

MANAGEMENT AND RELIEF OF THE EFFECTS OF AIR POLLUTION

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HOW CAN THE EFFECTS OF AIR POLLUTION BE MANAGED?

Avoiding exposure to air pollution is most effective in minimising its respiratory effects, however this can be **challenging in many regions**.¹ The goal of management should be to **protect against and minimise exposure to air pollution**, rather than simply treating the resultant symptoms. Measures to potentially reduce exposure to air pollution include nasal filters, masks and air purifiers.

Nasal filters can reduce symptoms of allergic rhinitis by filtering pollen, and may be able to filter air pollutants in a similar way, however, more research in this area is needed.² **Masks and respirators** can reduce exposure to larger sizes of particulate matter but must be fully sealed around the face to be effective.³ **Air purifiers and filters** can improve indoor air quality and reduce exposure to particulate matter and allergens.⁴





MASKS AND RESPIRATORS



AIR PURIFIERS AND FILTERS

HOW CAN SYMPTOMS ASSOCIATED WITH AIR POLLUTION EXPOSURE BE RELIEVED?

There are currently **no specific treatments for relieving air pollution-related symptoms**. Symptomatic treatments such as nasal irrigation and sprays, decongestants, antihistamines, cough suppressants, expectorants and throat sprays and lozenges may help relieve individual symptoms.⁵⁻⁷ Certain dietary supplements may also work to enhance the body's antioxidant defences.⁸

KEY REFERENCES

- Baena-Cagnani CE, Canonica GW, Zaky Helal M, Gómez RM, Compalati E, Zernotti ME, Sanchez-Borges M, Morato Castro FF, Murrieta Aguttes M, López-Garcia A, Tadros FA. The international survey on the management of allergic rhinitis by physicians and patients (ISMAR). World Allergy Organ J 2015; 8: 10.
- 2. Sigsgaard T, Tovey ER. Nasal filters: a novel approach to tackling allergic rhinitis. Expert Rev Clin Immunol 2014; 10: 1133–1135.
- 3. Rengasamy S, Eimer B, Shaffer RE. Simple respiratory protection--evaluation of the filtration performance of cloth masks and common fabric materials against 20-1000 nm size particles. Ann Occup Hyg 2010; 54: 789–798.
- 4. Batterman S, Du L, Mentz G, Mukherjee B, Parker E, Godwin C, Chin JY, O'Toole A, Robins T, Rowe Z, Lewis T. Particulate matter concentrations in residences: an intervention study evaluating stand-alone filters and air conditioners. Indoor Air 2012; 22: 235–252.
- 5. Macy E. A rhinitis primer for family medicine. Perm J 2012; 16: 61–66.
- 6. Farrer F. Sprays and lozenges for sore throats. S Afr Pharm J 2011; 78: 26–31.
- 7. Rubin BK. Mucolytics, expectorants, and mucokinetic medications. Respir Care 2007; 52: 859–865.
- 8. Kampa M, Castanas E. Human health effects of air pollution. Environ Pollut 2008; 151: 362–367.