

History of Physical Activity Recommendations and Guidelines for Americans

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Herodotus (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



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- 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 Testing and
Training of Apparently
Healthy Individuals:
A Handbook for Physicians

Exercise Testing and
Training of Individuals
with Heart Disease or at
High Risk for its
Development:
A Handbook for Physicians

“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.”



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The Exercise Training Paradigm

Early guidelines & recommendations (AHA 1972, 1975, ACSM 1978, 1990) were based primarily on endurance exercise to enhance performance - especially aerobic capacity.

TRAINING → PERFORMANCE

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.



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- 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.



Physical Activity and Public Health 1995

A Recommendation From the Centers for Disease Control and Prevention and the American College of Sports Medicine

Russell R. Pate, PhD; Michael Pratt, MD, MPH; Steven N. Blair, PED; William L. Haskell, PhD; Caroline A. Macera, PhD; Claude Bouchard, PhD; David Buchner, MD, MPH; Walter Ettinger, MD; Gregory W. Heath, DHSc; Abby C. King, PhD; Andrea Kriska, PhD; Arthur S. Leon, MD; Bess H. Marcus, PhD; Jeremy Morris, MD; Ralph S. Paffenbarger, Jr, MD; Kevin Patrick, MD; Michael L. Pollock, PhD; James M. Rippe, MD; James Sallis, PhD; Jack H. Wilmore, PhD

Physical Activity Guidelines for Americans

NIH Consensus Statement

1996

Volume 13, Number 3
December 18-20, 1996



Physical Activity and Cardiovascular Health

NATIONAL INSTITUTES OF HEALTH
Office of the Director



Physical Activity and Health

1996

A Report of the Surgeon General

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion
The President's Council on Physical Fitness and Sports



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.



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SPECIAL COMMUNICATIONS

Special Reports

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

WILLIAM L. HASKELL¹, I-MIN LEE², RUSSELL R. PATE³, KENNETH E. POWELL⁴, STEVEN N. BLAIR³, BARRY A. FRANKLIN⁵, CAROLINE A. MACERA⁶, GREGORY W. HEATH⁷, PAUL D. THOMPSON⁸.

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

Published 2007

MIRIAM E. NELSON^{1,2}, W. JACK REJESKI³, STEVEN N. BLAIR⁴, PAMELA W. DUNCAN⁵, JAMES O. JUDGE^{6,7}, ABBY C. KING⁸, CAROL A. MACERA⁹, and CARMEN CASTANEDA-SCEPPA^{2,10}



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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

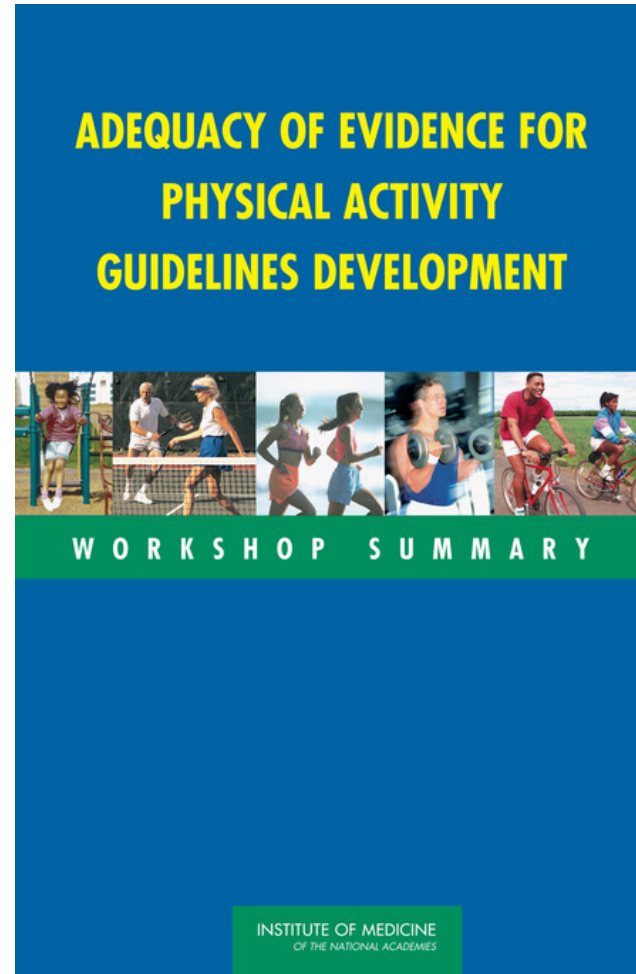


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2006 IOM Meeting – Adequacy of Evidence for Physical Activity Guidelines

