Glossary

This section provides definitions for many terms important to physical activity and health. It has been adapted from the glossary provided in the *2018 Physical Activity Guidelines Advisory Committee Scientific Report*. It is not meant to be an exhaustive list, and definitions of additional terms can be found in the Scientific Report.

Absolute intensity. See **Intensity.**

Adaptation. The body's response to exercise or activity. Some of the body's structures and functions favorably adjust to the increase in demands placed on them whenever physical activity of a greater amount or higher intensity is performed than what is usual for the individual. These adaptations are the basis for much of the improved health and fitness associated with increases in physical activity.

Adverse event. In the context of physical activity, a negative health event. Examples of adverse events as a result of physical activity include musculoskeletal injuries (injury to bone, muscles, or joints), heat-related conditions (heat exhaustion), and cardiovascular events (heart attack or stroke).

Aerobic physical activity. 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; and
- **Duration,** or how long a person does an activity in any one session.

Balance. A component of physical fitness that involves maintaining the body's equilibrium while stationary or moving.

Balance training. Static and dynamic exercises that are designed to improve individuals' ability to resist forces within or outside of the body that cause falls while a person is stationary or moving. Walking backward, standing on one leg, or using a wobble board are examples of balance-training activities.

Body composition. A health-related component of physical fitness that applies to body weight and the relative amounts of muscle, fat, bone, and other vital tissues of the body. Most often, the components are limited to fat and lean body mass (or fat-free mass).

Bone-strengthening activity. Physical activity designed primarily to increase the strength of specific sites in bones that make up the skeletal system. Bone-strengthening activities produce an impact or tension force on the bones that promotes bone growth and strength. Running, jumping rope, and lifting weights are examples of bone-strengthening activities.

Cardiorespiratory fitness (endurance). The ability to perform large-muscle, whole-body exercise at moderate-to-vigorous intensities for extended periods of time.

Exercise. 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.

Fitness. See **Physical fitness.**

Flexibility. A health- and performance-related component of physical fitness that is the range of motion possible at a joint. Flexibility is specific to each joint and depends on a number of specific variables, including but not limited to the tightness of specific muscles and tendons. Flexibility exercises enhance the ability of a joint to move through its full range of motion.

Functional limitation. Loss of functional ability, or the ability to carry out everyday tasks and life roles.

Health. A human condition with physical, social, and psychological dimensions, each characterized on a continuum with positive and negative poles. Positive health is associated with a capacity to enjoy life and to withstand challenges; it is not merely the absence of disease. Negative health is associated with illness, and in the extreme, with premature death.

Health-related fitness. A type of physical fitness aimed at promoting health and reducing risk of chronic disease and that includes cardiorespiratory fitness, muscular strength and endurance, body composition, flexibility, and balance.

Intensity. *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.** 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 upstairs, shoveling snow, or participating in a strenuous fitness class. Many adults do no vigorous-intensity activity.
- **Relative.** 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_2max) or VO_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).

Levels of physical activity. A concept to describe how much regular aerobic physical activity a person gets. These categories are related to how many health benefits a person obtains at a given level.

- **Inactive** is not getting any moderate- or vigorous-intensity physical activity beyond basic movement from daily life activities.
- **Insufficiently active** is doing some moderate- or vigorous-intensity physical activity but less than 150 minutes of moderate-intensity physical activity a week or 75 minutes of vigorous-intensity activity or the equivalent combination. This level is less than the target range for meeting the key guidelines for adults.
- **Active** is doing the equivalent of 150 minutes to 300 minutes of moderate-intensity physical activity a week. This level meets the key guideline target range for adults.
- **Highly Active** is doing the equivalent of more than 300 minutes of moderate-intensity physical activity a week. This level exceeds the key guideline target range for adults.

Metabolic equivalent of task. *Metabolic equivalent of task (MET)* refers to the energy expenditure required to carry out a specific activity, and 1 MET is the rate of energy expenditure while sitting at rest. This generally corresponds to an oxygen uptake of 3.5 milliliters per kilogram of body weight per minute. Physical activities frequently are classified by their intensity using the MET value as a reference.

Moderate-intensity physical activity. On an absolute scale, physical activity that is done at 3.0 to 5.9 METs. On a scale relative to an individual's personal capacity, moderate-intensity physical activity is usually a 5 or 6 on a scale of 0 to 10.

