

How can air quality at home be improved?

Today, air pollution is recognized as a major health risk. Air purifiers offer a valid solution to improve our health and productivity.

According to the World Health Organization (WHO), air pollution is the biggest environmental risk to human health. The pollutants of major public health concern include particulate matter, carbon monoxide, ozone, nitrogen dioxide and sulfur dioxide. Air pollution kills an estimated seven million people worldwide every year. WHO data show that almost all of the global population (99%) breathe air that exceeds WHO guideline limits and that low- and middle-income countries suffer from the highest exposures. Indoor air is two- to five-times more polluted than the air outdoors, with pollutants, allergens and toxins that can induce or aggravate respiratory diseases. People in developed countries spend the majority of their time indoors, making indoor air quality a key issue for a healthy lifestyle.

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Exposure to air pollution, both ambient and household, increases a person's risk of contracting a disease such as lung cancer, stroke, heart disease or chronic bronchitis.

For indoor air quality, ventilating by opening windows can help in homes or small closed spaces – if the surrounding outdoor air is clean. In many urban regions, the outdoor air quality is not good enough to ventilate via window or other opening. It is therefore recommended to purify the air inside if the source of pollution cannot be removed.

Air treatment devices like modern air purifiers offer a highly effective solution to this major threat to our health. They are able to filter particles, pollen, allergens, bad smells and other gases from the air. Furthermore, maintaining the right conditions of temperature and humidity prevent the incidence of respiratory infections and allergic attacks.

Air purifiers can effectively eliminate undesired, harmful, or dangerous components with maximum efficiency and precision such as oxidizing gases (NO_x), formaldehyde (HCHO), particulate matter (PM) or volatile organic compounds (VOCs) only when they measure these components, as well as carbon dioxide (CO₂), relative humidity and temperature (RH&T). Humans cannot perceive all pollutants reliably, so sensors and their performance play a crucial role in detecting these components. Sensirion's environmental sensor solutions enable precise and accurate monitoring of these air quality indicators.

As an example, Sensirion's ultimate combo sensor – SEN5x – offers the possibility to integrate in one platform accurate, real-time measurements of PM, VOCs, NO_x and RH&T.

Further reading

[Indoor air quality and Sensirion's environmental sensors](#)

[Air pollution](#)

