

MET Levels of Common Recreational Activities



What is a MET?

MET stands for Metabolic Equivalent

One MET is the amount of energy (calories) your body uses each minute while resting quietly. On average, a man sitting quietly burns 70 calories per hour, and a woman sitting quietly burns about 60 calories per hour.

The MET level is higher as the intensity of your activity increases. For example, 2.5 METs is the amount of energy used each minute to walk leisurely, but that goes up to 5 METs when walking very briskly at 4 mph. You are burning 5 times as many calories per minute when walking briskly as when sitting quietly.

This handout lists the intensity – the MET level – of various physical activities. What level is right for you?

- **Light activities (< 3 METs)** are good for elderly persons and those who may have physical limitations, or someone recovering from an illness who needs to gradually increase their activity level. A good example is slow walking or light gardening.
- **Moderate activities (3-6 METs)** are best for most people wanting a moderate exercise program. A good example is brisk walking 3-4 mph. These activities are safe for most people and do not usually require medical clearance before starting to exercise. If you have a serious health problem, such as diabetes or a heart condition, check with your doctor.
- **Vigorous activities (> 6 METs)** require a higher energy output and are best for persons who already have a high fitness level and are in good health. Examples of vigorous activities are jogging and competitive sports.

Measuring Exercise Intensity

Activity Description	Intensity on a "0-10" Scale*	MET level (Sitting = 1 MET)	Breathing & Heart Rate	How it feels; example
EASY	3-4	Less than 3.0 METs	Minimal increase	Feels easy (e.g., easy walking)
MODERATE	5-6	3.0-6.0 METs	Noticeable increase	Feels fairly easy to somewhat hard (e.g., brisk walking)
VIGOROUS	7-8	Greater than 6.0 METs	Large increase in breathing & heart rate but not out-of-breath	Feels somewhat hard to hard (e.g., jogging, vigorous sports)

*Intensity scale: On a scale of 0-10 where 0 = sitting and 10 = all-out effort

Walk, Jog, Run!	METs	Calories per 60 mins*
Walking, slowly (stroll)	2.0	145
Walking, 2 mph	2.5	215
Walking, 3 mph (20 min/mile)	3.3	245
Walking, 17 min/mile	3.8	285
Walking, 15 min/mile	5.0	360
Race walking, moderate pace	6.5	465
Hiking up hills	6.9	500
Hiking hills, 12 lb pack	7.5	540
Jogging, 12 min/mile	8.0	575
Running, 10 min/mile	10.0	715
Running, 9 min/mile	11.0	790
Running, 8 min/mile	12.5	855
Running, 7 min/mile	14.0	1000
Running, 6 min/mile	16.0	1145

*Approximation based on 150 lb. person



Ready, Set, Bike!	METs	Calories per 60 mins*
Stationary cycling, 50 watts	3.0	215
Bicycling, leisurely	3.5	250
Stationary cycling, 100 watts	5.5	395
Bicycling, 12-13 mph	8.0	575
Bicycling, 14-15 mph	10.0	715
Bicycling, 16-19 mph	12.0	860
Bicycling, 20+ mph	16.0	1145

*Approximation based on 150 lb. person

MET Levels

Listed alphabetically
by category of
intensity

Light activities (<3 METs)*

Light activities (<3 METs)*	METs
Canoeing leisurely	2.5
Croquet	2.5
Dancing, ballroom, slow	2.9
Fishing, standing	2.5
Golf with a cart	2.5
Housework, light	2.5
Playing catch	2.5
Playing a piano	2.5
Sitting quietly	1.0
Stretching exercises, yoga	2.5
Walking, 2 mph	2.5



