

Helping Patients Minimize Health Risks From Air Pollution

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Over 85 million Americans reside in counties with air pollution levels that exceed national standards. Breathing unclean air contributes to heart disease, stroke, and chronic lung disease. Air pollution with particulate matter smaller than 2.5 microns (PM_{2.5}), produced from the combustion of fossil fuels, is very harmful.¹ While not yet definitive, increasing evidence suggests that measures for PM mitigation may reduce cardiovascular (CV) events, and some strategies can be recommended to patients to decrease their PM_{2.5} exposure.^{2,3}

High-risk populations:

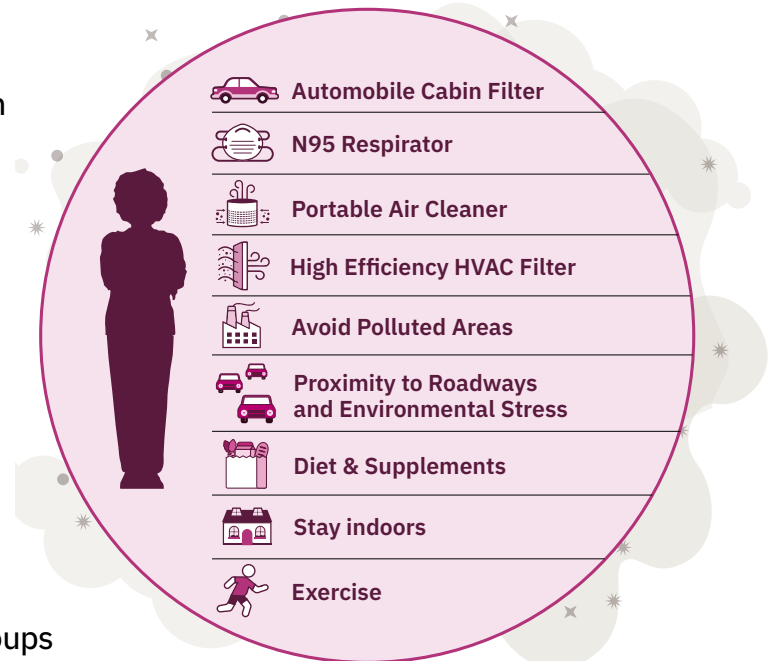
- Children and people over the age of 65
- Pregnant individuals
- People with obesity and/or diabetes
- People with prior CV or pulmonary disease or recipients of organ transplants
- People from socioeconomically disadvantaged groups

Clinicians should target the guidance to high-risk individuals and those with chronic PM_{2.5} exposure(s):

- In motor vehicles, close windows, use air conditioning, and regularly change air filters.²
- Use personal air-purifying respirators and masks (e.g., properly fitting N95 and surgical masks).²
- Clean air in the home is essential.² Use portable air cleaners and high efficiency air filtration systems.
- Avoid air pollution, especially during peak pollution times, by monitoring air quality and avoiding geographical areas with high PM_{2.5}, such as areas near highways.²
- Practice CV preventive measures, such as taking medications as directed and eating a healthy diet.²
- Stay indoors, close windows, and consider limiting outdoor exercise and activity when PM_{2.5} levels are high. Note, however, that the beneficial effects of increased activity offset the elevated mortality risk of increased air pollution exposure in all but the most polluted cities in the world.^{2,4}

For more information, access Cardi-OH’s expanded resources on [air pollution](#).

Figure 1. Commonly Used Personal Exposure Mitigation Approaches



Adapted from *Personal-level protective actions against particulate matter air pollution exposure: a scientific statement from the American Heart Association*²

References

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