Multicomponent physical activity. Physical activity that includes more than one type of physical activity, such as aerobic, muscle strengthening, and balance training. Multicomponent physical activity programs include a combination of balance, muscle-strengthening, and aerobic physical activity and may include gait, coordination, and physical function training.

Muscle-strengthening activity (strength training, resistance training, or muscular strength and endurance exercises). 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 lifting a weight or doing a push-up (comparable to duration for aerobic activity).

Overload. The amount of new activity added to a person's usual level of activity. The risk of injury to bones, muscles, and joints is directly related to the size of the gap between these two levels. This gap is called the *amount of overload*.

Performance-related fitness. Those attributes that significantly contribute to athletic performance, including aerobic endurance or power, muscle strength and power, flexibility, speed of movement, and reaction time.

Physical activity. Any bodily movement produced by the contraction of skeletal muscle that increases energy expenditure above a basal level. In these Guidelines, *physical activity* generally refers to the subset of physical activity that enhances health.

Physical fitness. The ability to carry out daily tasks with vigor and alertness, without undue fatigue, and with ample energy to enjoy leisure-time pursuits and respond to emergencies. Physical fitness includes several components: cardiorespiratory fitness (endurance or aerobic power), musculoskeletal fitness, flexibility, balance, and speed of movement.

Physical function. The capacity of a person to perform tasks or behaviors of everyday life, such as climbing stairs, or to fulfill basic life roles, such as personal care or grocery shopping.

Progression. The process of increasing the intensity, duration, frequency, or amount of activity or exercise as the body adapts to a given activity pattern.

Relative intensity. See **Intensity.**

Resistance training. See **Muscle-strengthening activity.**

Sedentary behavior. Any waking behavior characterized by a low level of energy expenditure (less than or equal to 1.5 METs) while sitting, reclining, or lying.

Specificity. A principle of exercise physiology that indicates that physiologic changes in the human body in response to physical activity are highly dependent on the type of physical activity. For example, the physiologic effects of walking are largely specific to the lower body and the cardiovascular system.

Strength. A health and performance component of physical fitness that is the ability of a muscle or muscle group to exert force.

Strength training. See **Muscle-strengthening activity.**

Vigorous-intensity physical activity. On an absolute scale, physical activity that is done at 6.0 or more METs. On a scale relative to an individual's personal capacity, vigorous-intensity physical activity begins at a 7 or 8 on a scale of 0 to 10.

Appendix 1. Physical Activity Behaviors: Intensity, Bouts, and Steps

In developing this second edition of the *Physical Activity Guidelines for Americans*, the U.S. Department of Health and Human Services considered three issues of particular relevance to translating scientific evidence into physical activity guidance for the public:

- How to incorporate the two methods used to assess the intensity of aerobic physical activity—absolute intensity and relative intensity;
- How to describe the relationship between the duration of bouts of physical activity and health outcomes; and
- How to incorporate steps.

How Are Methods to Assess Intensity of Aerobic Physical Activity Incorporated Into the Guidelines?

A well-known physiologic effect of physical activity is that it expends energy. A metabolic equivalent of task, or MET, is a unit useful for describing the energy expenditure of a specific activity. A MET is the ratio of the rate of energy expended during an activity to the rate of energy expended at rest. For example, 1 MET is the rate of energy expenditure while at rest. A 4 MET activity expends 4 times the energy used by the body at rest. If a person does a 4 MET activity for 30 minutes, they have done 4 x 30 = 120 MET-minutes (or 2.0 MET-hours) of physical activity. A person could also achieve 120 MET-minutes by doing an 8 MET activity for 15 minutes.

Two Methods of Assessing Aerobic Intensity

The intensity of aerobic physical activity can be defined in absolute or relative terms.

Absolute Intensity

Absolute aerobic intensity is defined in terms of METs, as described above:

- Light-intensity activities are defined as waking non-sedentary behaviors of less than 3.0 METs. Walking at 2.0 miles per hour requires 2.5 METs of energy expenditure and is therefore considered a light-intensity activity.
- Moderate-intensity activities are defined as 3.0 to 5.9 METs. Walking at 3.0 miles per hour requires 3.5 METs of energy expenditure and is therefore considered a moderate-intensity activity.
- Vigorous-intensity activities are defined as 6.0 METs or more. Running a mile in 10 minutes (6.0 mph) is a 10 MET activity and is therefore classified as a vigorous-intensity activity.

