

Household air pollution puts more than one in three people worldwide at risk of ill health and early death

September 3 2014

Household air pollution, caused by the use of plant-based or coal fuel for cooking, heating, and lighting, is putting nearly three billion people worldwide at risk of ill health and early death, according to a new Commission, published in *The Lancet Respiratory Medicine* journal.

A third of the world's population use plant-based solid fuels such as wood or charcoal, or coal, to cook, heat, and light their homes, primarily in Asia and Africa. These smoky, dirty fuels are often used in an open fire or simple stove, resulting in high levels of household air pollution in poorly ventilated homes.

Studies in India have found that in some areas, household air pollution is so high that it actually increases outdoor (ambient) air pollution – leading to [pollution levels](#) more than three times higher than a typical London street, and well above WHO-recommended safety levels.

The Commission, which was led by Professor Stephen Gordon, from the Liverpool School of Tropical Medicine, UK, and Professor William Martin, from The Ohio State University, USA, examines evidence for the effects of household air pollution on health. They conclude that an estimated 600-800 million families worldwide are at increased risk of illnesses such as respiratory tract infections, pneumonia, COPD, asthma, and lung cancer.

Estimates suggest that household air pollution killed 3.5 to 4 million people in 2010 [1]. Although overall rates of exposure to household air pollution have been declining slowly in recent years, population growth means that the number of people exposed has remained stagnant, at around 2.8 billion people worldwide.

Despite this huge toll of [premature death](#) and ill health, coordinated international and country-led efforts to tackle household air pollution have thus far been insufficient, say the authors, and public awareness of the risks of cooking with solid fuels in poorly ventilated homes remains low in the areas most badly affected.

The women and children living in poverty who are most affected by household air pollution are also likely to have poor access to healthcare – especially the complex and expensive treatments required for much of the respiratory illness and cancer caused by household air pollution.

"Although a number of clean cooking technologies – such as advanced cook stoves, LPG or solar power systems – exist, providing affected homes with cleaner ways to cook, heat, and light their homes with biomass fuel will not be the long term solution", says Professor Gordon. "In communities where solid fuel [cooking methods](#) are currently the norm, cleaner fuel and cooking methods need to be at least as affordable, efficient, and long-lasting as the traditional style methods they replace. They also need to be fit for the different cultures and regions in which they're used – if families only partially adopt cleaner cooking methods, using them alongside more polluting technologies, we are potentially looking at an expensive failure, and no reduction in the millions of people currently at risk from household air pollution."

The Commission provides a comprehensive review of the evidence for the effect on ill health and premature death of household air pollution, examines interventions currently available, and promising future

developments. It concludes by outlining research priorities which will need to be tackled if this problem is to be effectively reduced.

According to Professor Martin, "All of the evidence we examined in this Commission points to a serious need for improved commitment to tackling the problem of household air pollution. Scientists and health professionals in countries where household air pollution is still widespread need to work with governments and international health agencies to increase awareness of the huge toll that it is exacting on the population. There are many gaps in our knowledge of how to effectively measure and prevent household [air pollution](#), but this problem cannot be solved until the global community recognises the scale of this problem and commits to coordinated and concerted action."

More information: [1] Estimates taken from [www.thelancet.com/journals/lan ... \(12\)61766-8/fulltext](http://www.thelancet.com/journals/lan... (12)61766-8/fulltext)

Provided by Lancet

Citation: Household air pollution puts more than one in three people worldwide at risk of ill health and early death (2014, September 3) retrieved 24 April 2024 from <https://medicalxpress.com/news/2014-09-household-air-pollution-people-worldwide.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--