

National Disability Forum: The Benefits of Physical Activity to Older Adults

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2018 Physical Activity Recommendations for Adults

- Move more and sit less throughout the day;
- 150-300 min/week of moderate-intensity activity; OR
- 75-150 min/week of vigorous-intensity activity;
- Muscle strengthening and balancing activity on 2 days/week

2018 Physical Activity Guidelines for Americans. USPHS

2018 Physical Activity Recommendations for Children and Adolescents

- ≥ 60 min/day of MVPA (mostly aerobic);
- As part of their 60 min/day of activity, muscle-strengthening activity should be included on at least 3 days/week;
- As part of their 60 min/day of activity, bone-strengthening activity should be included on at least 3 days/week;

2018 Physical Activity Guidelines for Americans. USPHS

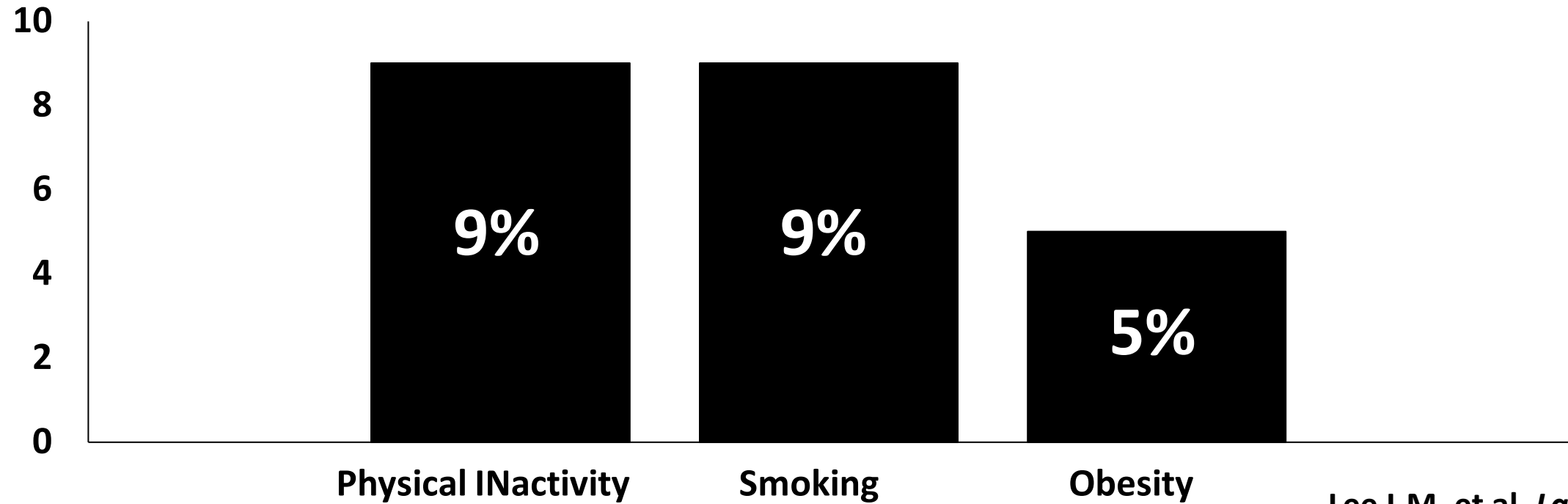
2018 Physical Activity Guidelines Report

https://health.gov/news/blog-bayw/2018/03/2018-physical-activity-guidelines-advisory-committee-submits-scientific-report/?source=govdelivery&utm_medium=email&utm_source=govdelivery

Physical Activity Lowers the Risk of Chronic Disease Morbidity and Mortality

Proportion of all-cause mortality attributable to physical INactivity, compared with smoking and obesity.

PAF (%)

