



Idaho State
University

“Just Keep Moving” – Maximizing Health Through Physical Activity

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ROAR



Defining Physical Activity¹

- **Physical Activity** – any body movements that requires a substantial increase in energy over resting energy expenditure
 - Brisk walking, mowing the lawn or gardening, golfing, dancing, hiking, shoveling snow, “Caregiving”
- **Exercise** – type of physical activity that is planned, structured, and focused on one or more components of fitness
 - Running, weight lifting, cycling/biking, Yoga, Tai Chi, interval training, CrossFit
- **Physical Fitness** – ability to carry out daily tasks with vigor, alertness, without undue fatigue



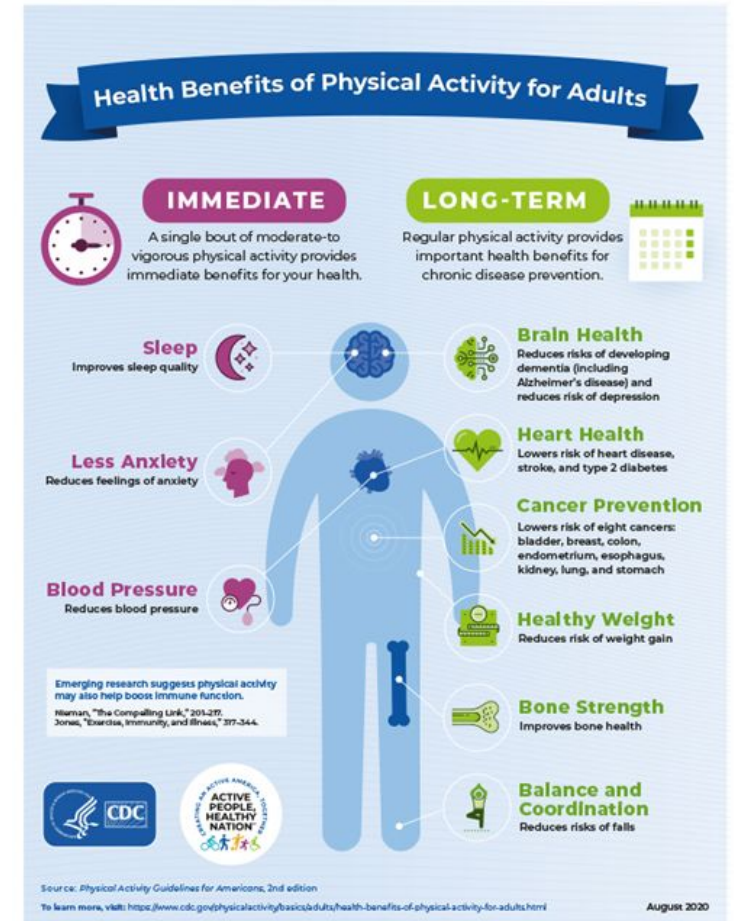
Types of Physical Activity That Target Components of Fitness⁵

- **Aerobic** exercise examples: walking, running, swimming, cycling, dancing, water aerobics, jump roping, recreational sports
- **Strength** training examples: lifting weights, bodyweight exercise, resistance band workouts, climbing stairs, push-ups, sit-ups, squats/standing up and sitting down
- **Flexibility** and **balance** exercises examples: stretching programs, Yoga, Tai Chi



Benefits of Physical Activity^{2,3}

- Lowers risk of all-cause mortality
- Reduces the risk of chronic diseases such as heart disease, diabetes, obesity, and certain cancers
- Strengthens muscles and bones
- Helps regulate blood pressure, body weight, and cholesterol levels
- Reduces stress, anxiety, and depression
- Enhances mental function
- Improves sleep quality





Physical Activity Recommendations¹

- For substantial health benefits or performance
- Participation in moderate intensity aerobic exercise for a minimum of 30 minutes, 5 days/week (150 minutes total/week)
 - Can be broken down into increments
 - 10 minutes, 3 times a day
 - 15 minutes, twice a day
- Participation in activities that maintain or increase muscle strength and flexibility, minimum 2 days/week