Physical Activity
Guidelines for
Americans



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- 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

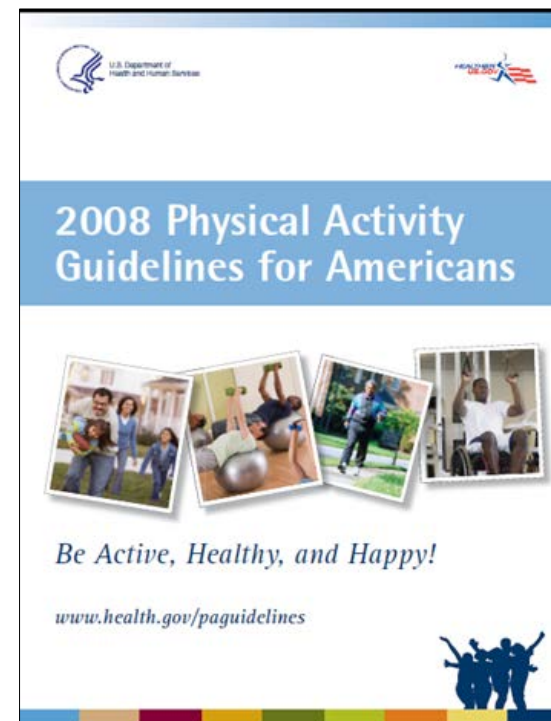
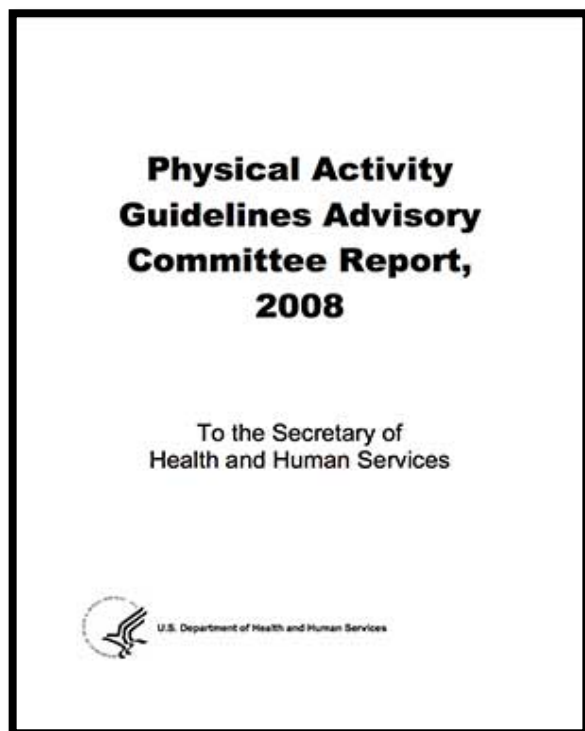


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2008 Physical Activity Guidelines for Americans

