

## India continues to retain high disease burden: Global Report

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Fewer Indians are having health loss from ailments associated with childhood under nutrition and unsafe water sources, but more Indians are having health loss from diseases attributable to high blood pressure, high blood sugar and high cholesterol according to a new analysis of 79 risk factors in 188 countries.

"Global, regional, and national comparative risk assessment of 79 behavioral, environmental and occupational, and metabolic risks or clusters of risks in 188 countries 1990-2013: a systematic analysis for the GBD 2013" examines the extent, pattern, and trends of risk factors' contributions to death and health loss across countries.

Published in The Lancet on September 11, 2015, the study was conducted by an international consortium of researchers working on the Global Burden of Disease (GBD) study, including from the Public Health Foundation of India (PHFI), and led by the Institute for Health Metrics and Evaluation (IHME) at the University of Washington.

The study examines which risk factors contribute to health loss as well as death. Researchers used DALYs, or disability-adjusted life years, to measure overall health loss. One DALY equals one lost year of healthy life. DALYs are measured as the sum of years of life lost due to early death and years of healthy life lost due to disability.

"It is remarkable that the contribution of metabolic risk factors such as high blood pressure, blood sugar and cholesterol, and that of poor diet and alcohol use, to health loss has doubled in India over the past quarter of a century," said study co-author Dr Lalit Dandona who is Professor at PHFI and IHME and who led the work of this study in India.

"Metabolic risk factors that include high blood pressure, blood sugar and cholesterol, along with unhealthy dietary habits and smoking are responsible for about 5.2 million premature deaths in India every year," said Dr K Srinath Reddy who is President of PHFI and member of the GBD Scientific Council. "This trend will continue to increase unless effective prevention strategies to address these risk factors are implemented in India rapidly."

"Since 1990, Improvements in unsafe water sources and sanitation, and in under nutrition of children and mothers, have

reduced their contribution to the disease burden in India but these risk factors continue to be significant contributors to ill health. High blood pressure, high blood sugar and indoor air pollution are the leading causes of health loss in India at present," said Dr Soumya Swaminathan who is director-general of the Indian Council of Medical Research. "Further multi-disciplinary and cross-sectoral action is essential in India to minimize the continuing burden caused by these risk factors. Behavioral and social science research will play an increasingly important role."

High blood pressure, high blood sugar and household air pollution from solid fuels were estimated to cause 7.8 percent, 5.2 percent and 4.7 percent of the total health loss in India in 2013, respectively. These three risk factors together contributed to 3.3 million premature deaths in India in 2013. The other major contributors to health loss in India are unsafe water sources, tobacco smoking, alcohol use, high blood cholesterol and outside air pollution. The contribution of unsafe water sources and poor sanitation, as well as child and maternal under nutrition, to health loss have dropped significantly since 1990, but these are still substantial contributors to health loss in India.

"Air pollution inside the home due to use of solid fuels as well as outdoor air pollution have continued to be major contributors to ill health and premature deaths in India for over two decades," said study co-author Dr Kalpana Balakrishnan, who is Professor and Director of WHO Collaborating Center for Occupational and Environmental Health at Sri Ramachandra University. "The findings from this study highlight the need to develop integrated approaches to reduce air pollution in both rural and urban populations."

India is part of a global landscape with tremendous regional variations. In much of the Middle East and Latin America, high body mass index is the number-one risk associated with health loss. In South and Southeast Asia, household air pollution is a leading risk, and India also grapples with high risks of unsafe water and childhood undernutrition. Alcohol is the number-two risk in Russia, and smoking is the number-one risk in many high-income countries, including the United Kingdom. The most marked differences are found in sub-Saharan Africa, which, unlike other regions, is dominated by a toxic combination of childhood undernutrition, unsafe water and sanitation, unsafe sex, and alcohol use.

"There's great potential to improve health by avoiding certain risks like smoking and poor diet as well as tackling environmental risks like air pollution," said IHME Director Dr. Christopher Murray who leads the GBD study globally. "The challenge for policymakers will be to use what we know to guide prevention efforts and health policies."