# Physical activity: moving from words to action

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In 2008, an analysis of disease burden showed physical inactivity to be the cause of 5·3 million deaths worldwide, largely due to its 9% population attributable fraction for premature mortality.[1] In 2016, the global prevalence of physical inactivity was 27·5%.[2] The mortality estimates for physical inactivity are similar to those observed for tobacco smoking.[3] However, unlike tobacco control programmes, the promotion of physical activity globally has largely been unsuccessful, due to poor coordination, ambiguous messaging, and a general absence of recognition of physical activity as a fundamental human right and public health priority.

In Comments on the 2012 *Lancet* Series on physical activity, Pamela Das and Richard Horton[4] claimed that "The benefits of physical activity are far-reaching and extend beyond health alone", and Chi Pang Wen and Xifeng Wu[3] noted that "Although the benefits of exercise and the harms of inactivity might seem like two sides of a coin, the benefits message emphasised so far has not worked well for most of the population… We need to view the inactive population as abnormal and consider them at high risk of disease." These two quotes represent different perspectives on how to communicate with the public—focusing on either the multiple benefits of physical activity for individuals and environments, or the health harms of inactivity to one's health.

In this context, the Article by Tessa Strain and colleagues[5] represents a breakthrough. They have used a prevented fraction for the population model to estimate the percentage and number of premature mortalities averted by current physical activity prevalence in 168 countries. They calculated that if the global population were inactive, mortality would increase by 15%. This Article tells a story of accomplishment—in that current physical activity prevalence already averts 3·9 million (95% CI 2·5–5·6) premature deaths per year globally—and provides a powerful advocacy message, that governments should continue with and expand support for physical activity promotion. Investment in physical activity already saves millions of lives, and building valid new policies on this basis will save more lives. This change of paradigm can help physical activity promotion worldwide to finally reach policy makers.

Poor coordination and ambiguous messaging have been exemplified in the literature. In the *Lancet* Series on physical activity, published in 2012, the 33 co-authors from 16 countries agreed to use the term "physical inactivity" to classify individuals who do not achieve the 150 min per week threshold recommended by WHO. However, in 2018, researchers from the same group still used the term "insufficient physical activity" instead of "physical inactivity" to describe such individuals.[2]

Unfortunately, this was not the first case of ambiguity. In 1996, an international group of experts was formed to develop, refine, and validate an International Physical Activity Questionnaire (IPAQ), with the aim of standardising the surveillance of physical activity worldwide. Almost immediately following the publication of the IPAQ,[6] another group began work culminating in the publication of the Global Physical Activity Questionnaire in 2009.[7] As such, surveillance systems worldwide still do not rely on a single standardised questionnaire.

If the mixed messaging around physical activity has been problematic, the failure to move from words to action has been worse. The basic public health recommendation for physical activity shifted from an emphasis on vigorous exercise to moderate-intensity physical activity in 1995 and remains much the same today.[8] Although great efforts have been made to clarify, refine, and reinforce the recommendation with evidence of improved quality, population prevalence rates of physical inactivity remain similar to those of 25 years ago. As Strain and colleagues highlight, current prevalence does not only have negative implications, as substantial numbers of deaths are being prevented each year, but modest and achievable gains in population physical activity are a lost opportunity to prevent further deaths. This shortfall is not because we do not know how to increase physical activity or do not have a plan. In fact, the evidence on how to reduce physical inactivity is reasonably strong, examples of success at a national level exist, and refined global and national plans have been developed.[9,10] However, implementation of these plans has been consistently poor and substantially under-resourced.

What can be done to change this inadequate action among stakeholders? Rapid, aggressive, and well-funded

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policy changes by all countries are needed. Timely and valid data on physical activity surveillance, research, and policy are also needed. The Global Observatory for Physical Activity has been collecting and sharing such data since 2012. Enhancing the quality of data collection, especially in low-income and middle-income countries, and improving the evaluation and accountability on implementation of policies and programmes are essential. However, without sufficient resources, little will change. Such changes might seem an impossible aim in a time of public health crisis due to COVID-19, but, in fact, most strategies to reduce physical inactivity either require public health to partner with other sectors, or reside entirely outside public health. Improved partnership development focused on sectors such as urban development and mobility, climate change, air quality, equity, and public safety might uncover the resources needed to reduce physical inactivity.

We declare no competing interests.



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1 Lee I-M, Shiroma EJ, Lobelo F, et al. Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. *Lancet* 2012; **380:** 219–29.
2 Guthold R, Stevens GA, Riley LM, Bull FC. Worldwide trends in insufficient physical activity from 2001 to 2016: a pooled analysis of 358 population-based surveys with 1·9 million participants. *Lancet Glob Health* 2018; **6:** e1077–86.
3 Wen CP, Wu X. Stressing harms of physical inactivity to promote exercise. *Lancet* 2012; **380:** 192–93.
4 Das P, Horton R. Rethinking our approach to physical activity. *Lancet* 2012; **380:** 189–90.
5 Strain T, Brage S, Sharp SJ, et al. Use of the prevented fraction for the population to determine deaths averted by existing prevalence of physical activity: a descriptive study. *Lancet Glob Health* 2020; **8:** e920–30.
6 Craig CL, Marshall AL, Sjöström M, et al. International physical activity questionnaire: 12-country reliability and validity. *Med Sci Sports Exerc* 2003; **35:** 1381–95.
7 Bull FC, Maslin TS, Armstrong T. Global physical activity questionnaire (GPAQ): nine country reliability and validity study. *J Phys Act Health* 2009; **6:** 790–804.
8 Physical Activity Guidelines Advisory Committee. 2018 Physical activity guidelines advisory committee scientific report. Washington, DC: US Department of Health and Human Services, 2018.
9 Pratt M, Perez LG, Goenka S, et al. Can population levels of physical activity be increased? Global evidence and experience. *Prog Cardiovasc Dis* 2015; **57:** 356–67.
10 WHO. Global action plan on physical activity 2018–2030: more active people for a healthier world. Geneva: World Health Organization, 2018.