

# Blood pressure, smoking and alcohol: The health risks with the biggest global burden

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Over 9 million people died as a consequence of high blood pressure in 2010, making it the health risk factor with the greatest toll worldwide, say experts.

Smoking and alcohol use have also overtaken child hunger in the last two decades to become the second and third leading risks globally, according to a study estimating the disease burden attributable to 43 risk factors in 1990 and 2010.

The analysis was undertaken by an international consortium of scientists as part of the Global Burden of Disease Study 2010, which is published in *The Lancet* today.

"Overall we're seeing a growing burden of risk factors that lead to [chronic diseases](#) in adults, such as cancer, heart disease and diabetes, and a decreasing burden for risks associated with infectious diseases in children," said Professor Majid Ezzati of the School of Public Health at Imperial College London, one of the study's senior authors. "But this global picture disguises the starkly different trends across regions. The risks associated with poverty have come down in most places, like Asia and Latin America, but they remain the leading issues in sub-Saharan Africa."

The researchers estimated both the number of deaths attributed to each risk factor and disability-adjusted life years (DALYs), a unit that takes into account both years of life lost and years lived with disability.

"We looked at risk factors for which good data are available on how many people are exposed to the risks and how strong their effects are, so that our results can inform policy and programmatic choices," said Associate Professor Stephen Lim at the Institute for Health Metrics and Evaluation (IHME) at the University of Washington. IHME served as the coordinating center for GBD 2010.

The risk factor with the greatest increase in health burden was high [body mass index](#) (BMI), which was ranked 10th in 1990 and sixth in 2010. More than 3 million deaths in 2010 were attributable to [excess body weight](#) - more than three times as many as undernutrition. In Australasia and southern Latin America, high BMI ranked as the leading risk factor.

The harms of alcohol also rose sharply, becoming the leading risk factor in Eastern Europe, most of Latin America and southern sub-Saharan Africa and accounting for 4.9 million deaths worldwide in 2010.

Tobacco smoking, including second-hand smoke, was the risk factor with the biggest burden in western Europe and high-income North American countries, and accounted for 6.3 million deaths worldwide in 2010.

Dietary [risk factors](#) and physical inactivity collectively accounted for one tenth of DALYs in 2010, with the most prominent dietary risks being too much salt and not enough fruit.

The burden of household air pollution from burning solid fuels such as coal or wood for cooking fell noticeably, but not having clean cooking and heating fuels remains the leading risk in south Asia.

"The good news is there are lots of things we can do to reduce disease risk," Professor Ezzati said. "To bring down the burden of [high blood pressure](#), we need to regulate the salt content of food, provide easier

access to fresh fruits and vegetables, and strengthen primary healthcare services. Undernutrition has come down in the ranking because we've made a lot of progress in many parts of the world. This should encourage us to continue those efforts and to replicate that success in Africa, where it's still a major problem."

**More information:** 'A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990-2010: a systematic analysis for the Global Burden of Disease Study 2010.' *Lancet* 2012; 380

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