*Calories burned = up to 215/hour

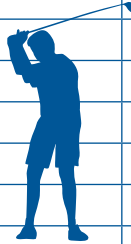
Vigorous activities (>6 METs)*

Vigorous activities (>6 METs)*	METs
Aerobic dance	6.5
Aerobic dance, high impact	7.0
Aerobic stepping, 6-8 inches	8.5
Backpacking	7.0
Basketball game	8.0
Bicycling, 12-13 mph	8.0
Bicycling, 20+ mph	16.0
Calisthenics, heavy, vigorous	8.0
Canoeing, 5 mph or portaging	7.0
Fishing in stream with waders	6.5
Football, competitive	9.0
Football, touch/flag	8.0
Frisbee, ultimate	8.0
Hockey, field or ice	8.0
Ice skating, social	7.0
Jogging, 12 min/mile	8.0
Judo/karate/tae kwan do	10.0



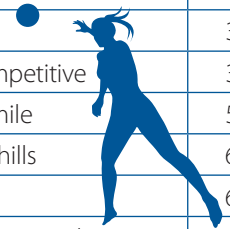
Moderate activities (3-6 METs)*

Moderate activities (3-6 METs)*	METs
Aerobic dance, low impact	5.0
Archery	3.5
Badminton	4.5
Baseball or softball	5.0
Basketball, shooting baskets	4.5
Bicycling, leisurely	3.5
Bowling	3.0
Calisthenics, light to moderate	3.5
Canoeing, 3 mph	3.0
Chopping wood	6.0
Dancing, aerobic or ballet	6.0
Dancing, modern, fast	4.8
Fencing	6.0
Fishing, walking and standing	3.5
Foot bag, hacky sack	4.0
Gardening, active	4.0
Golf, walking	4.4
Gymnastics	4.0
Hiking cross country	6.0
Horseback riding	4.0
Ice skating	5.5



Moderate activities (3-6 METs)*

Moderate activities (3-6 METs)*	METs
Jumping on mini tramp	4.5
Kayaking	5.0
Mowing lawn, walking	5.5
Raking the lawn	4.0
Shoveling snow	6.0
Skateboarding	5.0
Skiing downhill, moderate	6.0
Snorkeling	5.0
Snowmobiling	3.5
Surfing	6.0
Swimming, moderate pace	4.5
Table tennis	4.0
Tai chi	4.0
Tennis, doubles	5.0
Trampoline	3.5
Volleyball, noncompetitive	3.0
Walking, 15 min/mile	5.0
Walking, brisk up hills	6.0
Water skiing	6.0
Weight lifting, heavy workout	6.0
Wrestling	6.0



*Calories burned = 215-430/hour

Vigorous activities (>6 METs)*

Vigorous activities (>6 METs)*	METs
Lacrosse	8.0
Logging/felling trees	8.0
Mountain climbing	8.0
Racquetball	10.0
Racquetball, team	8.0
Roller skating	7.0
Rollerblading, fast	12.0
Rope skipping, slow	8.0
Rope skipping, fast	12.0
Running, 10 min/mile	10.0
Running, 6 min/mile	16.0
Running, 7 min/mile	14.0
Running, 8 min/mile	12.5
Running, 9 min/mile	11.0
Skiing cross country, slow	7.0
Skiing cross country, moderate	8.0
Skiing cross country, racing uphill	16.5



Vigorous activities (>6 METs)*

Vigorous activities (>6 METs)*	METs
Skiing cross country, vigorous	9.0
Skiing down hill, vigorous	8.0
Skin diving	12.5
Snow shoeing	8.0
Soccer, casual	7.0
Soccer, competitive	10.0
Swimming laps, fast	10.0
Swimming laps, moderate pace	7.0
Swimming laps, sidestroke	8.0
Swimming recreational	6.0
Tennis	7.0
Volleyball, competitive/beach	8.0
Walking, 11 min/mile	11.0
Walking up stairs	8.0
Water jogging	8.0
Water polo	10.0



*Calories burned = 430+/hour

How many calories is that?

You can calculate the number of calories you burn for any activity by using the following equation:

$$\text{Exercise calories} = (\text{MET level of activity} \times 3.5 \times \text{Weight (kg)} \times \text{minutes of activity}) / 200$$

Reference: American College of Sports Medicine. *The Compendium of Physical Activities. ACSM Resource Manual 5th Edition, 2006.*

