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Dire need to mitigate potential health risks from air pollutants

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What we fail to realize is the air quality inside our homes can possibly be worse than the quality of air out in the open



Rapid economic development and booming population sizes have led to a growing requirement of resources like energy, food and water to sustain activities in our society. As a consequence, different kinds of pollution have invaded our environment and among all, air pollution has arisen as a major cause of concern. Since the levels of air pollutants have increased manifold, there is a dire need to take measures which will help mitigate the potential health risks these pollutants pose for humans and probable damage they can cause to our environment.

When we talk about air pollution, we usually tend to think of giant industrial and manufacturing smokestacks, or thousands of cars stuck in a gridlock traffic emitting endless smoke. We also visualize the smoggy haze which clings to big cities and towns. So, every time we think of air pollution, we only think of the air outside. And we assume that to avoid it, we can retreat to the confines of our homes which give us access to clean air. However, what we fail to realize is the air quality inside our homes can possibly be worse than the quality of air out in the open.

Air Quality Levels: Outdoors vs. Indoors

In India, PM 2.5 & PM 10 is the biggest source of air pollution, whether it be indoors or outdoors. Construction and demolition operations majorly contribute to windblown dust problems onto nearby roadways which can remain suspended in the air for days or weeks together. Major sources of pollution include noxious vapors from oils, thinners, glues, treated woods, plastics, cleaners and other similar hazardous chemicals that are widely used in corporate spaces.

Moreover, the waste including building materials, rubble and debris resulting from the construction, repair, re-modeling or demolition of any corporate structure results in fatal levels of pollution.

At the same time, the issue of indoor air pollution has also piqued the interest of many experts, as people spend majority time inside. Apparently, indoor air quality should be better than outdoor air quality due to the shielding effect of buildings and possible installation of ventilation and air cleaning devices. However, a combined study of indoor and outdoor air quality has revealed that the concentration of air pollutants is higher indoors. The levels of air pollutants inside are often 2 to 5 times higher than outdoor levels, and in some cases these levels can exceed 100 times that of outdoor levels of the same pollutants. In other words, sometimes the air inside our homes can be much more harmful than the air outdoors. Hence, to address this issue, both indoor and outdoor environment needs to be considered.

As for the sources of air pollution inside, there are many. Outdoor air pollutants like NO2, particulate matter and ozone etc can easily enter our homes. The smoke that is generated when cooking on stoves and using dirty solid fuels like charcoal, coal, dung etc can get accumulated in our homes if there is poor ventilation. In addition, ozone can react with materials present inside our homes to create a cocktail of air pollutants.

Solutions to Curb Rising Air Pollution Levels

To tackle the dust particles released by cement or sand, liquid-based anti-pollution products can be used as a solution. In a corporate setup, companies can clean surfaces or keep them wet with outdoor anti-pollution liquid to let the dust settle and stop it from spreading in the air. This will help in mitigating the impact of air pollutants. By controlling air pollution, organisations can prevent their employees from suffering from various health issues. Even indoors, these liquid-based anti-pollution products can be sprayed which creates a coating on the floor that can trap harmful dust particles and prevent them from rising again, eventually eliminating them from our homes.

Summing Up

Apart from poor AQI, air pollution also causes serious health ailments. By realising our joint responsibility towards the environment, we need to take measures that can help limit the amount of pollution which is collectively created, both indoors and outdoors.

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