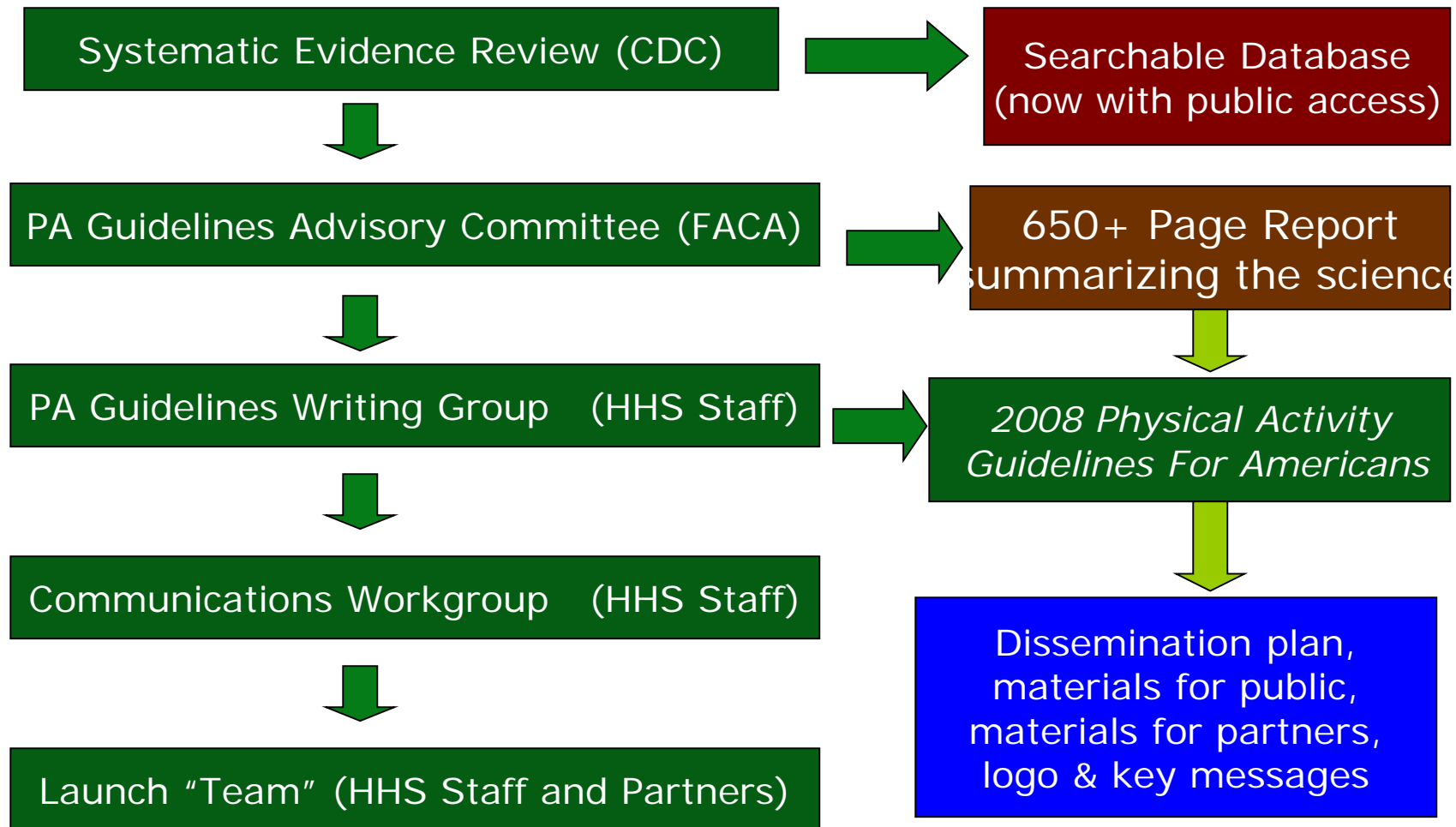
Physical Activity
Guidelines for
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Process for Developing PA Guidelines



- 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.”



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Framework: Categories of Volume

Level	Moderate-Intensity Minutes	Health Benefit
Inactive	No activity beyond baseline	None
Low	Above baseline but less than 150 min	Some
Medium	150 to 300 min	Substantial
High	Above 300 min	Additional



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2008 Physical Activity Guidelines for Americans

Physical Activity
Guidelines for
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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