Information on the absolute intensity of many activities for adults can be found in the *Compendium of Physical Activities* (https://sites.google.com/site/compendiumofphysicalactivities/home). Information for youth can be found in the *Youth Compendium of Physical Activities* (https://www.nccor.org/tools-youthcompendium/).

Relative Intensity

Intensity can also be defined relative to fitness, with the intensity expressed in terms of a percent of a person's maximal heart rate, heart rate reserve, or aerobic capacity reserve. For example, relative moderate intensity is defined as 40 percent to 59 percent of aerobic capacity reserve (where 0 percent of reserve is resting and 100 percent of reserve is maximal effort). Relative vigorous-intensity activity is 60 percent to 84 percent of reserve.

To better communicate the concept of relative intensity (or relative level of effort), a simpler definition is useful:

- Relatively moderate-intensity activity is a level of effort of 5 or 6 on a scale of 0 to 10, where 0 is the level of effort of sitting, and 10 is maximal effort.
- Relatively vigorous-intensity activity begins at a 7 or 8 on this scale.

Using Minutes of Moderate- and Vigorous-Intensity Activity to Reach a Goal

People can meet the key guidelines by doing either moderate- or vigorous-intensity physical activity or a combination of both. A simple rule of thumb is that 1 minute of vigorous-intensity activity counts the same as 2 minutes of moderate-intensity activity. The lower limit of vigorous-intensity physical activity (6.0 METs) is twice the lower limit of moderate-intensity activity (3.0 METs). Therefore, 75 minutes of vigorous-intensity activity a week is roughly equivalent to 150 minutes of moderate-intensity activity a week. The recommendation that adults do 150 to 300 minutes of moderate-intensity physical activity or 75 to 150 minutes of vigorous-intensity physical activity are both equivalent to doing about 500-1,000 MET-minutes a week. Because the MET range for vigorous-intensity physical activity has no upper limit, highly fit people can exceed 1,000 MET-minutes in 75 minutes if they do activities requiring 13.4 METs or more (running at approximately a 7.5 minute-per-mile pace or faster). This amount of activity will provide additional health benefits.

Using Relative Intensity to Meet Guidelines Expressed in Terms of Absolute Intensity

The aerobic key guideline uses METs (i.e., absolute intensity) of 3.0 to 5.9 METs for moderate-intensity activities and 6.0 METs or greater for vigorous-intensity activities. However, the key guidelines for adults indicate that relative intensity can also be used as a means of assessing the intensity of aerobic activities.

For many adults, activities will be similar, whether considering relative or absolute intensity. When reasonably fit adults do absolute moderate-intensity activities in the range of 3.0 to 5.9 METs, they generally are also doing relative moderate-intensity activity. Similarly, absolute vigorous-intensity and relative vigorous-intensity activities overlap a great deal.

For adults with greater levels of fitness, using relative intensity means they will do greater amounts of activity than the key guidelines. For example, a 3.5 MET activity can be relatively light intensity for these adults, and perhaps 6.0 MET activities are relatively moderate. Doing 150 minutes of a 6.0 MET activity will exceed the minimum amount of activity in the key guidelines. This is acceptable for two reasons. First, the key guidelines encourage people to do more activity to gain additional health benefits. Second, people with higher fitness are likely choosing to do greater amounts of activity to maintain that fitness.

The aerobic key guideline for older adults encourages the use of relative intensity because many have low levels of fitness. Therefore, activities in the range of 3.0 to 5.9 METs will be relatively vigorous or physiologically impossible. Thus, the level of effort should be guided by relative as opposed to absolute intensity. As fitness improves with physical activity, activities with greater absolute intensity will be possible.

Allowing the Use of Either Relative Intensity or Absolute Intensity in Children

The key guidelines for children and adolescents ages 6 through 17 years do not require careful tracking of the intensity of activity. The mix of moderate- and vigorous-intensity physical activity is flexible, if some vigorous-intensity activity is done on at least 3 days a week. Intensity can be measured on either the absolute or relative scale.

Relative intensity is appropriate because children and adolescents 6 through 17 years of age who follow the key guidelines should experience improvements in cardiorespiratory fitness, and the relative intensity of the activity is a major determinant of its fitness effects. Observing a youth's breathing can provide an indication of relative intensity. If a child breathes rapidly during physical activity, this indicates relatively vigorous-intensity activity.

