

5 THINGS TO KNOW ABOUT OUTDOOR AIR POLLUTION

Air pollution originates from diverse sources

Air pollutants are emitted directly as a result of chemical transformations in the atmosphere. Sources differ by location and season and include motor vehicles, industry, power generation, wind-blown dust, residential wood burning, wildfires, and volcanic eruptions. Both urban and rural areas can be impacted.



Air pollution and climate change are linked

Air and climate-altering pollutants can stem from the same sources (e.g. fuel combustion).¹ Climate change also affects air pollution levels directly (e.g. ground-level ozone, aeroallergens) and indirectly (e.g. increasing wildfire frequency).² Addressing both air pollution and climate change can have mutually beneficial effects and improve health.

Vulnerability to air pollution varies across the population

Air pollution disproportionately affects those with pre-existing conditions (respiratory, cardiovascular, diabetes). Seniors, children, pregnant women, disenfranchised, and those with specific genotypes (e.g. related to oxidant defences) are also vulnerable.^{1,3}



Air pollution contributes to acute and chronic health effects

Air pollution is associated with increased morbidity and mortality. Acute effects include myocardial infarction, stroke, aggravation of chronic cardiac and respiratory disease (e.g. asthma), and symptoms such as cough, and eye irritation. Examples of chronic effects include new onset of cardiac and respiratory disease, cancer, reduced lung growth, and impaired neurodevelopment.^{1,4} Pregnancy-related effects include preterm birth and low birth weight.¹

Personal and collective action can reduce air pollution impacts

Government policies have achieved dramatic air pollution reductions alongside population and economic growth, but continued action is needed. Personal protective measures, particularly during events like wildfire smoke episodes, can include air filtration/conditioning, closing windows, masks (highly dependent on fit and filtration capacity), avoiding places and times with elevated air pollution, and following treatment plans.⁵ Individuals can also reduce their contribution to air pollution emissions through decreased personal vehicle use and home energy consumption.



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