ACSM and CDC Recommendations



150 minutes
of moderate-intensity aerobic activity every week

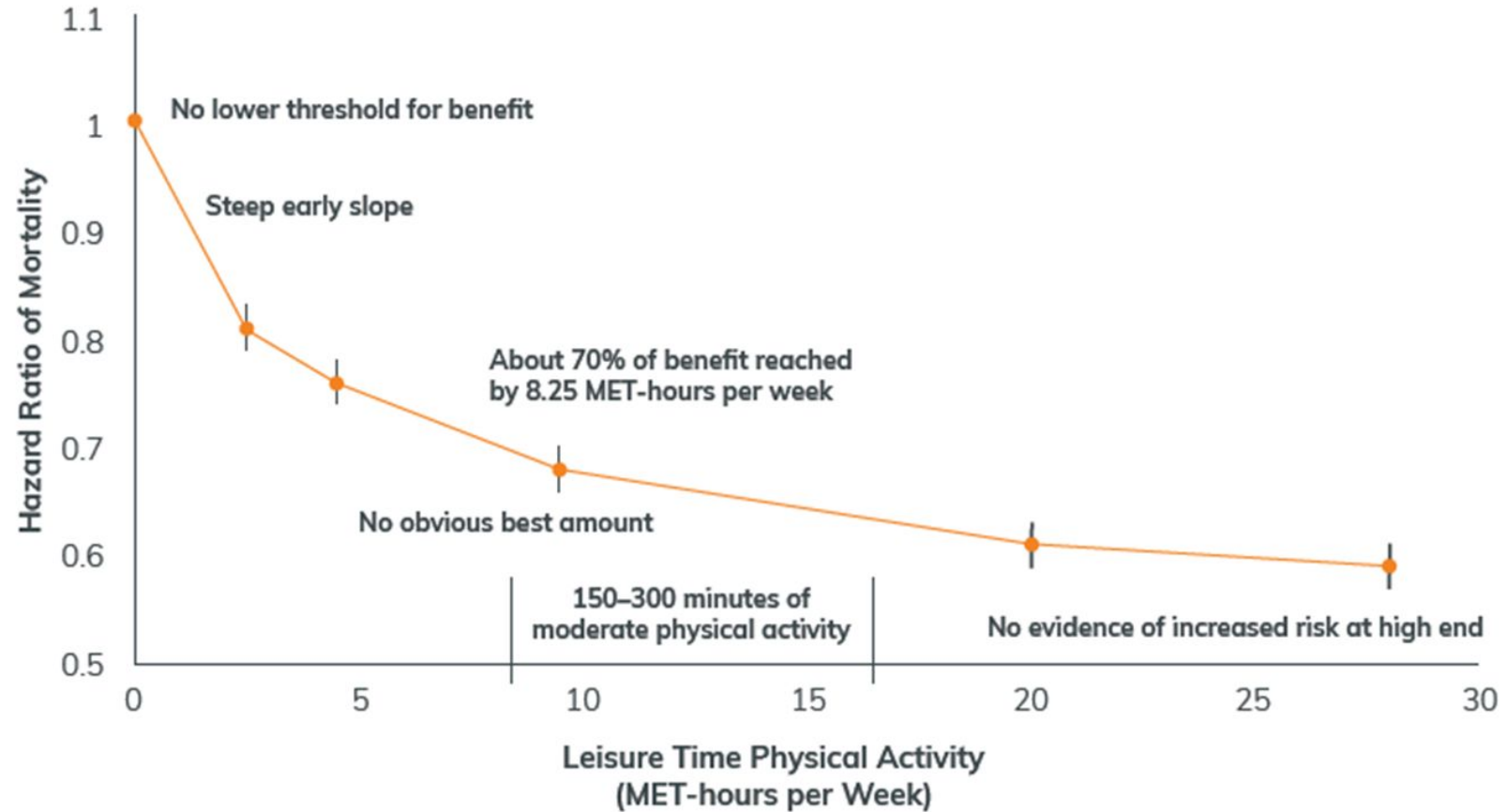
2X per week
Muscle-strengthening activities on 2 or more days a week that work all major muscle groups



<https://www.acsm.org/education-resources/trending-topics-resources/physical-activity-guidelines>



Figure 2-1. Relationship of Moderate-to-Vigorous Physical Activity to All-Cause Mortality



Source: Adapted from data found in Moore SC, Patel AV, Matthews CE. Leisure time physical activity of moderate to vigorous intensity and mortality: a large pooled cohort analysis. PLoS Med. 2012;9(11):e1001335. doi:10.1371/journal.pmed.1001335.

Information adapted from the Physical Activity Guidelines for Americans, 2nd edition. Available at health.gov/PAGuidelines.

Source of slide: Dr. J Woolstenhulme, PT, PhD, presentation, Physical Activity. Idaho State University



“Just Keep Moving”

- “Every step counts. Every minute counts. Anything is better than sitting (or inactivity)”.⁴
- Improvement of health status can occur as a result of **increasing** physical activity
- Decreased time component, but intensity is a key factor
- Valuable evidence for people who have limited time and resources to engage in physical activity



Determining Intensity of Activity⁶

- Most common method for determining exercise intensity is using **heart rate**
 - Maximum heart rate = $207 - (0.7 \times \text{age})$
 - **Moderate intensity** = between 64 – 76% of the maximum heart rate
 - Example - 50 year old
 - $207 - (0.7 \times 50) = 172$ beats per minute (maximal heart rate)
 - 64 – 76% = **110 - 130 beats per minute**
 - **Vigorous intensity** = between 77 – 93% of the maximum heart rate
 - Example – 50 year old
 - 77 – 93% = **132 - 160 beats per minutes**
- Talk Test:
 - Moderate intensity – can talk but difficulty singing
 - Vigorous – cannot say more than a few words without a pausing for a breath



Finding Your Pulse

- Radial pulse
 - Located on the “thumb” side of your wrist
 - Place 2 fingers (not your thumb) on the wrist bone just below your thumb, slide fingers in ~ 1 cm and gently press down
 - Count the number of “beats” in 30 seconds and double
- Carotid pulse
 - Located on the side of your neck
 - Place 2 fingers (not your thumb) on the side of your neck, between the bulk of muscles and your trachea (wind pipe)
 - Count the number of “beats” in 30 seconds and double
- FitBit™
- Watch with fitness trackers – Apple Watch, Garmin

