GLOBAL HEALTH RISKS

Mortality and burden of disease attributable to selected major risks
Global health risks: mortality and burden of disease attributable to selected major risks.


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Summary

The leading global risks for mortality in the world are high blood pressure (responsible for 13% of deaths globally), tobacco use (9%), high blood glucose (6%), physical inactivity (6%), and overweight and obesity (5%). These risks are responsible for raising the risk of chronic diseases such as heart disease, diabetes and cancers. They affect countries across all income groups: high, middle and low.

The leading global risks for burden of disease as measured in disability-adjusted life years (DALYs) are underweight (6% of global DALYs) and unsafe sex (5%), followed by alcohol use (5%) and unsafe water, sanitation and hygiene (4%). Three of these risks particularly affect populations in low-income countries, especially in the regions of South-East Asia and sub-Saharan Africa. The fourth risk – alcohol use – shows a unique geographic and sex pattern, with its burden highest for men in Africa, in middle-income countries in the Americas and in some high-income countries.

This report uses a comprehensive framework for studying health risks developed for The world health report 2002, which presented estimates for the year 2000. The report provides an update for the year 2004 for 24 global risk factors. It uses updated information from WHO programmes and scientific studies for both exposure data and the causal associations of risk exposure to disease and injury outcomes. The burden of disease attributable to risk factors is measured in terms of lost years of healthy life using the metric of the disability-adjusted life year. The DALY combines years of life lost due to premature death with years of healthy life lost due to illness and disability.

Although there are many possible definitions of “health risk”, it is defined in this report as “a factor that raises the probability of adverse health outcomes”. The number of such factors is countless and the report does not attempt to be comprehensive. For example, some important risks associated with exposure to infectious disease agents or with antimicrobial resistance are not included. The report focuses on selected risk factors which have global spread, for which data are available to estimate population exposures or distributions, and for which the means to reduce them are known.

Five leading risk factors identified in this report (childhood underweight, unsafe sex, alcohol use, unsafe water and sanitation, and high blood pressure) are responsible for one quarter of all deaths in the world, and one fifth of all DALYs. Reducing exposure to these risk factors would increase global life expectancy by nearly 5 years.

Eight risk factors (alcohol use, tobacco use, high blood pressure, high body mass index, high cholesterol, high blood glucose, low fruit and vegetable intake, and physical inactivity) account for 61% of cardiovascular deaths. Combined, these same risk factors account for over three quarters of ischaemic heart disease: the leading cause of death worldwide. Although these major risk factors are usually associated with high-income countries, over 84% of the total global burden of disease they cause occurs in low- and middle-income countries. Reducing exposure to these eight risk factors would increase global life expectancy by almost 5 years.

A total of 10.4 million children died in 2004, mostly in low- and middle-income countries. An estimated 39% of these deaths (4.1 million) were caused by micronutrient deficiencies, underweight, suboptimal breastfeeding and preventable environmental risks. Most of these preventable deaths occurred in the WHO African Region (39%) and the South-East Asia Region (43%).

Nine environmental and behavioural risks, together with seven infectious causes, are responsible for 45% of cancer deaths worldwide. For specific cancers, the proportion is higher: for example, tobacco smoking alone causes 71% of lung cancer deaths worldwide. Tobacco accounted for 18% of deaths in high-income countries.

Health risks are in transition: populations are ageing owing to successes against infectious diseases; at the same time, patterns of physical activity and food, alcohol and tobacco consumption are changing. Low- and middle-income countries now face a double burden of increasing chronic, noncommunicable conditions, as well as the communicable diseases that traditionally affect the poor. Understanding the role of these risk factors is important for developing clear and effective strategies for improving global health.
Abbreviations

AIDS .......... acquired immunodeficiency syndrome
BMI .......... body mass index
CRA .......... comparative risk assessment
DALY .......... disability-adjusted life year
GBD .......... global burden of disease
HIV .......... human immunodeficiency virus
IUGR .......... intrauterine growth restriction
MET .......... metabolic equivalent (energy expenditure measured in units of resting energy expenditure)
PAF .......... population attributable fraction
UNAIDS ..... Joint United Nations Programme on HIV/AIDS
UNICEF ..... United Nations Children’s Fund
WHO .......... World Health Organization
YLD .......... years lost due to disability
YLL .......... years of life lost (due to premature mortality)