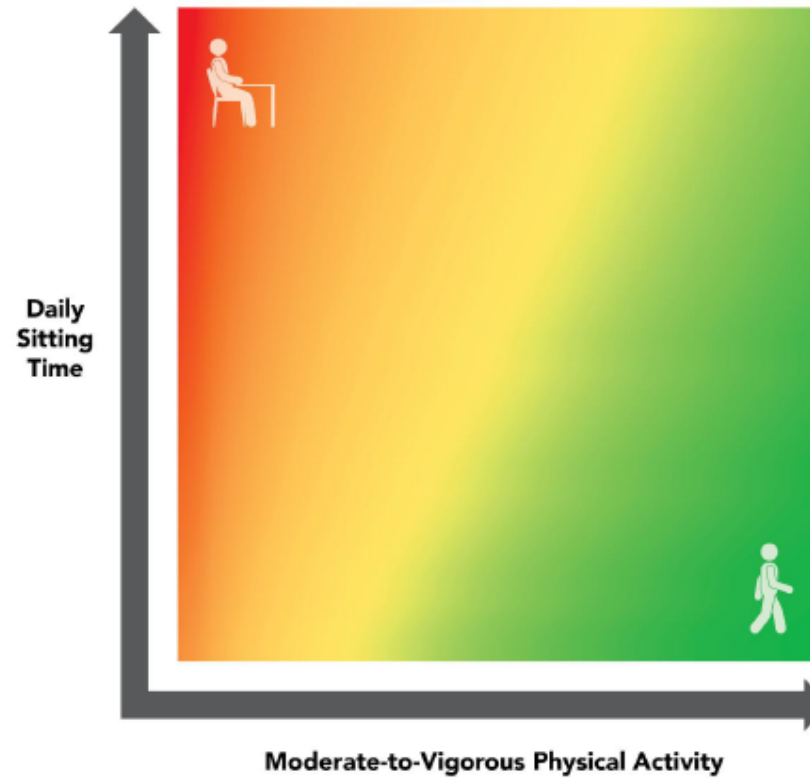


Lee I-M, et al. *Lancet*, 2012.

The joint association between physical activity and sedentary time

Part D. Integrating the Evidence

Figure D-2. Relationship Among Moderate-to-Vigorous Physical Activity, Sitting Time, and Risk of All-Cause Mortality

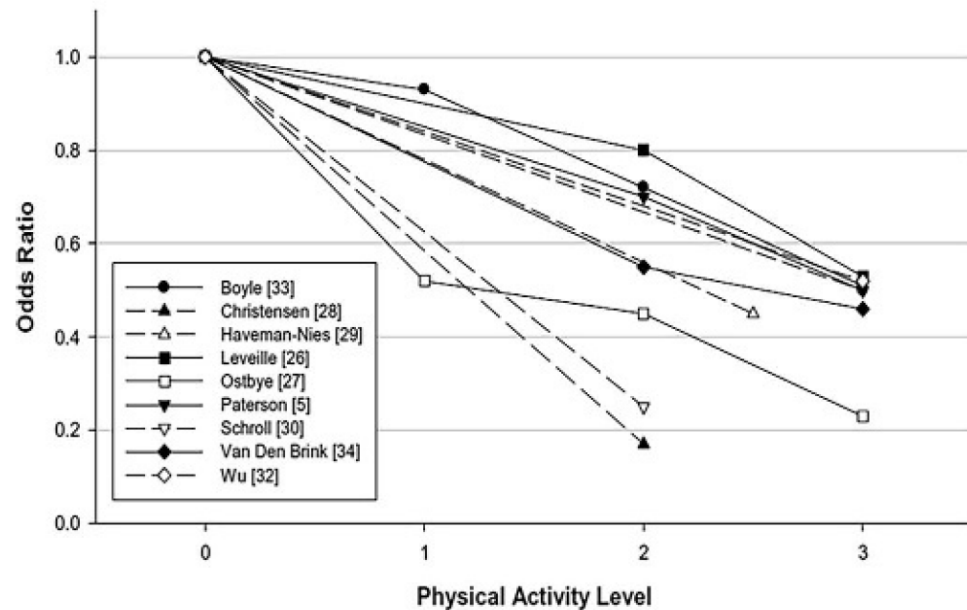


Risk of all-cause mortality decreases as one moves from red to green.