<https://www.medicalnewstoday.com/articles/258118>



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Rate of Perceived Exertion (RPE)

- Another method to determine intensity of your activity intensity
- Scale of 1 - 10
 - 1 = hardly any exertion
 - 10 = maximal effort activity – feels like you can't keep going at this pace, completely out of breath
- Intensity levels
 - Moderate = RPE of 4 to 6
 - Vigorous = RPE of 7 to 8

Modified Borg RPE Scale

RPE SCALE	RATE OF PERCEIVED EXERTION
10 /	MAX EFFORT ACTIVITY Feels almost impossible to keep going. Completely out of breath, unable to talk. Cannot maintain for more than a very short time
9 /	VERY HARD ACTIVITY Very difficult to maintain exercise intensity. Can barely breathe and speak only a few words
7-8 /	VIGOROUS ACTIVITY Borderline uncomfortable. Short of breath, can speak a sentence
4-6 /	MODERATE ACTIVITY Breathing heavily, can hold a short conversation. Still somewhat comfortable, but becoming noticeably more challenging
2-3 /	LIGHT ACTIVITY Feels like you can maintain for hours. Easy to breathe and carry a conversation
1 /	VERY LIGHT ACTIVITY Hardly any exertion, but more than sleeping, watching TV, etc



Guidelines for Safe Physical Activity^{7,8}

- Contact your doctor before beginning any moderate to vigorous exercise program if you have:
 - Existing chronic health problems such as high blood pressure or diabetes
 - History of heart disease, lung disease, vascular disease
 - Currently a smoker
- **Caution** in performing vigorous exercise only once a week
 - Increases the risk for cardiac event
 - Risk reduces with increase frequency of activity (increasing the number of days per week that vigorous exercise is performed)



Guidelines for Safe Physical Activity^{1,7,8}

- Incorporate warm-up and active cool-down period
- Increase physical activity **over time** to meet goals
 - If you are starting from being inactive – “start low and go slow”
- Choose activity that are appropriate for your health level or health history
 - History of joint or muscle injuries
 - History of osteoporosis
 - Impaired balance



When to Stop Physical Activity¹

- Develop pain in the chest
- Marked onset of shortness of breath
- Begin wheezing
- Become light-headed
- Develop confusion
- Detect abnormally fast heart rate or palpitations
- Severe fatigue



Challenges of Physical Activity for the Care Partner

- Not enough TIME
- No additional help or respite care
- Don't have the resource/equipment available
- Not enough energy due to daily demands of caregiving
- Not motivated
- Physical limitations/injuries/discomfort

- Are there other reasons??



Overcoming Barriers to Physical Activity

- Lack of time
 - Break up exercise into shorter time increments – benefits to health even with a few of minutes at a time
 - Prioritize exercise or physical activity by putting into your daily routine - try to set a specific time of day
- Lack of assistance or help
 - Seek respite care resources
 - Ask for help
- Physical limitations
 - Choose an exercise or activity that is appropriate for you



Overcoming Barriers to Physical Activity

- Lack of motivation
 - Set realistic and achievable goals
 - Start small and build up
 - Engage in activities or exercise that you enjoy
- Incorporate variety
 - To target different muscles groups
 - To prevent boredom



https://www.reddit.com/r/Boise/comments/hph4vw/love_going_for_walks_down_the_greenbelt/



Exercise Alternatives for the Care Partner

- Physical activities: walking, climbing stairs, high knees, standing knee bends, jumping rope, gardening, dancing, jumping jacks, playing with children; walking with care partner
- Resource options
 - Online
 - Apps
- DeskFIT

NERD Fitness THE BEGINNER BODYWEIGHT WORKOUT
DO THREE CIRCUITS OF THE FOLLOWING

1. Bodyweight Squats (20)
2. Push-ups (10)
3. Walking Lunges (each leg) (10)
4. Dumbbell Rows (use a milk jug or other weight) (10)
5. Plank (15 sec)
6. Jumping Jacks (30)

https://www.nerdfitness.com/blog/the-7-best-at-home-workout-routine-s-the-ultimate-guide-for-training-without-a-gym/#at_home_workout_1



My Journey as a Care Partner

- My upper body was very strong – duties as a care partner
- Often frustrated that I didn't have the time for aerobic/endurance physical activity
 - Could have incorporated what I know now
- “Wasted” money on gym memberships
 - Thought it would motivate me and make me accountable
- Didn't recognize the physical activities that I was doing – gardening, moving the lawn, shoveling snow



Summary

- Minimal amounts of physical activity are beneficial to your health
- Monitor intensity to achieve moderate level of physical activity
- Understand precautions and guidelines when beginning a program
- Incorporate “non-traditional” physical activity target to your ability

<https://www.amazon.com/Finding-Dory-Swimming-Sticker-Graphic/dp/B08GY9XJHF>





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