

ECOLOGIC

Simple Steps for Good Air Quality Indoors

Skin problems, eye irritation & recurring allergic conditions are some of the early warning signs of living in a 'sick' building



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Nearly 90% of our time is spent breathing 'indoor air' — and 65% of that is in our homes! Unlike outdoor air, the air within a home or office is recycled continuously by conventional air conditioning systems. This continuous re-circulation of air builds up pollutants every time it passes through without addition of fresh air into the mix. Indoor air quality (or) IAQ characteristics corresponds to the concentrations of pollutants in indoor air including suspended particulate matter.

In the past, residential ventilation was never considered a major cause for concern because most folks were getting enough 'fresh' outdoor air by simply opening their windows or by allowing air leaks through the building's envelope. Nowadays residents are less likely to open windows because of constantly running air conditioners, high energy costs, security issues, and the intent to keep out drafts, noise and 'dirty air'.

Studies from the Environmental Protection Agency on human exposure to air pollutants show that indoor levels of pollutants may be two to five times, some-

times more than 100 times higher than outdoor levels. People in poorly ventilated spaces frequently report headaches and other forms of discomfort. Such building-related health symptoms often develop into acute and chronic respiratory illnesses including asthma, pneumonia and even lung cancer!

The most common indoor air pollutants are carbon dioxide, carbon monoxide, environmental tobacco smoke, volatile organic compounds, ozone, nitrogen oxides, particulate matter and forms of formaldehyde. These are mainly produced by the occupants within the building and can also result from appliances, aerosols, paints and house dust! Apart from these we often have to combat biological agents such as bacteria, viruses, fungi, dander and dust mites!

Technology provides real-time monitors within our spaces to detect and provide information on various pollutant levels throughout the day — almost like a fit bit for air quality! But it is good practice to stay attentive — especially to any allergy episodes. Skin conditions, eye irritation and other recurring allergic manifestations are the early warning signals of a person's response to a 'sick' building.



Free ventilation for enough air circulation is a must

Another thing is to watch for changes in the immediate environment like a new neighbouring construction site, a new painting job or renovation works like replacement of floor tiles.

They pollute the purity of the indoor air we breathe. Chemicals and particulate matter collect in AC filters and ducts and circulate in a closed loop for a long time unless the filters are checked and cleaned.

Simple daily practices help to improve the IAQ. It is important to store paints, solvents and cleaners out of normally occupied areas; not light cigarettes or candles indoors as both give off particulate matter; ensure proper ventilation for all major appliances, including washing machines and vacuum cleaners; or install a good particulate filter as part of the air conditioning system; all of which can keep dirt particles and pollutants out of the buildings. Last but definitely not the least — take a walk, open your windows and let some fresh air in, it does more good than harm!

(The writer is an architect, urban designer, dancer and chief designer at Shilpa Architects)