



Physical activity guidelines 2020: comprehensive and inclusive recommendations to activate populations

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The new WHO 2020 Guidelines on Physical Activity and Sedentary Behaviour¹ provide recommendations on the amount and types of physical activity for various age groups, pregnant and post-partum women, and people living with chronic conditions or disabilities. The 2020 WHO guidelines are built on a much larger evidence base than the 2010 guidelines,² and include some major developments. First, evidence for additional health benefits, such as improved cognitive health, health-related quality of life, mental health, and sleep, is reported, over and above what was included in the 2010 WHO guidelines—ie, cancer, cardiorespiratory, metabolic, musculoskeletal, and functional health. This development reflects the maturation of research on physical activity and the growing incorporation of the WHO definition of health as a state of complete physical, mental, and social wellbeing.³ Second, the 2020 WHO guidelines, for the first time, on a global level, provide specific recommendations for pregnant and post-partum

women and for people living with chronic conditions or disabilities, showing the increasing specificity and relevance of physical activity guidelines to different populations. Third, these guidelines have modified recommendations for how aerobic physical activity should be accumulated—eg, the previous requirement for 10-min minimum duration of continuous activity has been dropped and “some physical activity is better than none”. Finally, the 2020 WHO guidelines provide general recommendations to reduce sitting time, which accords with growing interest in the health effects of sedentary behaviour.⁴

The launch of the 2020 WHO guidelines follows other major physical activity guidelines, most recently in the USA⁵ and UK.⁶ These guidelines provide similar recommendations for the types, intensity, volume, and duration of physical activity for both general and specific populations. Meanwhile, the new Canadian 24-Hour Movement Guidelines for Adults,⁷ launched in October, 2020, took a different approach by integrating recommendations for sleep, sedentary behaviour, and physical activity of various intensities. Such a 24-h activity spectrum approach, which aims to account for the interconnections across multiple behaviours, has also been applied in guidelines on physical activity, sedentary behaviour, and sleep for children younger than 5 years by WHO⁸ and countries such as Australia⁹ and Canada.¹⁰

Debate continues about certain aspects of physical activity guideline development. Although some experts consider existing evidence insufficient for supporting quantitative recommendations for sitting time,¹¹ others advocate that guidelines should be developed despite insufficient and low-quality evidence.¹² Furthermore, some researchers propose inclusion of the entire 24-h day in integrated movement guidelines,^{7,12} whereas others raise concerns such as communication challenges and insufficient 24-h compositional evidence.¹³ Despite some differences, contemporary physical activity guidelines share many commonalities in their defined public health context, an emphasis on participation, and a socially inclusive approach for reaching the entire population.

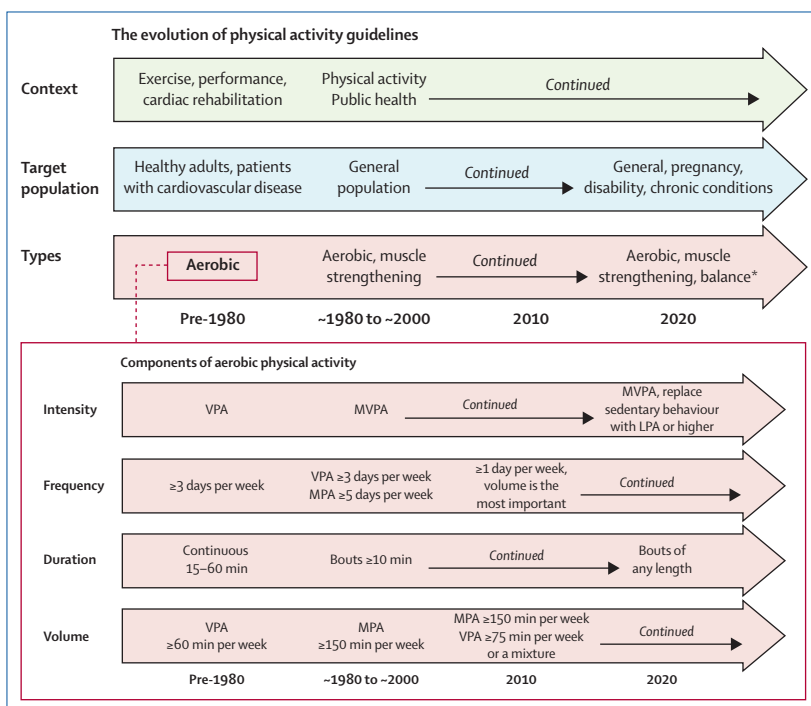


Figure: The evolution of physical activity guidelines and components of aerobic physical activity. VPA=vigorous-intensity physical activity. MVPA=moderate-to-vigorous intensity physical activity. MPA=moderate-intensity physical activity. LPA=light-intensity physical activity. *Primarily among older adults.