However, it is often not feasible to observe children closely enough to determine their level of effort. In this case, absolute intensity can be used to judge whether the child is doing activity that counts toward meeting the key guidelines. Absolute intensity varies by the age and sex of the child. Information on the absolute intensity of various activities for children and adolescents ages 6 years and older is found in the *Youth Compendium of Physical Activities* (https://www.nccor.org/tools-youthcompendium/). In general, similar to adults, brisk walking (as opposed to slow walking) counts as a moderate-intensity physical activity and running counts as a vigorous-intensity activity.

The key guidelines for children ages 3 through 5 years do not require careful monitoring of intensity. All intensities and types of activities provide health benefits and count toward meeting the key guidelines.

What Is the Relationship Between Bout Duration of Physical Activity and Health Outcomes?

Historical Context

Physical activity recommendations have traditionally focused on moderate- to vigorous-intensity physical activity performed in a continuous manner, such as in exercise. In the 1990s, the focus shifted to accumulating physical activity throughout the day in bouts as short as 10 minutes. The *2008 Physical Activity Guidelines for Americans* included the guidance that activity needed to last 10 minutes to count.

Evolving Evidence

Research continues to support the conclusion that physical activity accumulated in bouts of at least 10 minutes can improve a variety of health-related outcomes. In addition, new research indicates that bouts of any length of moderate-to-vigorous physical activity contribute to health benefits associated with the accumulated volume of physical activity. This new evidence justified the current guidance that moderate-to-vigorous physical activity of any duration counts toward meeting the key guidelines.

How Are Steps Considered in the Guidelines?

Steps are a basic unit of locomotion and provide an easy-to-understand metric of ambulation (anything that requires steps, such as walking, dancing, or running). Measuring step counts combined with goal setting and other behavioral approaches has been shown to increase physical activity levels. Step counts are generally measured with wearable activity monitors, including step counters (pedometers, which measure number of steps over a given time) and accelerometers (which can measure both number of steps over a given time and the level of intensity of movement over a given time). Step counters are frequently included in health-tracking smart phone applications.

Over the past 10 years, expanding research and advances in technological approaches for measuring physical activity have led to examinations of the association of step counts with health outcomes and effective approaches to promoting regular physical activity. The research evidence on the influence of incremental increases in the number of steps per day on health outcomes is limited but is expanding rapidly.

Monitoring Physical Activity With Steps

Most of the technological approaches for measuring step counts used within research have provided total step counts for all physical activity over a day. The baseline number of steps per day has varied across studies but the typical amount is about 5,000 steps a day. It is estimated that 80 percent of daily steps among less active people are light intensity. Most research studies designed to increase physical activity have focused on increasing both the amount and intensity of physical activity above basic movement from daily life activities. Studies that focus on steps often set targets of 10,000 steps a day or a percentage increase in steps a day to encourage people to increase their amount of moderate-to-vigorous physical activity.

Increases in physical activity of any duration and any intensity are captured with step counters. Therefore, all types of activities that increase the number of steps taken during the day, such as taking stairs, doing errands by walking, or breaking up sedentary behavior by standing and moving during the work day, are included in estimating total physical activity over a day. The key to using a step counter to monitor progress in meeting the key guidelines is to first set a time goal related to moderate- or vigorous-intensity physical activity (minutes per day of brisk walking or other types of ambulation) and then to calculate how many steps are needed each day to reach that goal. Figure A1-1 explains how to use a pedometer to track walking to achieve the key guidelines goal.

Figure A1-1. Using a Pedometer or Fitness Tracker to Track Walking

Walking is a popular and easy way to meet the key guidelines, and pedometers or step counters are a useful way to track progress. Popular advice, such as walking 10,000 steps a day, is not a guideline per se, but a way people may choose to meet the key guidelines. The main idea in using a pedometer to meet the key guidelines is to first set a time goal (minutes of walking a day) and then calculate how many steps are needed each day to reach that goal.

Moderate- or vigorous-intensity physical activity, such as a brisk walk, counts toward meeting the key guidelines. People generally need to plan episodes of walking if they want to use step goals to progress toward meeting key guidelines.

As a basis for setting step goals, it is preferable that people know how many steps they take per minute of a brisk walk. A person with a lower fitness level, who takes fewer steps per minute than a fit adult, will need fewer steps to achieve the same time of walking.