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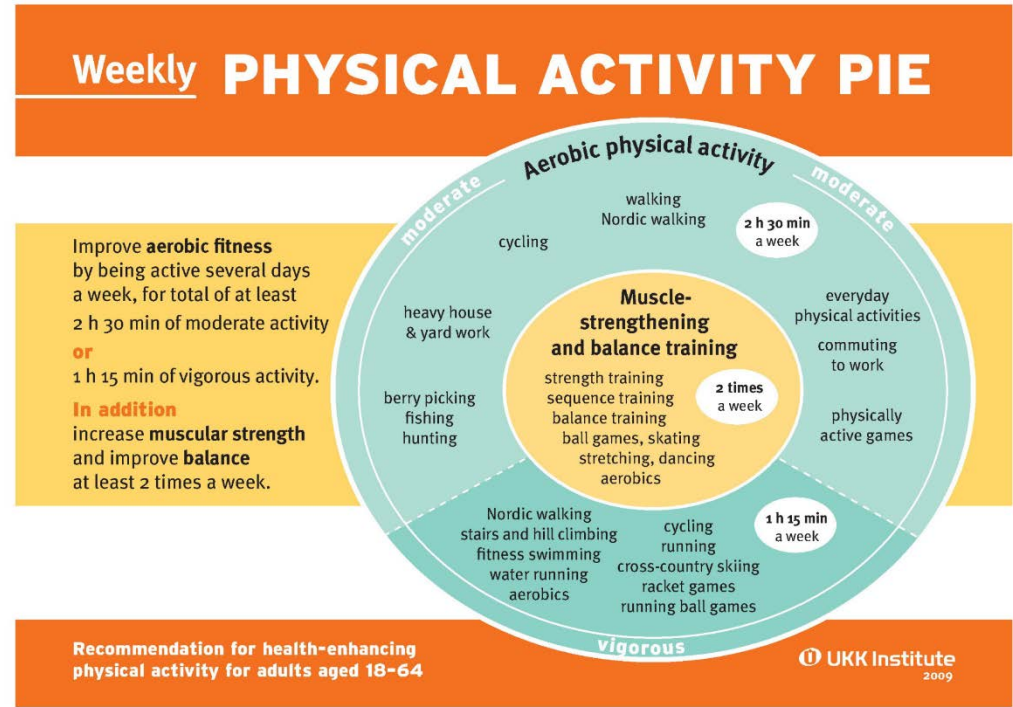
GLOBAL RECOMMENDATIONS ON PHYSICAL ACTIVITY FOR HEALTH



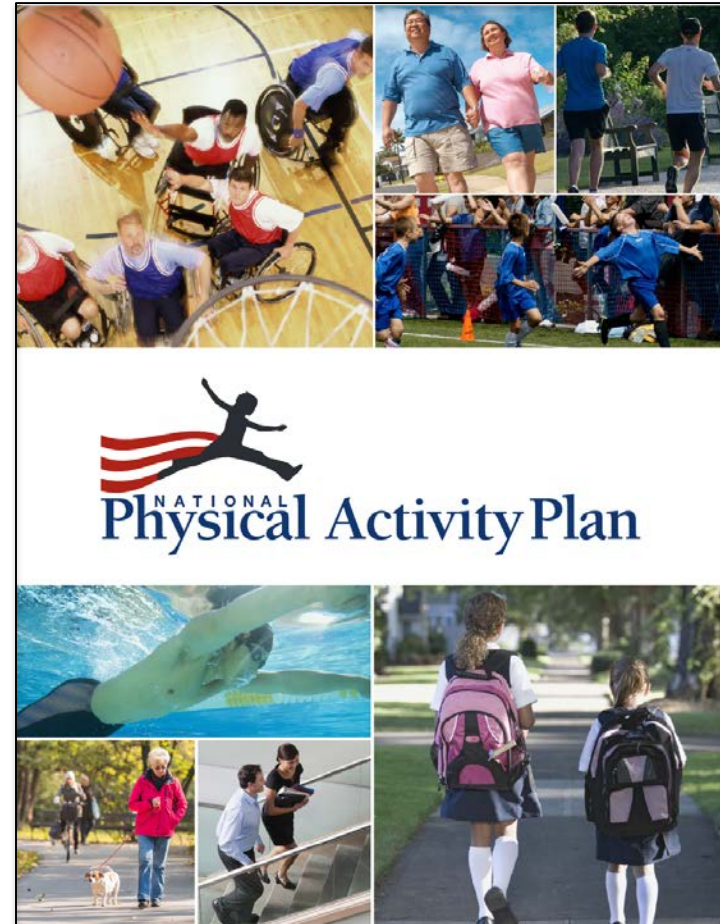
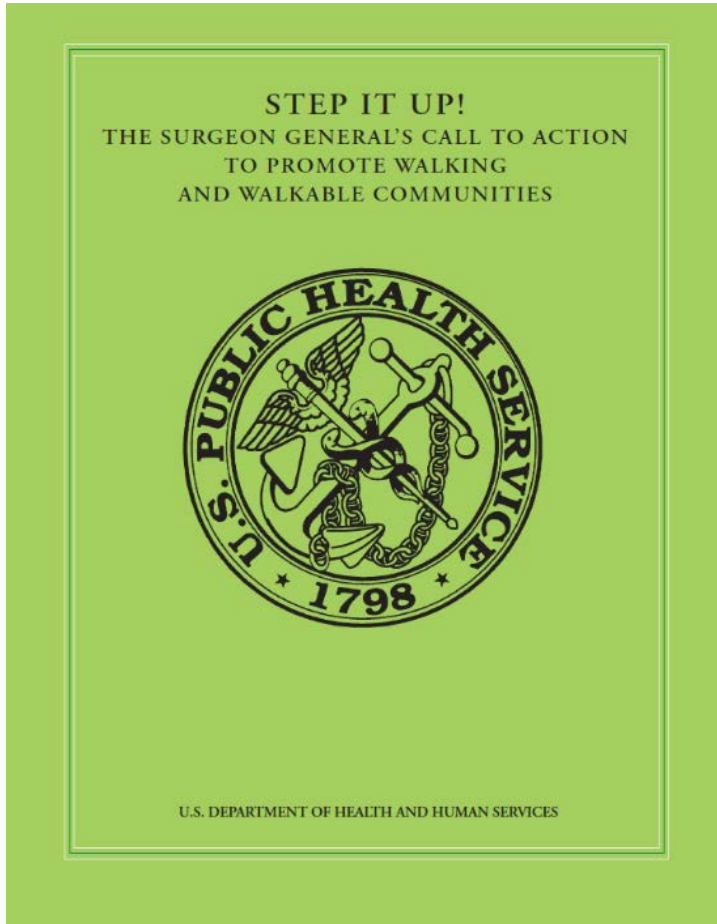
Österreichische Empfehlungen

