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Call to Action: Contribute to the Development of the Third Edition of the Physical Activity Guidelines for Americans

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INTRODUCTION

Every 10 yr, the US Department of Health and Human Services (HHS) reviews the body of evidence for physical activity and health outcomes and provides updated guidance on the amounts and types of physical activity necessary to get and stay healthy (1). Developing the *Physical Activity Guidelines for Americans* (Guidelines) is a multiyear process, beginning with the identification of key topics, and then the solicitation and appointment of a group of academic experts to serve on the Advisory Committee. The Physical Activity Guidelines Advisory Committee conducts a series of systematic literature reviews on physical-activity-related topics and summarizes the findings in a scientific report, which is then used by the Federal Government to develop the Guidelines.

Planning is underway for the third edition of the Guidelines, anticipated for release in 2028. A federal planning group led by HHS's Office of Disease Prevention and Health Promotion (ODPHP), the National Institutes of Health (NIH), and the Centers for Disease Control and Prevention (CDC) organized a listening session in May 2024 and invited those with expertise in selected topics to participate. Experts from the World Health Organization and the Canadian Physical Activity Guidelines were also invited as key international collaborators. The goals of the listening session were to assess the body of knowledge on selected emerging topics that can inform the next edition of the Guidelines, identify research

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gaps that can be shared with the research community, and begin engaging physical activity researchers and health professionals in the planning for the next edition.

KEY TAKEAWAYS FROM THE LISTENING SESSION

The following sections present key takeaways from the scientific summaries presented by the invited experts, along with potential implications for Guidelines development. Topics were selected based on research needs identified in the second edition of the Guidelines and emerging areas (2), and included equity, wearable devices and the 24-h movement cycle, steps, and the occupational physical activity paradox. Throughout the session, there was an overarching focus on equity, both as a standalone subject and as a cross-cutting topic.

Equity

There are differences in physical activity participation by sociodemographic characteristics such as age, race or ethnicity, and sex. The 2018 Advisory Committee noted difficulties drawing conclusions about the effectiveness of physical activity interventions in various subpopulations (2). The committee also called for additional information on the health effects of physical activity across various subgroups (2). Its literature review was primarily a “review of reviews” focusing on systematic reviews and meta-analyses, and data on subgroups tended to disappear once aggregated. Broadening the types of research examined could help center equity in the Guidelines. Reviewing original research, including qualitative research, and gathering input from individuals with lived experience are strategies that could facilitate the inclusion of findings about specific demographic groups.

HHS is committed to supporting health equity in the next version of the Physical Activity Guidelines. Research that addresses the causes of disparities in physical activity participation (e.g., among rural residents and racial and ethnic minorities) could inform these efforts. The federal planning group continues to explore how to retain information about subpopulations when synthesizing evidence, to consider both what works and how to adapt what works for various populations. Physical activity researchers can help close this gap by including traditionally underrepresented populations in physical activity research, as both participants and members of research teams.

Wearable Devices and the 24-h Movement Cycle

Wearable devices (e.g., accelerometers, pedometers) have changed the way physical activity is measured, eliciting a new area for examination in the Guidelines. Devices can measure patterns of physical activity behavior over days or weeks in ways that questionnaires cannot. Further, studies that use devices show that adults who sit less and do moderate-to-vigorous physical activity gain some health benefits, which is consistent with the current Guidelines (1,3).

The Guidelines provide a weekly recommendation for physical activity. However, several countries now make 24-h movement recommendations (e.g., Canada) (4,5). Given advances in wearable devices, shifting the Guidelines to a 24-h physical activity recommendation is an area to consider. However, because of variation in devices and processing procedures, data may be insufficient to make quantitative 24-h physical activity recommendations. For

example, popular commercial devices are different from accelerometers used in research studies, and outputs are generally not standardized. The choice of algorithm impacts summary estimates and interpretation, and because of this variation, data show that adherence to the Guidelines ranges from 6.3% to 98.3%, depending on the threshold used (6,7).

Validating and harmonizing device data may help address the issues above. Four key actions for researchers discussed at the meeting include 1) generate benchmark datasets for comparing across devices, 2) establish measurement and harmonization practices to promote consistency across studies, 3) explore information technology systems that allow data pooling and support computational tools to implement algorithms consistently across studies, and 4) conduct more studies in real-world versus laboratory settings (8,9).

Steps

Steps from wearable devices are a helpful metric for monitoring and promoting physical activity. Steps tend to be consistently defined and produce reliable estimates over time (10). Steps are also a simple and easy metric to communicate and interpret, and measures of step counts are included in many devices people use every day, such as cell phones.

Evidence suggests that taking more steps is associated with a lower risk of death (11). Findings from a meta-analysis of 15 studies indicate that thresholds of daily steps may vary by age (11). For example, there is some leveling in dose-response association at 6000–8000 steps per day for older adults and 8000–10,000 steps per day for younger adults (12).

There are challenges to consider in evaluating the science on steps and their potential inclusion in the Guidelines. For example, steps could be presented as one way to meet a time-based Guideline, or a step-specific recommendation could be developed. It is not yet clear if intensity is important above and beyond the number of steps. The studies examining intensity are inconsistent in their methodologies and in their conclusions (11). Additionally, there are fewer data available for younger adults, by race and ethnicity, by body mass index, and for adults with chronic conditions. There is also a dearth of experimental design studies (e.g., randomized controlled trials). Equity issues may arise when assessing physical activity using steps. For example, step recommendations cannot be used for people who are nonambulatory. Others may lack the ability or desire to wear step-counting devices (e.g., economic and privacy concerns).

