



WHO global air quality guidelines

Particulate matter (PM_{2.5} and PM₁₀),
ozone, nitrogen dioxide, sulfur dioxide
and carbon monoxide



World Health
Organization

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Foreword

Clean air is fundamental to health. Compared to 15 years ago, when the previous edition of these guidelines was published, there is now a much stronger body of evidence to show how air pollution affects different aspects of health at even lower concentrations than previously understood. But here's what hasn't changed: every year, exposure to air pollution is still estimated to cause millions of deaths and the loss of healthy years of life. The burden of disease attributable to air pollution is now estimated to be on a par with other major global health risks such as unhealthy diets and tobacco smoking.

In 2015, the World Health Assembly adopted a landmark resolution on air quality and health, recognizing air pollution as a risk factor for noncommunicable diseases such as ischaemic heart disease, stroke, chronic obstructive pulmonary disease, asthma and cancer, and the economic toll they take. The global nature of the challenge calls for an enhanced global response.

These guidelines, taking into account the latest body of evidence on the health impacts of different air pollutants, are a key step in that global response. The next step is for policy-makers around the world to use these guidelines to inform evidence-based legislation and policies to improve air quality and reduce the unacceptable health burden that results from air pollution.

We are immensely grateful to all the scientists, colleagues and partners around the world who have contributed time and resources to the development of these guidelines. As with all WHO guidelines, a global group of experts has derived the new recommendations based on a robust and comprehensive review of the scientific literature, while adhering to a rigorously defined methodology. This process was overseen by a steering group hosted and coordinated by the WHO European Centre for Environment and Health.

Although the burden of air pollution is heterogeneous, its impact is ubiquitous. These guidelines come at a time of unprecedented challenges, in the face of the ongoing COVID-19 pandemic and the existential threat of climate change. Addressing air pollution will contribute to, and benefit from, the global fight against climate change, and must be a key part of the global recovery, as prescribed by the WHO Manifesto for a healthy recovery from COVID-19.

A guideline is just a tool. What matters is that countries and partners use it to improve air quality and health globally. The health sector must play a key role in monitoring health risks from air pollution, synthesizing the evidence, providing the tools and resources to support decision-making, and raising awareness of the impacts of air pollution on health and the available policy options. But this is not a job for one sector alone; it will take sustained political commitment and bold action and cooperation from many sectors and stakeholders. The payoff is cleaner air and better health for generations to come.

Dr Tedros Adhanom Ghebreyesus
WHO Director-General

Dr Hans Henri P. Kluge
WHO Regional Director for Europe

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