

PUBLIC HEALTH

Health risks of physical inactivity similar to smoking

Physical inactivity causes approximately one in every 10 deaths each year, and accounts for 6–10% of major noncommunicable diseases worldwide. Removing this behavior could prevent 5.3 million deaths annually, and extend life expectancy in the population of the world by 0.68 years. These important findings have been published by Dr I-Min Lee and colleagues as part of the *Lancet* Physical Activity Series. "Since physical activity has so many health benefits, it is concerning that only about one-third of the world's population is physically active," comments Dr Lee. "With the 2012 summer Olympic Games, we felt this was a good opportunity to call the attention of the world to the public health problem of physical inactivity."

In the study by Lee and co-workers, 'physical inactivity' was defined as not engaging in the equivalent of 2.5 h per week (e.g. 30 min per day, 5 days per week) of moderate-intensity exercise, such as brisk walking. The investigators estimated the prevalence of physical inactivity using data collected by the WHO from 122 countries worldwide. They calculated population-attributable factors (PAFs) associated with physical inactivity, by country, for coronary heart disease (CHD), type 2 diabetes mellitus, breast cancer, and colon

cancer. The PAF is the proportion of new cases of a disease that would not occur if the risk factor (i. e. physical inactivity) was removed. Life tables were used to determine potential gains in life expectancy.

Physical inactivity was most prevalent (43.2%) among people who later developed diabetes, and lowest (40.7%) in those who developed breast cancer. The prevalence for CHD was 42.2%. The median PAFs for CHD and all-cause mortality were 5.8% and 9.4%, respectively. By-country analysis showed that the benefits of removing physical inactivity would be greatest in the Eastern Mediterranean region, with median PAFs for CHD and all-cause mortality of 7.8% and 12.5%, respectively. The gain in life expectancy was also highest for this region at a median of 0.95 years.

The investigators illustrate the gravity of their findings by drawing comparisons between physical inactivity and tobacco smoking. Both these risk factors for noncommunicable diseases account for around 5 million deaths each year worldwide, yet smoking is much more-widely recognized as being detrimental to health than is lack of exercise. Although the benefits of physical activity are often highlighted, the very real dangers of inactivity do not receive sufficient attention. "This unhealthy behavior needs to be viewed on a par with, and as dangerous to health as, smoking," explains Dr Lee. "Efforts need to be made across multiple sectors of influence, including health, transport, sport, education, and business to promote physical activity."

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Original article Lee, I. et al. Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. *Lancet* **380**, 219–229 (2012)