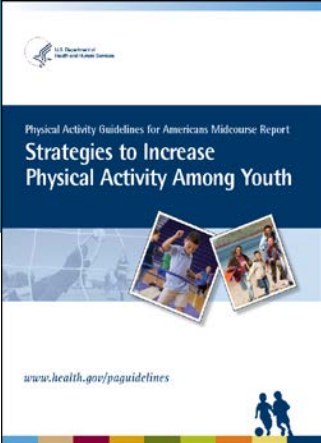


esch/abmeich
Fonds Gesundes Österreich



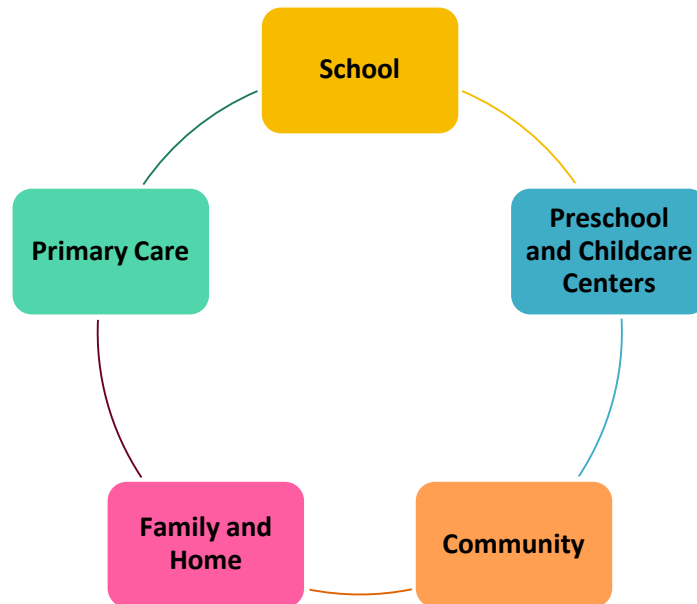
Improve **aerobic fitness** by being active several days a week, for total of at least 2 h 30 min of moderate activity **or** 1 h 15 min of vigorous activity.
In addition increase **muscular strength** and improve **balance** at least 2 times a week.





PAG Midcourse Report: Strategies to Increase Physical Activity Among Youth

Physical Activity Guidelines for Americans



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- 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



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Thank You

Be Active, Healthy and Happy!

