History of Physical Activity Recommendations and Guidelines for Americans

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Overview

Pre-history of the Physical Activity Guidelines for Americans

2006 IOM Meeting Adequacy of Evidence for Physical Activity Guidelines

2008 Physical Activity Guidelines for Americans

2013 PAG Midcourse Report: Strategies to Increase Physical Activity Among Youth

2014 State of the Science Meeting at ACSM

2018 Physical Activity Guidelines for Americans
The Beginnings

Herodicus (480 BC)
Hippocrates (ca 460-ca 377 BC)

“Eating alone will not keep a man well, he must also take exercise. ... And it is necessary, as it appears, to discern the power of various exercises, both natural exercises and artificial...”

Hippocrates, Regimen, ca 400 BC
Exercise Guidelines for Professional Use

- American Heart Association - 1972 *Exercise Testing and Training of Healthy Adults* and 1975 *Exercise Testing and Training of Individuals with Heart Disease or at High Risk for Its Development*

“Exercise is a therapeutic agent designed to promote a beneficial clinical effect and, as such, has specific indications and contraindications and possible toxic or adverse reactions.”
Early guidelines & recommendations (AHA 1972, 1975, ACSM 1978, 1990) were based primarily on endurance exercise to enhance performance - especially aerobic capacity.

**RATIONALE:** Increases in aerobic capacity are most rapidly achieved by increasing the intensity of endurance exercise and higher aerobic capacity is associated with reduced risk of CVD.
• Results from large epidemiological studies show benefits of moderate-intensity activities of daily living.

• Quantity and quality of exercise needed to attain health-related benefits may differ from that recommended for fitness benefits.

• Move toward a more “public health” approach to physical activity. Recognize can trade off amount (frequency and/or duration) for intensity.

• Enhance safety and possibly acceptability.
Public health oriented guidelines since 1995 include the accumulation of ≥ 30 minutes of moderate or greater intensity activity on ≥ 5 days per week.

**ACTIVITY** → **HEALTH**

**RATIONALE:** Data from observational and experimental studies demonstrate health-related outcomes from moderate intensity activity accumulated throughout the day.
Physical Activity and Public Health: Updated Recommendation for Adults from the American College of Sports Medicine and the American Heart Association

Physical Activity and Public Health in Older Adults: Recommendation from the American College of Sports Medicine and the American Heart Association

Published 2007
Adults, 18-65 y
• ≥ 30 minutes moderate on 5 days/wk
• ≥ 20 minutes of vigorous on 3 days/wk
• Or combination of moderate and vigorous
• Muscle strengthening at least 2 days/wk

Older adults or persons with conditions
• Relative intensity
• Flexibility and balance
• Integrate prevention and therapy for current conditions
IOM Meeting Topics

• All-cause mortality, cardiovascular disease and cancer
• Bone, joint and muscle health and performance
• Mental and neurological health
• Diabetes and other metabolic disorders
• Physical activity, obesity and weight management
• Physical activity and risk
• Special consideration groups:
  ◦ Children and youth
  ◦ Older adults
  ◦ Pregnant and postpartum women
  ◦ Persons with disabilities
Physical Activity Guidelines Advisory Committee Report, 2008

To the Secretary of Health and Human Services

U.S. Department of Health and Human Services

2008 Physical Activity Guidelines for Americans

Be Active, Healthy, and Happy!

www.health.gov/paguidelines
Physical Activity Guidelines for Americans

Process for Developing PA Guidelines

Systematic Evidence Review (CDC) → Searchable Database (now with public access)

PA Guidelines Advisory Committee (FACA) → 650+ Page Report summarizing the science

PA Guidelines Writing Group (HHS Staff) → 2008 Physical Activity Guidelines For Americans

Communications Workgroup (HHS Staff) → Dissemination plan, materials for public, materials for partners, logo & key messages

Launch “Team” (HHS Staff and Partners)
Fundamental Finding of PAGAC Report

• A summary of the dose-response relationship across all the health benefits of activity:

“Total weekly physical activity in the range of 500 to 1,000 MET-minutes produces substantial health benefits for adults.”
### Framework: Categories of Volume

<table>
<thead>
<tr>
<th>Level</th>
<th>Moderate-Intensity Minutes</th>
<th>Health Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inactive</td>
<td>No activity beyond baseline</td>
<td>None</td>
</tr>
<tr>
<td>Low</td>
<td>Above baseline but less than 150 min</td>
<td>Some</td>
</tr>
<tr>
<td>Medium</td>
<td>150 to 300 min</td>
<td>Substantial</td>
</tr>
<tr>
<td>High</td>
<td>Above 300 min</td>
<td>Additional</td>
</tr>
</tbody>
</table>
2008 Physical Activity Guidelines for Americans

ADULTS (18 and older)

Aerobic
- At least 150 minutes (2.5 hours) a week of moderate-intensity aerobic physical activity
  OR
- 75 minutes of vigorous-intensity aerobic physical activity
  OR
- An equivalent combination of the two

Muscle-strengthening
- Two or more days a week

YOUTH (6-17 yrs)

- 60 minutes (1 hour) or more of physical activity daily
  - Aerobic
  - Muscle-strengthening
  - Bone-strengthening
Global Harmonization

GLOBAL RECOMMENDATIONS ON PHYSICAL ACTIVITY FOR HEALTH

Improve aerobic fitness by being active several days a week, for a total of at least 2 hours 30 minutes of moderate activity or 1 hour 15 minutes of vigorous activity.

In addition increase muscular strength and improve balance at least 2 times a week.

Weekly PHYSICAL ACTIVITY PIE

Aerobic physical activity
- walking
- Nordic walking
- cycling

Muscle-strengthening and balance training
- strength training
- sequence training
- balance training
- ball games, skating
- stretching, dancing
- aerobics

Heavy house & yard work
- berry picking
- fishing
- hunting

Nordic walking
- stairs and hill climbing
- fitness swimming
- water running
- aerobics

Cycling
- running
- cross-country skiing
- racket games
- running ball games

Recommendation for health-enhancing physical activity for adults aged 18-64

ÖSTERREICHISCHE EMPFEHLUNGEN

Österreichische Empfehlungen

Physical Activity Guidelines for Americans

Office of Disease Prevention and Health Promotion

NIH

CDC

Fonds Gesundes Österreich
PAG Midcourse Report: Strategies to Increase Physical Activity Among Youth

Strategies to Increase Physical Activity Among Youth

School

Primary Care

Preschool and Childcare Centers

Family and Home

Community

Physical Activity Guidelines for Americans

www.health.gov/pagguidelines
• Feds and external experts gathered to explore the current state of the science and potential topics for PAG 2018 consideration

• Topics discussed:
  ◦ Youth under age six*
  ◦ Older adults
  ◦ Cognition across the lifespan*
  ◦ Dose (including variability from baseline and light activity)
  ◦ Sedentary behavior*

• Outcome: consensus that sufficient evidence exists to update the PAG

*not addressed in PAG 2008
Thank You

Be Active, Healthy and Happy!