

IQAir Bulletin: May 2015

Are you polluting your home with ozone?

Air Quality News from IQAir, the world leader in air purifiers.



While trying to create a clean air environment in your home, you may actually be polluting the air with dangerous levels of ozone. Some air cleaner manufacturers continue to insist that products that produce ozone are a safe, effective way to purify indoor air. By using terms such as “energized oxygen” and “mountain-fresh air,” these companies continue to market their systems in a way that misleads the public. But according to the U.S. Environmental Protection Agency (EPA), ozone-generating air purifiers are neither safe nor effective. In fact, instead of helping people breathe easier, they can actually make them sick.

“Good up high — bad nearby”

Ozone is a reactive gas made up of three atoms of oxygen. Found in the earth’s upper atmosphere, the ozone layer protects us from the sun’s damaging rays. But when inhaled, it’s a powerful pollutant that can irritate the throat and lungs, and can cause coughing, chest pain, shortness of breath and asthma. Long-term exposure can even lead to premature death. This is why the EPA has used the phrase “good up high — bad nearby” to mark the difference between the ozone layer and ozone in the air we breathe.

Unfortunately, humans are responsible for the majority of the ozone we breathe. Ground-level ozone — the main component of smog — is created when pollutants such as power plant emissions and vehicle exhaust are exposed to sunlight. Thankfully, the EPA has recognized the danger of outdoor ozone pollution and established standards under the Clean Air Act to protect both the environment and our health. However, indoor ozone is another story altogether.

Ozone-producing “air cleaners” actually cause pollution

Underwriters Laboratory’s UL Standard 867 requires household air purifiers to produce no more than 50 parts per billion (ppb) of ozone. However, even this level is not safe for humans to breathe. And there is no current national regulation against air purifiers that produce ozone indoors. This is unfortunate, since tests conducted by the California Air Resources Board (CARB) have shown that many of these so-called air purifiers produce ozone levels as high as 300 ppb. According to CARB, “These concentrations are equal to, or worse than, a first stage smog alert.”

But the real kicker is that ozone-producing air purifiers are not effective at cleaning the air. According to the EPA, these systems do not neutralize airborne particles such as dust, pollen, bacteria and mold spores. They’re also ineffective at neutralizing odour-causing chemicals. And besides the damage ozone can do to the respiratory system, it can also react with other chemicals to form toxic by-products such as formaldehyde and ultrafine particles.

Steps to improve Indoor Air Quality

Instead, to safely and effectively improve the Indoor Air Quality in your home, the EPA suggests taking the following steps, in order of effectiveness:

- **Source Control.** Eliminate or control the sources of pollution by keeping your home clean to control indoor pollution.
- **Ventilation.** When appropriate, open doors and windows to bring fresh air in from outside.
- **Air Cleaning.** Use an air purifier with proven technologies such as mechanical filtration to remove airborne particles and gas-adsorption to control odours.

For more information on the dangers of ozone-generating air purifiers, visit the U.S. EPA at: www.epa.gov/iaq/pubs/ozonegen.html

This publication is brought to you by The IQAir Group, which develops innovative air quality solutions for indoor environments around the globe. IQAir is the exclusive educational partner of the American Lung Association for the air purifier industry.