Physical activity—time to take it seriously and regularly

In 1994, the epidemiologist Jerry Morris described physical activity as the "best buy" in public health.¹ In 2012, *The Lancet* published its first Series on physical activity, which showed an estimated 5·3 million deaths per year are due to inactivity; the Series concluded that physical inactivity is as important a modifiable risk factor for chronic diseases as obesity and tobacco.² Today, we publish our second Series, which provides an update of the field since 2012 and an analysis of the latest science of physical activity and health, with a strong focus on lowincome and middle-income countries (LMICs).³-6

The urgency for global action is strengthened by new evidence in this 2016 Series about the effect of physical inactivity on dementia,⁵ the large health-care costs of inactivity,⁴ the additional health risks from excessive sitting,³ and, most importantly, the observation that physical activity is not improving worldwide, despite an increased number of countries having a national physical activity policy or plan.⁵ Action is possible because evidence of effective interventions is growing. But there has been an overall failure to scale up effective interventions at the population level.⁶

The UN's goals for non-communicable disease reduction and the WHO targets for physical activity⁷ have led to improvements in adoption of national policies. But political commitment and resources are lacking to implement those policies. Instead, the default response for many years is for governments and WHO to roll out media campaigns, which have had little impact. Furthermore, as our first Series pointed out, many public policies to promote physical activity lie outside the health sector. These policies are harder to deliver: they need cross-government agreements and partnership for action, across, for example, housing, transportation, land use, and education. They also require public health agencies to reach out themselves and collaborate with organisations with which they do not usually work.

Further benefits of physical activity are shown in the largest harmonised meta-analysis on the joint health effects of sedentary behaviour and physical activity.³ Ulf Ekelund and colleagues³ show how regular activity can diminish the increased mortality risks associated with prolonged sitting. The study should help shift the current focus on reducing sitting times alone to more emphasis on regular activity.

The world needs to get serious about physical activity. And that means money—for capacity in public health departments to undertake adequate surveillance, crosssector partnerships, interventions, policy monitoring, and research, especially the cost-effectiveness of interventions. There is extensive evidence about the need for action to improve physical activity, what actions are most promising, and who needs to be involved. But capacity and funding remains insufficient because physical activity is not taken seriously enough to rise to the top of the funding priorities. The staggering INT\$67.5 billion economic cost of physical inactivity worldwide to the health-care system through health-care expenditure and productivity losses, as shown by Ding Ding and colleagues,4 should be a wake-up call for Ministries of Health. It should help spur countries to focus on the WHO target to achieve a reduction by 10% in physical inactivity by 2025.7 Without a rapid increase in action this target will not be achieved. We hope this Series will encourage policy makers to take physical activity more seriously and for people to take it regularly. We must continue to strive towards the longer term goal: the integration of physical activity into our daily lives.

Pamela Das, Richard Horton The Lancet, London EC2Y 5AS, UK

We thank Pedro C Hallal and Ding Ding for devising and leading this second Series, and Adrian E Bauman, Ulf Ekelund, Gregory W Heath, Harold W Kohl 3rd, I-Min Lee, Kenneth E Powell, Michael Pratt, Rodrigo S Reis, and James F Sallis for their contributions, commitment, and support as the *Lancet* Physical Activity Series 2 Executive Committee. We also thank the Wellcome Trust for funding the Series' peer review meeting.

- 1 Morris J. Exercise in the prevention of coronary heart disease. Today's best buy in public health. *Med Sci Sports Exerc* 1994; **26**: 807–14.
- 2 Lee IM, Shiroma EJ, Lobelo F, Puska P, Blair SN, Katzmarzyk PT. Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. *Lancet* 2012; 380: 219–29.
- 3 Ekelund U, Steene-Johannessen J, Brown WJ, et al, for the Lancet Physical Activity Series 2 Executive Committee and the Lancet Sedentary Behaviour Working Group. Does physical activity attenuate, or even eliminate, the detrimental association of sitting time with mortality? A harmonised meta-analysis of data from more than 1 million men and women. Lancet 2016; published online July 27. http://dx.doi.org/10.1016/S0140-6736(16)30370-1.
- 4 Ding D, Lawson KD, Kolbe-Alexander TL, et al, for the Lancet Physical Activity Series 2 Executive Committee. The economic burden of physical inactivity: a global analysis of major non-communicable diseases. Lancet 2016; published online July 27. http://dx.doi.org/10.1016/S0140-6736(16)30383-X.
- 5 Sallis JF, Bull F, Guthold R, et al, for the Lancet Physical Activity Series 2 Executive Committee. Progress in physical activity over the Olympic quadrennium. Lancet 2016; published online July 27. http://dx.doi. org/10.1016/S0140-6736(16)30581-5.





Published Online July 27, 2016 http://dx.doi.org/10.1016/ S0140-6736(16)31070-4

See Online/Comment http://dx.doi.org/10.1016/ S0140-6736(16)30960-6, http://dx.doi.org/10.1016/ S0140-6736(16)30929-1, and http://dx.doi.org/10.1016/ S0140-6736(16)30881-9

See Online/Articles http://dx.doi.org/10.1016/ S0140-6736(16)30370-1, and http://dx.doi.org/10.1016/ S0140-6736(16)30383-X

See Online/Series http://dx.doi.org/10.1016/ S0140-6736(16)30581-5, and http://dx.doi.org/10.1016/ S0140-6736(16)30728-0

For the **2012 Lancet Series on physical activity** see http://www.thelancet.com/series/physical-activity

Comment

- 6 Reis RS, Salvo D, Ogilvie D, Lambert EV, Goenka S, Brownson RC, for the Lancet Physical Activity Series 2 Executive Committee. Scaling up physical activity interventions worldwide: stepping up to larger and smarter approaches to get people moving. Lancet 2016; published online July 27. http://dx.doi.org/10.1016/S0140-6736(16)30728-0.
- 7 WHO. Global status report on non-communicable diseases. Geneva, Switzerland: World Health Organization, 2014.
- 8 Kohl HW 3rd, Craig CL, Lambert EV, et al, for the Lancet Physical Activity Series Working Group. The pandemic of physical inactivity: global action for public health. Lancet 2012; 380: 294-305.