



INVITED EDITORIAL

24-hour movement guidelines: is there more to seek than time standards for health?

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Date of first submission, April 23, 2025

Date of final revised submission, May 26, 2025

Date of acceptance, June 2, 2025

Cite this article as: 24-hour movement guidelines: is there more to seek than time standards for health?. (n.d.). *Universa Medicina*, 129-130. Retrieved June 2, 2025, from

<https://univmed.org/ejurnal/index.php/medicina/article/view/1757>

The term physical inactivity is used to describe people who perform insufficient amounts of moderate and vigorous physical activity, thus not meeting the specified physical activity guidelines,⁽¹⁾ and is recognized as one of the greatest threats to health in the 21st century.⁽²⁾

As it is a public health issue of great global concern, it has led to the search for a progressive improvement in the understanding of the role of physical activity in protecting against non-communicable diseases. Therefore, based on the evidence obtained, guidelines were developed that provided recommendations for the practice of minimum levels of physical activity aimed at promoting and maintaining the health of the population.⁽³⁾

The World Health Organization recommends that all countries establish national guidelines and targets for physical activity as a central policy component of public health action.⁽⁴⁾ The release of the 2020 World Health Organization guidelines followed other important physical activity guidelines, such as those from the US and the UK, in providing advice on the type, intensity, volume, and duration of physical activity in general and for specific populations.⁽⁵⁾ The current physical activity guidelines carry important public health messages, the main ones being to reduce sedentary behavior and engage in moderate- and vigorous-intensity activities. The World Health Organization predicts that only 2% of our waking time needs to be spent at such intensities.⁽⁶⁾ But what about the rest of the time? Focusing solely on these activities ignores a large

part of the spectrum of physical activity intensities, which can have a significant impact on health.⁽⁷⁾

Regular physical activity has several health benefits, including improved sleep quality and symptoms of sleep disorders. Sleep promotes memory consolidation and learning while allowing the body to recover and restore itself.⁽⁸⁾ For example, American adults spend, on average, 36% of their daily time on sleep, 32.9% on sedentary behavior, 29.5% on light-intensity physical activity, and 1.6% on moderate- and vigorous-intensity physical activity.⁽⁹⁾ The world's first 24-hour movement guidelines for the adult population were released by Canada in October 2020; they establish measurable targets for surveillance and provide guidance to health professionals, researchers, decision-makers, and the general public.⁽¹⁰⁾

This new paradigm that combines recommendations for all-day movement behaviors (physical activity, sedentary behavior, and sleep) establishes for adults: that sedentary time be limited to 8 hours or less, including no more than 3 hours of recreational screen time; that sleep time be 7 to 9 hours per day; and that 150 minutes of moderate or vigorous physical activity be accumulated per week.⁽¹¹⁾ Based on emerging evidence and seeking a better understanding of the importance of considering movement behaviors in a holistic, that is, global, way, countries such as Australia, Finland, New Zealand, South Africa, and Thailand have issued their 24-hour movement guidelines, replicating the Canadian model.⁽¹²⁾

There is no doubt that the Canadian 24-hour movement guide, by introducing parameters for sleep and sedentary behavior, innovated by expanding the focus beyond moderate and vigorous physical activity. However, some notes are necessary so that future research can fill gaps in this scientific field, such as: i) investigating the combinations of compliance or non-compliance with recommendations for attaining health through physical activity, sedentary behavior, and sleep, seeking to find the existence of a better combination, and whether this would be consensual for all health outcomes; ii) studying behavioral domains—not just how long people are active, sedentary, or asleep, but where and how. For example, is physical activity during leisure time more beneficial than during commuting? iii) considering that physical activity is not limited to moderate and vigorous intensity, a substantial volume of activity practiced during the day occurs at light intensity (approximately 30% of daily time), and therefore deserves special attention (in which contexts, domains, and accumulation patterns it occurs). Advancing these searches is essential to inform future health promotions and disease prevention and intervention policies.

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