

# Diabetes deaths due to air pollution highest in India

In 2017, exposure to PM 2.5 pollution was found to be the third leading risk factor globally for Type 2 diabetes-related deaths and disability after high blood sugar and excessive body weight

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Globally, such exposure contributed to about 2.76 lakh deaths and 15.2 million life years lost to disability in 2017. (Photo by Parveen Kumar/Hindustan Times)



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The burden of Type 2 diabetes contributed by exposure to fine particulate pollution is the highest in India, according to the State of Global Air 2019 report released on Wednesday. Air pollution lowers insulin sensitivity, contributing to diabetes.

In 2017, exposure to PM 2.5 pollution was found to be the third leading risk factor globally for Type 2 diabetes-related deaths and disability after high blood sugar and excessive body weight.

Globally, such exposure contributed to about 2.76 lakh deaths and 15.2 million life years lost to disability in 2017. This burden was highest in India, where it accounted for 55,000 deaths and 2.7 million life years lost, according to the report by Health Effects Institute (HEI) and Institute of Health Metrics and Evaluation's Global Burden of Disease project. India was followed by China, Indonesia, Mexico and Brazil.

“PM 2.5 particles are endocrine disruptors. They can affect insulin secretion and insulin sensitivity. They can also damage the beta cells in the pancreas that produces insulin... the exact pathways are not known yet. But increasingly, research is showing these connections. So apart from poor diet, obesity etc., air pollution definitely plays a role in diabetes,” said Dr Vishwanathan Mohan, diabetologist and chairman of Dr Mohan's Diabetes Specialties Centre

# Battling a growing n

The State of Global Air 2019 report has revealed that 1.2 million Indians died due to ailments triggered by air pollution in 2017

## Link to diabetes

The health burden of diabetes due to exposure to PM 2.5 pollution was the highest in India in 2017

## Diabetes deaths due to P

55,300



INDIA

32,600



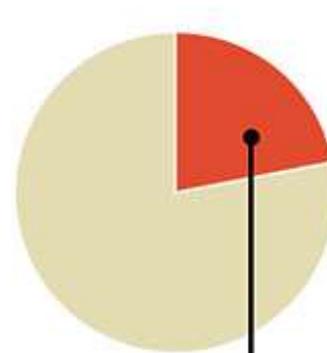
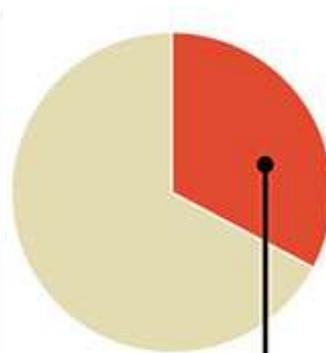
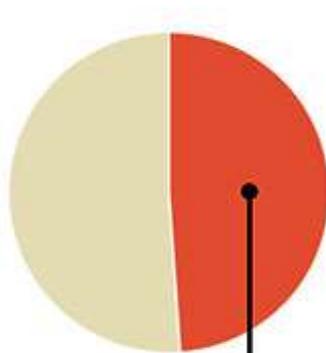
China

16,200



Indonesia

## Deaths attributed to air pollution in



Diabetes affected at least 65 million people in India in 2017, according to The Lancet Global Health study released last year.

In 2017, diabetes accounted for more than one million deaths and 57 million life years lost globally — an increase of 175% and 141%, respectively, since 1990.

India also tops a list of 13 countries, with populations over 50 million, in which more than 10% of the population was exposed to household air pollution by use of solid fuels. About 60% of India's population was exposed to household pollution, followed by China with 32%. However, the report recognises that the proportion of households cooking with solid fuels in India has dipped from 76% in 2005 to 60% (846 million) in 2017, “due in part to a major government program to shift households from solid fuels to liquefied petroleum gas.”

“India has initiated major steps to address pollution sources: the Pradhan Mantri Ujjwala Yojana Household LPG program, accelerated Bharat Stage VI vehicle standards, and the new National Clean Air Programme. These and future initiatives have the potential, if fully implemented as part of a sustained commitment to air quality, to result in significant health benefits in coming years,” said Robert O’Keefe, vice president, Health Effects Institute, Boston, US.

Exposure to outdoor and indoor air pollution together contributed to over 1.2 million deaths in India and China in 2017, the report said. Globally, air pollution (PM 2.5, household and ozone emissions) is estimated to have contributed to about 4.9 million deaths — 8.7% of all deaths globally and

5.9% of all life years lost to disability. India and China have the highest health burden from air pollution, followed by Pakistan, Indonesia, Bangladesh and Nigeria.

Since 1990, there has been a 68% jump in the number of deaths attributed to PM 2.5 exposure, with the largest spike between 1990 and 2010.