

Presently recommended exercise levels may be much more than needed for significant health benefits

April 5 2016

International physical activity guidelines generally recommend 150 minutes a week of moderate-to-vigorous intensity physical activity, but a critical review of the literature indicates that just half this level of activity may still lead to marked health benefits, say experts in the *Canadian Journal of Cardiology*. They challenge physical activity and exercise guidelines development groups to update their recommendations to reflect the evidence.

Physical inactivity is the fourth leading risk factor for global mortality, accounting for approximately 3.2 million deaths annually, according to the World Health Organization. Regular physical activity is acknowledged to be an effective primary and secondary preventive strategy. The evidence points to risk reductions of at least 20-30% for more than 25 chronic medical conditions and premature mortality. However, the amount and intensity of recommended exercise are still hotly debated.

"One of the greatest myths perpetuated within physical activity promotion, the exercise sciences, and exercise medicine is the belief that you need to engage in a minimum of 150 minutes a week of moderate-to-vigorous physical activity to obtain health benefits," explained Darren E.R. Warburton, PhD, and Shannon S. Bredin, PhD, MSc, of the Cardiovascular Physiology and Rehabilitation Laboratory, University of British Columbia, Vancouver, Canada. "However, the preponderance of

evidence simply does not support this contention. There is compelling evidence that health benefits can be accrued at a lower volume and/or intensity of physical activity. These health benefits are seen in both healthy and clinical populations.

"Marked health benefits can be observed in persons living with disability and/or chronic disease with volumes of activity that are well below the 150 minutes per week threshold. Unfortunately, this arbitrary threshold has too often been included in recommendations related to those living with disability and/or chronic medical conditions," they added.

Dr. Warburton and Dr. Bredin, who were responsible for creating the systematic reviews that informed the 2011 Canadian Physical Activity Guidelines for adults and older adults, attribute the recommendation of the need to reach a minimum of 150 minutes of moderate-to-vigorous intensity physical activity per week in Canada to a translation error introduced since the publication of those reviews. "A simple turn of phrase from 'should' to 'must' has had significant impact upon the knowledge translation of the evidence. For instance, promotional materials that state explicitly that individuals 'must' attain 150 minutes per week to achieve health benefits have emerged, along with other messages that imply (or explicitly state) that health benefits cannot be accrued at lower volumes of activity."

In the current article, the authors systematically review the latest studies and recommend that:

- Public health policies should reduce barriers to physical activity participation such that everyone can reap the benefits of physical activity
- Physical activity/exercise promotion should be part of an integrated approach to enhance healthy lifestyle behaviors
- The independent health risks of sedentary time (particularly

sitting time) should be highlighted

- Patients should be provided with an individualized prescription (dosage) that considers their unique characteristics and needs

"It is our sincere hope that this article will help address this significant knowledge translation error, such that all Canadians can reap the health benefits of physical activity." they concluded. "Important, also, is the associated evidence that sedentary time (in particular sitting time) has its own health risk, even for those persons that are physically active. The simple message of 'Move more and sit less' is more understandable by contemporary society and based on a strong body of evidence."

Commenting on this article, James A. Stone, MD, PhD, Clinical Professor of Medicine and Consultant Cardiologist at the University of Calgary, questioned whether these recommendations are "running on empty," i.e., deriving [clinical practice](#) recommendations in the absence of clearly linked high-quality scientific evidence.

"Much of the pertinent information Drs. Warburton and Bredin reference in their review article has only been published in the last few years, and some of it is based on large epidemiologic studies where the available information may be less rigorously researched than the scientific evidence used to produce clinical practical guidelines recommendations," observed Dr. Stone.

"Have the facts really changed? The argument that a lesser dose of physical activity and exercise can still return significant [health benefits](#) needs to be vetted and incorporated into evidence-informed clinical practice guidelines. The time has come to update the message regarding physical activity and exercise," commented Dr. Stone. "However, practice implementation messages are not the same as evidence-informed clinical practice recommendations derived from high-quality evidence. More specifically, the message that some [physical activity](#) is

better than none needs to be researched and validated so it can be incorporated into clinical practice guidelines. So, are current guidelines running blind? Clearly, the correct historical answer is an emphatic no. But with rapidly emerging [evidence](#), we need to expeditiously change all clinical practice guidelines when the facts change," he concluded.

More information: Darren E.R. Warburton et al. Reflections on Physical Activity and Health: What Should We Recommend?, *Canadian Journal of Cardiology* (2016). [DOI: 10.1016/j.cjca.2016.01.024](https://doi.org/10.1016/j.cjca.2016.01.024)

James A. Stone. Canadian Physical Activity Clinical Practice Guidelines: Running on Empty?, *Canadian Journal of Cardiology* (2016). [DOI: 10.1016/j.cjca.2016.01.037](https://doi.org/10.1016/j.cjca.2016.01.037)

Provided by Elsevier

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