



Air Pollution and COVID-19

POLLUTION WORSENS HEALTH OUTCOMES IN PANDEMICS

Air pollution makes COVID-19 worse.

Exposure to pollution increases an individual's risk for severe coronavirus symptoms and death.¹

- The risks of complicated coronavirus symptoms and need for hospitalization and intensive care increase if a patient has underlying health conditions, such as asthma, respiratory problems, weakened immune system, diabetes, cancer or other conditions.²
- **Pollution is a major risk factor for many of those underlying conditions.³** Exposure to air pollution in particular reduces lung function, increases asthma rates and damages immune systems.⁴ WHO estimates that air pollution kills 7 million people per year on its own. Exposure to other types of pollution, such as lead (Pb) can damage the immune system as well.⁵
- Exposure to air pollution increases risk of getting pneumonia and other respiratory infections.⁶
- Even small increases in exposure to air pollution (i.e. one $\mu\text{g}/\text{m}^3$ of $\text{PM}_{2.5}$) over time can lead to large increases in death rate (15-20%) from COVID-19.⁷
- **91% of the world's population lives in places with unhealthy air.⁸**
- Vulnerable populations already at risk to pollutions' worst effects due to poverty, occupation, low access to healthcare and education are also most vulnerable to the impacts of coronavirus: sick days, loss of income earning family members and loss of livelihoods due to the global economic slowdown.⁹
- **Cities with higher rates of air pollution experience higher mortality rates during such pandemics.¹⁰** Previous variation in mortality across different cities during the 1918 influenza pandemic was attributable in part due to air pollution. Similar results were seen in China during the SARS epidemic, and have been observed in the worst affected regions of northern Italy, which also have higher levels of air pollution.¹¹

Short-term gains in air quality are moot if the world returns to “business as usual” post-COVID-19 shutdown.

Short-term gains in air quality from global economic slowdown show what the world can do if it has no choice but to act, but years of a global economic system that espouses pollution has already wreaked significant damage on human health and the environment.

- Satellite imagery shows dramatic reductions in air pollutants globally in cities under “lockdown” but rates are starting to go back up as cities open back up for business.¹²
- Unfortunately these reduced levels of air pollution are not a direct result of conscious effort to improve the environment but rather a direct unintended result of intense human suffering, disease, death, and the loss of livelihoods and businesses.
- This in itself will increase poverty and illness, reduce access to education, and have other negative domino effects.

Photo: Larry C. Price



Efforts to reduce air pollution and enforce air quality standards and regulations now and after the COVID-19 crisis are critical.¹³

The shockingly strong link between exposure to air pollution and increased mortality from COVID-19, and the resulting disproportionate impacts on impoverished vulnerable populations and developing countries due to impacts on the global economy and local livelihoods, cannot be ignored.

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