-physical-activity/physical-activity-guidelines/current-guidelines))

- **Move Your Way®**: Move Your Way® is the campaign from the U.S. Department of Health and Human Services led by the Office of Disease Prevention and Health Promotion that provides free tools in both English and Spanish to promote the *Physical Activity Guidelines for Americans*. The campaign encourages Americans to get the physical activity they need to get and stay healthy by increasing awareness, knowledge, and self-efficacy. The campaign resources include interactive tools, videos, posters, fact sheets, and social media messages for audiences of all ages, including older adults. ([https://health.gov/moveyourway](https://health.gov/moveyourway)) Specific resources highlighting older adults include:
  - Information on how much physical activity older adults need and why physical activity is key for healthy aging. ([https://health.gov/sites/default/files/2021-02/PAG_MYW_FactSheet_OlderAdults_508c.pdf](https://health.gov/sites/default/files/2021-02/PAG_MYW_FactSheet_OlderAdults_508c.pdf))
  - Information on the different types of physical activity older adults need and how they can get a mix of activity types. ([https://health.gov/sites/default/files/2021-07/PAG_MYW_FactSheet_OlderAdults_07-08_508c.pdf](https://health.gov/sites/default/files/2021-07/PAG_MYW_FactSheet_OlderAdults_07-08_508c.pdf))
  - Story illustrating how two older adults eat healthy and find safe ways to get active. ([https://health.gov/moveyourway/stories/john-patty](https://health.gov/moveyourway/stories/john-patty))
  - Planning tool to help people build a personalized weekly activity plan with tips for fitting activity into their daily routines. ([https://health.gov/moveyourway/activity-planner](https://health.gov/moveyourway/activity-planner))

- **Healthy People**: Healthy People provides science-based, 10-year national objectives for improving the health of all Americans. It has a physical activity topic area, which includes objectives used to track the progress of populations meeting the *Physical Activity Guidelines for Americans* as well as other physical activity areas. ([https://healthypeople.gov](https://healthypeople.gov))
• **Step it Up! The Surgeon General’s Call to Action to Promote Walking and Walkable Communities:** This Call to Action is intended to increase walking across the United States by calling for improved access to safe and convenient places to walk and wheelchair roll, as well as for a culture that supports these activities for people of all ages and abilities. This publication presents five goals and supporting implementation strategies that are grounded in scientific and practice-based evidence. These goals call for action by multiple sectors of society, as well as families and individuals. ([https://www.surgeongeneral.gov/library/calls/walking-and-walkable-communities/index.html](https://www.surgeongeneral.gov/library/calls/walking-and-walkable-communities/index.html))

**Environmental Protection Agency (EPA)**

• **Healthy Places for Healthy People:** Healthy Places for Healthy People engages with community leaders and health care partners to create walkable, healthy, and economically vibrant communities that can improve health, protect the environment, and support economic growth. One key focus of the program is creating physical activity programs and supporting sidewalks, bike paths, trails, and parks in the community to promote active living. ([https://www.epa.gov/smartgrowth/healthy-places-healthy-people](https://www.epa.gov/smartgrowth/healthy-places-healthy-people))

• **National Walkability Index:** The EPA’s National Walkability Index is a nationwide geographic data resource that ranks block groups according to their relative walkability. The national dataset includes walkability scores for all block groups as well as the underlying attributes that are used to rank the block groups. ([https://www.epa.gov/smartgrowth/smart-location-mapping#walkability](https://www.epa.gov/smartgrowth/smart-location-mapping#walkability))

**National Park Service (NPS)**

• **Healthy Parks Healthy People Program:** The National Park Service’s Healthy Parks Healthy People program connects people to parks through health promotion, fosters society’s understanding and appreciation for the life-sustaining role of parks, and creates the next generation of park stewards. The program addresses health promotion in parks and communities, at local, state, national and international levels through five main programmatic areas, including healthy recreation. ([https://www.nps.gov/public_health/hp/hphp/about.htm](https://www.nps.gov/public_health/hp/hphp/about.htm))

**U.S. Department of Agriculture (USDA)**
• **Forest Service Accessibility Resources**: Provides over 15 resources and tools to promote trail use and outdoor recreation opportunities accessible to older adults with mobility limitations and persons with disabilities. “Accessibility” defines a facility in compliance with accessibility guidelines or standards when it was built or altered. One of the most popular pastimes on forests and grasslands is camping. Many Forest Service campsites are accessible to visitors of any ability. ([https://www.fs.usda.gov/managing-land/national-forests-grasslands/accessibility/resources](https://www.fs.usda.gov/managing-land/national-forests-grasslands/accessibility/resources))

  • These resources include an Interactive Visitor Map. ([https://www.fs.usda.gov/ivm/](https://www.fs.usda.gov/ivm/))

**U.S. Department of Transportation (DOT)**

• **Federal Highway Administration’s Complete Streets**: This website is focused on helping people to plan, develop and operate equitable streets and networks that prioritize safety, comfort, and connectivity to destinations for all people who use the street network. ([https://highways.dot.gov/complete-streets](https://highways.dot.gov/complete-streets))


• **Federal Highway Administration’s Bicycle and Pedestrian Program**: The Bicycle and Pedestrian program provides resources to help promote bicycle and pedestrian transportation use, safety, and accessibility. Resources include a listing of State Pedestrian and Bicycle Coordinators, information on funding sources, and bicycle- and pedestrian-related legislation. ([https://www.fhwa.dot.gov/environment/bicycle_pedestrian/index.cfm](https://www.fhwa.dot.gov/environment/bicycle_pedestrian/index.cfm))

  • Pedestrian and Bicycle Funding Opportunities: U.S. Department of Transportation Transit, Safety, and Highway Funds ([https://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/funding_opportunities.pdf](https://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/funding_opportunities.pdf))

• **Federal Highway Administration’s Small Town and Rural Multimodal Networks**: The DOT’s Small Town and Rural Multimodal Networks guide is a design resource and idea book to help small towns and rural communities support safe, accessible, comfortable, and active travel for people of all ages and abilities.
U.S. Department of Veterans Affairs (VA)

- **Gerofit for Veterans**: Gerofit is an exercise program that promotes health & wellness for Veterans. Veterans are given a personalized exercise prescription and guidance in carrying out the exercise program is provided by trained exercise staff such as physiologists, nurses, or physical therapists. ([https://www.va.gov/GERIATRICS/pages/gerofit_Home.asp](https://www.va.gov/GERIATRICS/pages/gerofit_Home.asp))

- **MOVE! Weight Management Program**: MOVE! is a weight management and health promotion program, supported by the U.S. Department of Veterans Affairs’ (VA) National Center for Health Promotion and Disease Prevention (NCP), designed to improve the lives of Veterans. The program helps Veterans maintain and lose weight by encouraging healthy eating and increased physical activity. ([https://www.move.va.gov/](https://www.move.va.gov/))