One way to set a step goal is the following:

1. To determine one's usual daily steps, a person uses a pedometer or fitness tracker to count the number of steps taken on several ordinary days with no episodes of walking for exercise. Suppose the average is about 5,000 steps a day. (Most of those steps are light-intensity activity.)
2. With the pedometer or fitness tracker, the person measures the number of steps taken during a 10-minute walk. Suppose this is 1,000 steps. For a goal of 20 minutes of walking, the goal would total 2,000 steps (1,000 times 2).
3. To calculate a daily step goal, add the usual daily steps (5,000) to the steps required for a 20-minute walk (2,000), to get the total steps per day (5,000 + 2,000 = 7,000).

Then, each week, the person gradually increases the number of total steps a day until the step goal is reached. Rate of progression should be individualized. Some people who start out at 5,000 steps a day can add 500 steps per day each week. Others, who are less fit and starting out at a lower number of steps, should add a smaller number of steps each week.

Appendix 2. Federal Physical Activity Resources

Centers for Disease Control and Prevention (CDC):

BAM! Body and Mind

https://www.cdc.gov/bam/

BAM! Body and Mind was specifically designed for children ages 9 to 12 years to promote age-appropriate nutrition, physical activity, stress management, and other healthy lifestyle habits.

Division of Cancer Prevention and Control (DCPC), Policies and Practices for Cancer Prevention and Survivorship: Physical Activity

https://www.cdc.gov/cancer/dcpc/prevention/policies_practices/physical_activity/index.htm

This DCPC resource highlights the benefits of physical activity for children, adults, and cancer survivors. It also outlines strategies for increasing physical activity in the community and provides guidance for how comprehensive cancer control programs can help promote physical activity for cancer prevention.

Division of Nutrition, Physical Activity, and Obesity (DNPAO)

https://www.cdc.gov/nccdphp/dnpao/state-local-programs/physicalactivity.html

The DNPAO physical activity website provides resources for state and local program planners, health professionals, and other community members to increase physical activity access through community design and programs in various settings.

https://www.cdc.gov/nccdphp/dnpao/data-trends-maps/index.html

Data, Trends, and Maps is an interactive database that provides information about the health status and behaviors of Americans, state-by-state, through clickable maps, charts, and tables. Data can be filtered by category (such as physical activity) and topic (such as behavior or environmental and policy supports).

https://www.cdc.gov/physicalactivity/community-strategies/index.htm

This CDC website offers resources that can help state and local health departments, public health professionals, and community organizations build activity-friendly communities.

Division of Population Health (DPH), Physical Activity for Arthritis

https://www.cdc.gov/arthritis/basics/physical-activity-overview.html

This DPH website provides resources and guidance on physical activity for individuals with arthritis.

Healthy Schools

https://www.cdc.gov/healthyschools/physicalactivity/index.htm

CDC Healthy Schools works to prevent chronic disease and promote the health and well-being of children and adolescents in schools. The physical activity section of the website provides resources on how to effectively implement physical education and physical activity in the school setting.

Million Hearts

https://millionhearts.hhs.gov/tools-protocols/tools/physical-activity.html

The Million Hearts Initiative was established to prevent a million cardiovascular events over a 5-year period by aligning national cardiovascular disease prevention efforts around a select set of evidence-based public health and clinical goals and strategies. This website provides information on community-based programs and resources that promote physical activity as a strategy for preventing cardiovascular disease for people with known cardiovascular disease risk factors.

National Center on Birth Defects and Developmental Disabilities, Increasing Physical Activity Among Adults With Disabilities

https://www.cdc.gov/ncbddd/disabilityandhealth/pa.html

The National Center on Birth Defects and Developmental Disabilities website provides data, resources, and guidance on increasing physical activity among adults with disabilities.

National Institute of Occupational Safety and Health Total Worker Health®

https://www.cdc.gov/niosh/TWH/

Total Worker Health® is defined as policies, programs, and practices that integrate protection from work-related safety and health hazards with promotion of injury and illness prevention efforts to advance worker well-being. This website includes information on how to reduce the health risks from sedentary work.

Older Adult Falls Program

https://www.cdc.gov/homeandrecreationalsafety/falls/programs.html

This collection of effective fall interventions is designed to help public health practitioners, senior service providers, clinicians, and others who want to address older adult falls in their community. The website also provides a program guide designed for community-based organizations that are interested in implementing their own evidence-based fall prevention programs.

Workplace Health Promotion

https://www.cdc.gov/workplacehealthpromotion/index.html

The CDC Workplace Health Program provides leadership to improve the health, safety, and well-being of employees through science-based workplace health promotion programs. Through the Workplace Health Program, CDC works with national employer groups and coalitions, state health agencies, academic institutions, employers, and other key groups to develop, set up, and promote effective strategies for improving the health in the work environment. This website provides health promotion program planners with information on a variety of health promotion programs, as well as how to design, implement, and evaluate effective workplace health programs.

