

## Documenting and Calculating Physical Activity:

Physical Activity is documented in weekly **minutes of moderate intensity physical activity**. This document provides the user with basic information for converting light or vigorous intensity activity to moderate activity; miles to minutes and steps to minutes.

Regardless of the type of activity or the intensity level, all physical activity will be converted to **minutes of moderate intensity** physical activity.

- **Light Intensity Activity:** divide total minutes spent by 2
- **Moderate Intensity Activity:** log the number of minutes spent
- **Vigorous Intensity Activity:** multiply the number of minutes spent by 2

Example:

- For the purpose of this program a brisk walk refers to 120 (to 140) steps/ minute or a 3.0 MPH walk. Thus, for an individual that walks 2 miles in 40 minutes, 3 days per week ; you would log  $40 \times 3 = 120$  minutes.
- For light intensity activity (1 mile in 40 minutes), multiply by 0.5 and log 60 minutes.
- For vigorous intensity activity (2 miles in 20 minutes), multiply by 2 and log 120 minutes.

Use the step conversion chart to determine relative intensity.

- **Light Intensity Activities** (equivalent to < 120 steps/min): divide minutes spent by 2
- **Moderate Intensity Activity** (equivalent to 120 to 154 steps/min): log the actual minutes spent.
- **Vigorous Intensity Activity** (equivalent to < 155 steps/min): multiply the minutes spent by 2

Use a MET chart to determine relative intensity.

- **Light Intensity Activities** (< 3.0 MET): divide minutes spent by 2
- **Moderate Intensity Activity** (3.0 to 5.0 MET): log the actual minutes spent.
- **Vigorous Intensity Activity** (5.5 to 12.0 MET): multiply the minutes spent by 2

## Goals for Overall Health Benefits:

- 150 min moderate PA + 20 min of strength training 2 days per week; or,
- 75 min vigorous PA + 20 min of strength training 2 days per week.
- 8 to 10,000 steps per day (first 3,000 are baseline) may be used as an alternative. This model does not address intensity and is not supported by strong evidence of health benefits.
- For weight loss or additional health benefits, increase to 300 min. of moderate PA per week (or an equivalent combination of PA).
- There are more specific PA recommendations for Diabetes, Cardiovascular Health, To Reduce Blood Pressure, Stress Reduction and Weight Loss.

**Classification of Total Weekly Amounts of Aerobic Physical Activity Into Four Categories**

Levels of Physical Activity	Range of Moderate-Intensity Minutes a Week	Summary of Overall Health Benefits	Comment
Inactive	No activity beyond baseline	None	Being inactive is unhealthy.
Low	Activity beyond baseline but fewer than 150 minutes a week	Some	Low levels of activity are clearly preferable to an inactive lifestyle.
Medium	150 minutes to 300 minutes a week	Substantial	Activity at the high end of this range has additional and more extensive health benefits than activity at the low end.
High	More than 300 minutes a week	Additional	Current science does not allow researchers to identify an upper limit of activity above which there are no additional health benefits.

**The Health Benefits of Physical Activity—Major Research Findings**

- Regular physical activity reduces the risk of many adverse health outcomes.
- Some physical activity is better than none.
- For most health outcomes, additional benefits occur as the amount of physical activity increases through higher intensity, greater frequency, and/or longer duration.
- Most health benefits occur with at least 150 minutes a week of moderate-intensity physical activity, such as brisk walking. Additional benefits occur with more physical activity.
- Both aerobic (endurance) and muscle-strengthening (resistance) physical activity are beneficial.
- Health benefits occur for children and adolescents, young and middle-aged adults, older adults, and those in every studied racial and ethnic group.
- The health benefits of physical activity occur for people with disabilities.
- The benefits of physical activity far outweigh the possibility of adverse outcomes.

## Health Benefits Associated With Regular Physical Activity

### Children and Adolescents

#### Strong evidence

- Improved cardiorespiratory and muscular fitness
- Improved bone health
- Improved cardiovascular and metabolic health biomarkers
- Favorable body composition

#### Moderate evidence

- Reduced symptoms of depression

### Adults and Older Adults

#### Strong evidence

- Lower risk of early death
- Lower risk of coronary heart disease
- Lower risk of stroke
- Lower risk of high blood pressure
- Lower risk of adverse blood lipid profile
- Lower risk of type 2 diabetes
- Lower risk of metabolic syndrome
- Lower risk of colon cancer
- Lower risk of breast cancer
- Prevention of weight gain
- Weight loss, particularly when combined with reduced calorie intake
- Improved cardiorespiratory and muscular fitness
- Prevention of falls
- Reduced depression
- Better cognitive function (for older adults)

#### Moderate to strong evidence

- Better functional health (for older adults)
- Reduced abdominal obesity

#### Moderate evidence

- Lower risk of hip fracture
- Lower risk of lung cancer
- Lower risk of endometrial cancer
- Weight maintenance after weight loss
- Increased bone density
- Improved sleep quality

Note: The Advisory Committee rated the evidence of health benefits of physical activity as strong, moderate, or weak. To do so, the Committee considered the type, number, and quality of studies available, as well as consistency of findings across studies that addressed each outcome. The Committee also considered evidence for causality and dose response in assigning the strength-of-evidence rating.