Occupational Physical Activity Paradox

The occupational physical activity paradox suggests that physical activity done at work may not have the same health benefits as activity done during leisure time (13). The current Guidelines state the purpose of aerobic activity does not affect whether it counts toward meeting the aerobic Guideline (1). However, evidence is emerging that suggests high-volume occupational physical activity may not be beneficial to cardiovascular health the way leisure time physical activity is (13).

Experts at the meeting discussed potential reasons why occupational physical activity may impact health differently: it is too low in intensity, or too long in duration, to improve

fitness; it elevates 24-h heart rate and blood pressure; it is performed without sufficient recovery and under high stress; and it increases levels of inflammation (14).

Notably, if the paradox is proven true, equity issues arise. For example, those with high levels of occupational physical activity—populations that tend to be already at increased cardiovascular disease risk (e.g., those with hypertension)—may not experience the health benefits discussed in the Guidelines (14). The topic of occupational physical activity also has implications to the consideration of a 24-h recommendation (e.g., weekly vs daily recommendations; work schedules vary across days).

Research showing health risks of occupational activity contradicts historical research showing health benefits of occupational activity (e.g., among longshoremen) (15). This suggests that additional research on the context of occupational activity may be important. Experts at the meeting also suggested additional research, particularly in the United States, and studies with device-based occupational physical activity measurement can help improve collective understanding of occupational physical activity. Studies of workplace interventions and studies with longitudinal measurement of occupational physical activity exposure would help round out this evidence base.

NEXT STEPS

The listening session focused on four topics that could be considered in the third addition of the Guidelines. However, other topics were also discussed; these included new areas or expanded focus from the current Guidelines (see Table 1).

Call to Action

There are four primary ways the physical activity scientific community can promote the Guidelines and get involved in the development of the third edition (see Fig. 1):

1. Contribute to the literature base that will inform the next edition of the Guidelines. Publish your work by December 31, 2025.
2. Submit nominations for members of the Advisory Committee in the spring of 2025.
3. Use the Guidelines and related promotional material while encouraging physical activity:
 - a. Physical Activity Guidelines: <https://health.gov/our-work/nutrition-physical-activity/physical-activity-guidelines>
 - b. Move YourWay[®]: <https://health.gov/moveyourway>
 - c. Active People Healthy NationSM: <https://www.cdc.gov/active-people-healthy-nation>
4. Stay informed about the Guidelines by joining the email list: <https://health.gov/EmailUpdates/PhysicalActivity>

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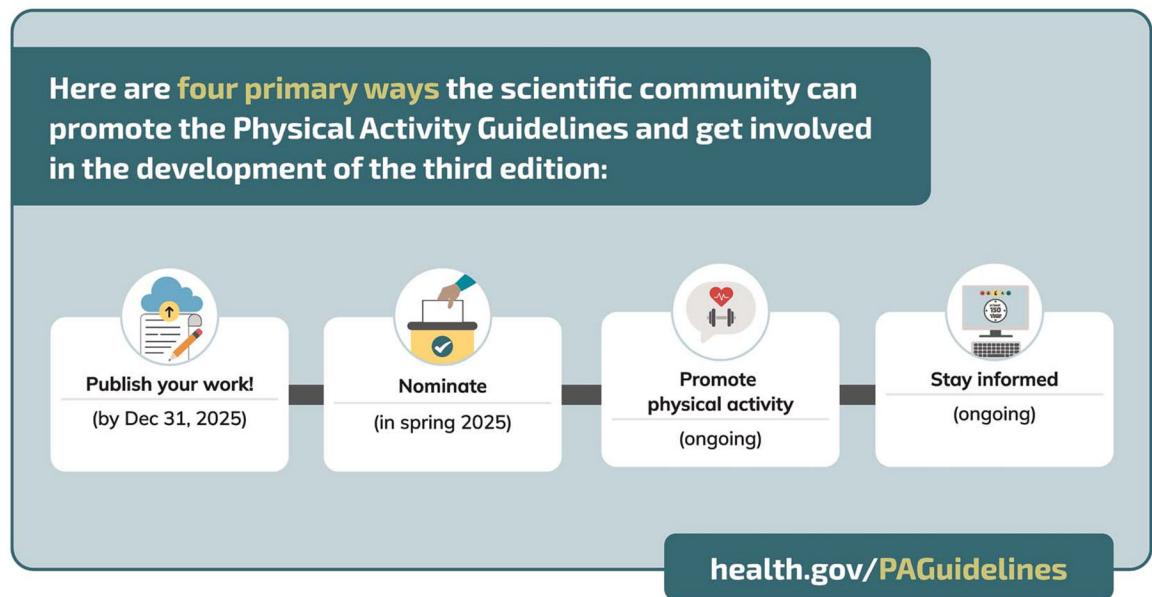


Figure 1:
Call to action.

TABLE 1

Potential Topics for Inclusion in the Guidelines.

Topic
Physical activity recommendations
24-h movement cycle and sleep
Wearable devices and steps
High-intensity interval training
Muscle strengthening physical activity
Sedentary behavior
Timing of physical activity
Impact of extreme weather on physical activity and outdoor physical activity
Equity
Health outcomes
Immune function
Addiction, substance abuse, and risky behaviors
Mental health
Changes in risk of health outcomes with changes in physical activity participation
Weight-related issues (e.g., physical activity while taking weight loss medications, weight maintenance, sarcopenia, and other weight-related conditions)
Occupational physical activity paradox
Special populations
Children younger than 3 yr old
People with intellectual or developmental disabilities
People with chronic conditions
People living with obesity
People in particular stages of life, like menopause or pregnancy

Topics were identified by federal staff and listening session participants as possible areas for the next Advisory Committee to explore.