Current physical activity guidelines evolved from decades of evidence generation, syntheses, and updates (figure). Early physical activity guidelines focused on continuous vigorous aerobic exercise mainly for performance improvement¹⁴ or cardiac rehabilitation.¹⁵ With increasing evidence on the health benefits of moderate-intensity physical activity, such as walking, guidelines evolved to become more public health oriented and the focus shifted from exercise, which is planned and structured, to physical activity, which can be part of daily living.¹⁶ In recent decades, evidence that incorporates device-based measures and sophisticated analytical approaches has further characterised the amount of physical activity associated with health benefits—eg, the curvilinear relationship between physical activity and health outcomes, the value of any duration of physical activity, and the benefits of light-intensity physical activity as a replacement for sedentary time.^{17,18} Such developments have led to the emphasis on doing any physical activity in any duration in the current guidelines.^{1,5,6} Overall, physical activity guidelines have shifted from exercise training to active living.

Guidelines are an important way to bring scientific research to end-users, such as policy makers, health and non-health professionals, and the public. Updates to existing physical activity guidelines should influence priority setting, decision making, and community awareness and behaviour. An emphasis on doing any amount of physical activity, for example, aims to empower inactive individuals to reap benefits of physical activity, even when the recommended target range (ie, 75–150 min per week of vigorous-intensity physical activity or 150–300 min per week of moderate-intensity physical activity) is perceived to be out of reach. This message is particularly relevant during the COVID-19 pandemic, since lockdowns and physical distancing have imposed additional barriers to physical activity.¹⁹ Additionally, specific recommendations for subpopulations underline social inclusion by engaging with community members left out by earlier guidelines, such as people living with disabilities. Recommendations to reduce sedentary time could lead to new physical activity promotion strategies, such as encouraging light-intensity physical activity among sedentary workers. Finally, the acknowledgment of the health benefits of incidental physical activity of any duration reinforces the

importance of engaging sectors outside of health, such as urban planning, transportation, and architecture, to facilitate short bursts of activities, such as walking or stair climbing.

Public health guidelines alone do not lead to progress. To reach the WHO global target of reducing physical inactivity by 15% by 2030,²⁰ guideline development must be supported by long-term political commitment and paired with coordinated and sustained dissemination and communication strategies across sectors.²¹ WHO encourages governments to consider national social and cultural contexts while adopting the global physical activity guidelines,²¹ which provide opportunities for governments to incorporate strategies on communication, dissemination, and implementation into national guidelines. Key questions to consider include who to engage, what message to communicate,²² and when, where, and how to deliver messages.²³ Furthermore, these guidelines should be used to advocate for long-term resource investment, policy making, and political commitment to reduce physical inactivity. Researchers, practitioners, and advocates need to work with decision makers and all stakeholders and sectors to catalyse change. Tailored guideline summaries and infographics can be disseminated through public health and medical associations to support and empower all practitioners in patient counselling and education. Partnering with non-health sectors, such as transportation, planning, education, and community services, can drive changes in legislation, policies, environments, and practice to facilitate active living.²³

Reducing physical inactivity is a mammoth societal challenge. Sustained commitment and investment, effective communication and dissemination, and cross-sectoral coordination and collaboration are all crucial to activate populations.

We declare no competing interests.

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Action needed now to prevent further increases in measles and measles deaths in the coming years

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Measles is a deadly disease that has killed or disabled millions of children over centuries.¹ In 1980, when most children in low-income countries did not have access to measles vaccine, it was estimated that measles led to the deaths of more than 2 million children.² Advances in child survival during the next two decades were partly due to the provision of measles vaccine for children in all countries through the Expanded Programme on Immunization.³ By 2000, estimated global measles mortality was 539 000 deaths per year.⁴ Further declines followed the introduction of catch-up vaccination campaigns to immunise children missed by routine immunisation. Measles cases declined through 2008, and regional elimination targets for measles were established thereafter.⁵ In 2016, when

measles elimination was verified for the Americas, the global number of reported measles cases reached a low of 132 490.⁴ But measles is extremely infectious, with a basic reproduction number of 12–18.⁶ At least 95% vaccination coverage is required for herd immunity. Globally, estimated measles vaccine coverage in 2019 was 85% and 71% for the first and second doses of measles-containing vaccine respectively,⁴ which combined with poor immunisation campaign performance has left major immunity gaps likely to result in measles outbreaks. Non-uniform vaccination coverage, whether due to problems with accessing vaccination services or vaccine hesitancy, leads to clusters of non-immune individuals, even if overall vaccination coverage exceeds 95%.