Department of Transportation (DOT)

Federal Highway Administration's Bicycle and Pedestrian Program

https://www.fhwa.dot.gov/environment/bicycle_pedestrian/index.cfm

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.

Federal Highway Administration's Small Town and Rural Multimodal Networks

https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/small_towns/page00.cfm

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.

Environmental Protection Agency (EPA)

Healthy Places for Healthy People

https://www.epa.gov/smartgrowth/healthy-places-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.

National Walkability Index

https://www.epa.gov/smartgrowth/smart-location-mapping#walkability

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.

National Institutes of Health (NIH)

National Heart, Lung, and Blood Institute (NHLBI), We Can!

https://www.nhlbi.nih.gov/health/educational/wecan/

We Can! (Ways to Enhance Children's Activity and Nutrition) provides resources for families and communities focused on helping youth improve food choices, increase physical activity, and reduce screen time. This website provides useful information and tips created specifically for individuals, parents, caregivers, and families. *We Can!* was jointly created by the NHLBI, the National Institute of Diabetes and Digestive and Kidney Diseases, the Eunice Kennedy Shriver National Institute for Child Health and Human Development, and the National Cancer Institute.

National Institutes on Aging (NIA), Go4Life

https://go4life.nia.nih.gov/

Go4Life is an exercise and physical activity campaign designed to help older Americans fit exercise and physical activity into daily life. *Go4Life* offers exercises, motivational tips, and free resources to help older Americans get ready, start exercising, and keep going. The *Go4Life* campaign includes an evidence-based exercise guide in both English and Spanish, an exercise video, an interactive website, and a national outreach campaign.

National Park Service (NPS)

Healthy Parks Healthy People Program

https://www.nps.gov/public_health/hp/hphp/about.htm

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.

Office of the Assistant Secretary for Health (OASH)

Office of Adolescent Health (OAH), Think, Act, and Grow (TAG)

https://www.hhs.gov/ash/oah/tag/index.html

TAG is a national call to action to improve adolescent health in the United States. This website provides information about how professionals, parents, and adolescents can take action as well as resources and success stories to engage and empower teens and young people to be physically active and improve their overall health.

Office of Disease Prevention and Health Promotion (ODPHP)

https://health.gov/paguidelines/

The ODPHP website includes information on the science base used to develop the *Physical Activity Guidelines for Americans*, as well as the Move Your Way campaign resources for health professionals and consumers. This website also offers an online tool to help consumers determine what physical activities they can fit into their daily life and make a plan to help them meet the Guidelines.

https://healthypeople.gov

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.

Office of the Surgeon General, Step it Up! The Surgeon General's Call to Action to Promote Walking and Walkable Communities

https://www.surgeongeneral.gov/library/calls/walking-and-walkable-communities/index.html

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.

President's Council on Sports, Fitness & Nutrition (PCSFN)

https://www.hhs.gov/fitness/index.html

PCSFN engages, educates, and empowers all Americans to adopt a healthy lifestyle. The "Be Active" page of the website provides useful information on how all individuals can engage in appropriate types and amounts physical activities.

The Guide to Community Preventive Services

The Community Guide

https://www.thecommunityguide.org/topic/physical-activity

The Community Guide is a collection of evidence-based findings of the Community Preventive Services Task Force. It is a resource to help select interventions to improve health and prevent disease in states, communities, community organizations, health care organizations, businesses, and schools.

U.S. Preventive Services Task Force (USPSTF)

https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/healthful-diet-and-physical-activity-for-cardiovascular-disease-prevention-in-adults-without-known-risk-factors-behavioral-counseling

https://www.uspreventiveservicestaskforce.org/Page/Document/evidence-summary2/healthy-diet-and-physical-activity-counseling-adults-with-high-risk-of-cvd

https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/healthy-diet-and-physical-activity-counseling-adults-with-high-risk-of-cvd

The USPSTF is an independent, volunteer panel of national experts in disease prevention and evidence-based medicine that makes evidence-based recommendations about clinical preventive services. The USPSTF recognizes that regular physical activity helps prevent chronic disease and decrease morbidity, and its counseling recommendations about promoting physical activity are focused on behavioral counseling services delivered in primary care practices.