US Physical Activity Guidelines
For Youth, Adults and Older Adults

<www.health.gov/paguidelines>

- Brief History of PA Guidelines in the USA
- The Guideline Development Process - Summary
- 2008 PA Guidelines for Americans - Highlights
- A New issue - Sedentary Behavior

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Guidelines Development - A dynamic process

- Nearly 60 years of continued science investigating the health benefits of physical activity (Morris, et al. 1953)

- First US physical activity guidelines by American Heart Association in 1972-73 (clinical - how to avoid injury)


Guidelines Development - A dynamic process

2008 Physical Activity Guidelines for Americans

Federal Guidelines by DHHS are a major advance:
• based on substantial new science
• deal with a range of benefits & implementation issues
• application to a broader population
• potential impact on US Federal policy

New guidelines adopted by USA, Canada, UK and WHO in 2008-2011 are well harmonized
Process for Developing National PA Plan in the USA

<www.health.gov/paguidelines>

Processes

- Systematic Evidence Review (2006-07)
- PA Guidelines Advisory Committee
- PA Guidelines Writing Group (HHS Staff)
- Communications Workgroup (HHS Staff)
- National Physical Activity Plan - 2010 <www.physicalactivityplan.org>

Products

- Searchable Data Base 1995-2007 (now w public access)
- 650+ Page Report summarizing the science
- 2008 Physical Activity Guidelines For Americans
- Dissemination plan, information for public, materials for partners, key messages for policies
All-cause mortality
Cardiorespiratory health
Musculoskeletal health
Metabolic health
Energy balance & maintenance of healthy weight
Cancer
Mental health
Functional health - especially in older adults
Youth
Understudied populations
Adverse events & safety
Sources of Data to Support Evidence-Informed Physical Activity Practice Guidelines

- Large randomized controlled trials
- Meta-analysis and systematic reviews
- Small randomized controlled trials
- Prospective observational studies
- Non-randomized trials
- Population surveillance
- Experimental studies on biomarkers
- Case-control studies
- Experimental studies on non-human animals
- Genetic studies
- Consecutive case series
Physical Activity Guidelines Advisory Committee Report 2008
To the Secretary of Health and Human Services

www.health.gov/paguidelines
Preventive Health Benefits of Physical Activity: Strong Evidence

- Lower risk of:
  - Early death (all-cause mortality)
  - Coronary heart disease, stroke
  - Hypertension
  - Type 2 diabetes
  - Cancers: colon and breast
- Prevention of weight gain
- Weight loss (with reduction of caloric intake)
- Prevention of falls
- Depression, cognitive function (older adults)
Preventive Health Benefits of Physical Activity: Moderate Evidence

- Functional ability (older adults)
- Hip fracture, bone density, osteoporosis
- Lung cancer and endometrial cancer
- Weight maintenance after weight loss
- Sleep quality

- Evidence was insufficient for other conditions, e.g.
  - Anxiety disorders
  - Prostate cancer
2008 Physical Activity Guidelines for Americans

Be Active, Healthy, and Happy!

www.health.gov/paguidelines
ALL ADULTS should avoid inactivity. Some activity is better than none, and adults who participate in any amount of physical activity gain some health benefits.

PUBLIC HEALTH TARGET. For substantial health benefits, adults should perform at least 150 minutes of moderate-intensity or 75 minutes of vigorous-intensity activity/week.

Aerobic activity can be accumulated in bouts of 10 minute or longer (e.g., 3 x 10 min./day)

Mix moderate and vigorous intensity activity to meet the aerobic activity goal (500 - 1000 MET-minutes/week).

Perform 6-8 resistance (muscle strengthening) exercises 2 x week
Dose-Response Through Full Range of Activity

- LOW END: *Something is better than nothing.*
  The dose-response for major health benefits clearly indicates an inverse relation between the dose of activity and risk of disease *through the full range of activity.*

- HIGH END: As total activity increases from 150 to 300 minutes of moderate-intensity PA/week, two things happen:
  - *Additional* benefits accrue (e.g., lower risk of breast cancer, more effective weight control)
  - *More extensive* benefits accrue (e.g., risks of heart disease and type 2 diabetes are significantly lower with 300 minutes/week compared to 150 minutes/week)
The key guidelines for adults for aerobic & resistance activity apply to older adults, but there are 4 additional qualifying guidelines:

- Guideline for adults who cannot perform 150 minutes/week
- Balance exercise
- Use relative intensity to determine the level of effort
- Chronic conditions and injury risk
Children and Adolescents (ages 6-17)

- **60 or more minutes of physical activity daily**
  - **Aerobic**: Most of the 60 or more minutes per day should be either moderate- or vigorous-intensity aerobic physical activity. Include vigorous-intensity physical activity at least 3 days per week.
  - **Muscle-strengthening**: Include muscle-strengthening physical activity on at least 3 days of the week, as part of the 60 or more minutes.
  - **Bone-strengthening**: Include bone-strengthening physical activity on at least 3 days of the week, as part of the 60 or more minutes.

- Encourage participation in physical activities that are age appropriate, enjoyable, and offer variety.
Children and Adolescent Guidelines

- As opposed to adults, no choice on frequency - Daily PA recommended
- Unstructured play can meet guidelines
- Requires some vigorous intensity activity - moderate-intensity activity only not sufficient
- Insufficient data to specify exact amounts/ranges of vigorous aerobic, muscle strengthening, and bone strengthening activities
- Challenge to track youth that meet this guideline
Additional Considerations

Other subgroups of the population in the *Physical Activity Guidelines for Americans* include:

- Persons with disabilities
- Adults with selected chronic conditions
- Women during pregnancy and the postpartum period
Does Following the Guidelines Work for Adults?

All-Cause Mortality and Adherence to 2008 Aerobic Activity Guidelines

NEW ISSUE - Sitting / Sedentary Behavior

Preliminary Conclusions Based on Published Data

- Higher amounts of habitual sedentary behavior (sitting) are associated with increased risk for various diabetes and CVD biomarkers and all-cause and CVD mortality. This increased risk appears to be somewhat independent of time spent in MVPA.

- Longer bouts of sitting time tend to increase risk and more frequent breaks appear to decrease risk.

- High amounts of sedentary behavior carries greater risk in men, women, boys and girls who perform little or no MVPA compared to those who meet MVPA guidelines.

- So far it looks like sitting time may need to be decreased by hours/day to achieve significant decreases in risk.
Thank You

Questions?

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