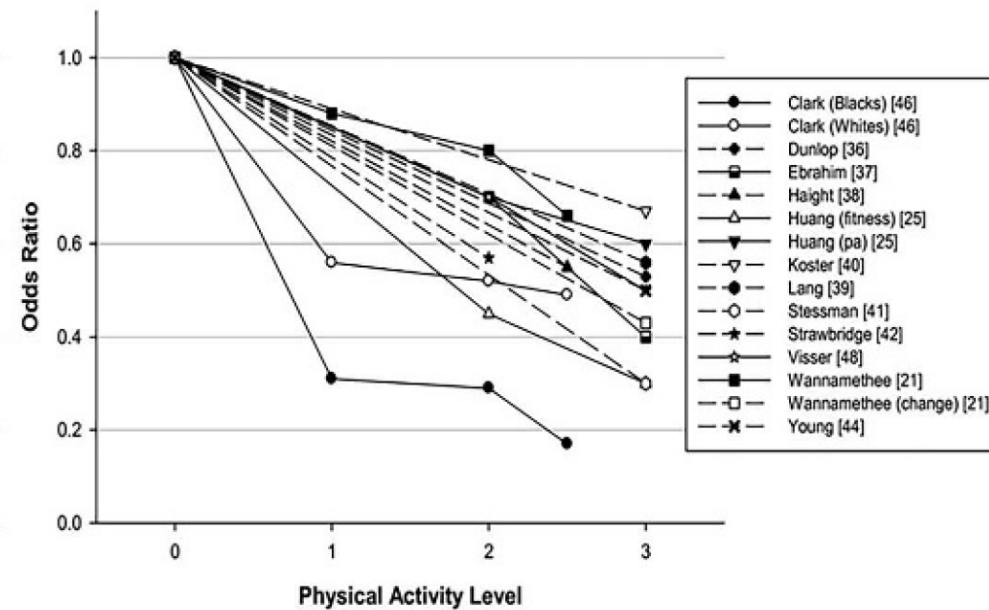
Source: Adapted from data found in Ekelund et al., 2016.⁴

The inverse dose-response relationship between volume of physical activity and risk of physical function limitations in the general older adult population: results from a systematic review

Odds of ADL, IADL, QOL disability (N=9 studies)



Odds of functional limitations in “higher” level functions (e.g., walking a distance or climbing stairs) (N=15 studies)



Paterson and Warburton, 2010

Disease Prevention Benefits from Regular MVPA

10 Leading Causes of Death	10 Most Prevalent Chronic Conditions	10 Most Expensive Medical Conditions
Heart disease	Hypertension	Heart conditions
Cancer	Hyperlipidemia	Trauma disorders
Chronic lung diseases	Upper respiratory conditions	Cancer
Unintentional injuries	Arthritis	Mental disorders
Stroke	Mood disorders	Asthma/COPD
Alzheimer's disease	Diabetes	Hypertension
Diabetes	Anxiety disorders	Type 2 Diabetes
Influenza and pneumonia	Asthma	Arthritis
Kidney disease	Coronary artery disease	Back problems
Suicide	Thyroid disorders	Normal childbirth

Specificity of different modes of physical activity to chronic disease prevention in older people.

Chronic Disease

- Cardiovascular Disease
- Type 2 diabetes
- Cancer
- Osteoporosis
- Physical Disability/Falls
- Cognitive decline

Type of Activity

- Moderate-intensity aerobic
- Moderate-intensity aerobic, muscle strengthening, post-meal walking
- Moderate-intensity aerobic activity, muscle strengthening
- Moderate-intensity aerobic activity (high impact, weight bearing), muscle strengthening
- Multi-component (aerobic, strength, and balance)
- Aerobic *multi-task*

Promoting Physical Activity during Middle- and Older-Age



Barriers to Physical Activity among Older People

- Time
- Illness or disability
- Safety
- Fear of falling
- *ACCESS* to programs



Policy, Systems, Environment (PSE)

- Working at a more foundational level to address causes and improve environments where we live, work, learn, play, and receive health care, we can prevent many people from becoming chronically ill
- Can help public health advocates create sustainable, comprehensive measures to improve public health

Policy	Systems	Environment
Written statement of organizational position, decision or course of action. (such as ordinances, resolutions, mandates, guidelines, or rules)	Changes in organizational procedures (such as personnel, resource allocation, programs)	Physical, observable changes in the built, economic, and/or social environment.

Events/programs approach	Policy, systems, environment approach
One time	Ongoing
Often results in only short-term behavior	Often produces behavior change over time
Individual level	Population level
Not part of ongoing plan	Part of an ongoing plan
Short term	Long term
Non-sustaining	Sustaining

The National Physical Activity Plan

A set of recommendations organized in 8 societal sectors:

- Public health
- Health care
- Education
- Transportation, Land use, Community design
- Parks, Recreation, Fitness & Sports
- Business and Industry
- Volunteer and Non-profit organizations
- Media

Multiple Sector Approach

- Each sector contains a set of strategies for promoting physical activity;
- Each strategy describes specific tactics that communities, organizations, agencies, and people can use to address a given strategy

Exercise Prescription for Aging

- Physical activity is *highly recommended* to modify aging-related physiological decline and its adverse outcomes;
- Benefits may be greater in those most at risk;
- The benefits appear to outweigh the risks;
- USPHS 2018 and WHO 2020 guidelines of 150 min of moderate-intensity aerobic activity per week plus resistance exercise on 2 days is encouraged;
- Balance and flexibility exercises added to lower risk of falls;

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