



Air pollution is already known to contribute to thousands of early deaths from other respiratory diseases

DANIEL BEREHULAK/GETTY IMAGES

CORONAVIRUS

Dirty air puts more lives at risk by damaging lungs, scientists say

Pollution may have caused thousands of extra deaths because people living in areas with poor air quality are less likely to survive after becoming infected with coronavirus, researchers say.

Scientists analysed data from 3,000 counties in the US up to April 4 and found that a small increase in long-term exposure to fine particles, known as PM2.5, was apparently linked to a large increase in the death rate.

The study is significant because it suggests delays in measures to improve air quality in urban areas, such as restricting diesel and petrol vehicles and banning wood and coal fires, will have contributed to the Covid-19 death toll.

The team from Harvard University found that lowering the long-term average fine particle pollution in Manhattan by only 1 microgram per cubic metre of air (mcg/m³) could have prevented 248 of the 1,905 deaths recorded in the area up to last weekend.

Overall, they found that each 1mcg/m³ increase in exposure to fine particles seemed to be linked to a 15 per cent increase in the Covid-19 death rate.

The study, which is still going through the peer-review process, could not prove a direct link. However, the authors said that fine particle pollution damaged people's lungs and hearts and left them vulnerable to respiratory diseases such as Covid-19.

The study says: "We hypothesise that because long-term exposure to PM2.5 adversely affects the respiratory and cardiovascular system, it can also exacerbate the severity of the Covid-19 infection symptoms and may increase the risk of death in Covid-19 patients."

It adds: "The results of this paper suggest that long-term exposure to air pollution increases vulnerability to the most severe Covid-19 outcomes."

London generally has worse fine particle pollution than Manhattan, with an annual average of 13.3 mcg/m³ and no area complying with the World Health Organisation's recommended limit of 10mcg/m³.

The Times's Clean Air for All campaign, launched 11 months ago, has been seeking a legally binding target to improve air quality to WHO levels. The government has pledged to introduce a new target but has yet to say what it is or set a deadline.

Frank Kelly, professor of environmental health at King's College London and chairman of the Department of Health's committee on air pollutants, said the study seemed to be "the most robust" so far on the link between air pollution and Covid-19 deaths.

He added: "These findings fit well with the established relationship between PM_{2.5} exposure and many of the cardiovascular and respiratory comorbidities that dramatically increase the risk of death in Covid-19 patients.

"The Harvard team are first class and have a reputation for being one of the leaders in the field. Similar findings have just been reported by researchers in Europe."

The Department for Environment, Food and Rural Affairs (Defra) called yesterday on researchers to submit rapid evidence on air quality and the pandemic, including whether air pollution was an aggravating factor.

John Newington, head of evidence on air quality and industrial emissions at Defra, appealed to "the research community to support the UK government in its efforts to manage air pollution risk and impacts during the Covid-19 pandemic".

Defra is also seeking evidence on how the lockdown and fall in traffic has changed public exposure to air pollution. Levels of fine particles and nitrogen dioxide have fallen sharply in British cities since lockdown began last month.

However, traffic is only one source of air pollution, with emissions from agriculture, home heating and pollutants swept in from abroad also contributing to poor quality. The Met Office is forecasting a risk of high air pollution in southern and southwest England on Friday, due to very light winds allowing pollution levels to build up.

Researchers at the University of Bologna have suggested that airborne pollution particles might help to spread the virus by carrying it on their surfaces. However, this theory has not been confirmed and some experts have said there is no evidence to support it.
