

Air Pollution and Allergy

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Air pollution is defined as “the presence in or introduction into the air of a substance which has harmful or poisonous effects”.

Many Epidemiological and toxicological studies suggest a strong link between air pollution and allergy disorders. According to research, air pollution affects the balance between antioxidant pathways (protective mechanism) and airway inflammation (pathogenic mechanism) in the human body which leads to an exacerbation of asthma symptoms and many respiratory diseases. The incidence of allergic diseases in industrialized countries is increasing annually.

In urban settings, diesel emissions are the most important source of air pollution. In indoor settings however, tobacco smoke is considered the main air pollutant.

Tobacco and Allergies

Allergic Respiratory Disease (ARD) is a frequent atopic condition expressed through asthma and allergic rhinoconjunctivitis. ARD affects around 40% of the world population with a serious impact over the quality of life of patients who suffer from it.

In a closed environment, excessive tobacco exposure results in increases in the human body of the production of Immunoglobulin E (IgE) which is the allergy antibody. A stimulation of production of IgE is the main trigger of allergic reactions.

Parental smoking is very toxic for kids and studies show that it increases risks of bronchitis, chronic cough and asthma among children. Kids become passive smokers: they inhale big amounts of tobacco smoke without actually smoking cigarettes.

Studies have shown that smoking during pregnancy and breastfeeding leads to a higher risk for the baby to develop

allergic eczema (atopic dermatitis). The probability for an infant of a smoking mother to develop asthma is double that of a non-smoking mother.

Five simple ways to improve air quality at home

Air quality at home is very important and the presence of many indoor pollutants such as Carbon Monoxide (CO), asbestos, mold, lead particles, biological products, without forgetting of course tobacco smoke is very hazardous to health and can trigger allergies. Improving air quality at home is very important and can be achieved by following these 5 simple and easy to do tips:

- 1. Air it out:** open a window for at least few minutes every day. This can help to air out harmful chemicals and let cleaner air in. You can also turn on a fan while the window is open to enhance air recycling.
- 2. Buy healthy houseplants:** Try to purchase healthy plants that have the properties of recycling air inside the house. They are natural air cleaners that absorb chemicals in the ambient air surrounding them and pump out fresh oxygen. Some examples of these plants are:
 - *Hedera Helix* -also known as English Ivy.
 - *Dypsis lutescens* –also known as Bamboo palm.
 - *Gerbera jamesonii*-also known as Gerbera Daisy.
 - *Chrysanthemum morifolium*- also known as Pot Mum.
 - *Spathiphyllum species*-also known as Peace Lily.
- 3. Avoid air fresheners:** they infuse the house with toxic chemicals.
- 4. Switch to non-toxic household cleaning products:** traditional cleaning reagents are a source of air pollution in your house with all the chemicals they contain. Try to use more natural substances to clean such as white distilled vinegar, olive oil, baking soda, hot water and lemon juice.
- 5. Choose wisely your furniture, paint and home accessories:** Make sure the things you buy to decorate and paint your house are safer and labeled “Low VOC or Zero VOC”. With lower chemical emissions, your furniture is safer and the air inside your home cleaner and healthier.

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