Why Use a Home IAQ Monitor?

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Home indoor air quality monitors have proliferated in recent years, with their price points dropping as the technology becomes more sophisticated and accessible. Should homeowners (and tenants!) consider purchasing a device or two to monitor their home air quality? The answer unequivocally is, yes!

Maine Indoor Air Quality Council

https://maineindoorair.org

What Do Home IAQ Monitors Do?

IAQ monitors are small electronic devices that continuously measure the levels of pollutants in your indoor air, and deliver that information to users via a digital readout on the device and/or a digital app. Thanks to COVID, most people now understand there are things present in their indoor environment that can make them sick—many of which you can't see, smell, or taste. That's what makes these devices so useful – they can detect the presence of contaminants and inform you about pollutant levels that may require action.There's a common adage in the IAQ arena: "you can't manage what you don't measure." Gathering measurable data can help you improve how you manage your indoor environment, making it healthier for you and your family.

What to Expect From Your Device

There are two key things to remember about home IAQ monitors:

- There is no single device that can monitor all the indoor pollutants that can make you and your family sick. More comprehensive monitoring of your home environment may require the purchase and use of more than one type of device.
- Home IAQ monitors are not the calibrated pieces of equipment used by professionals to measure indoor pollutants. That said, the home monitors are pretty darn good, and they can and do spur you to take immediate and long-term action to reduce elevated pollutant levels.

Learn More

The U.S. EPA has a great web page about IAQ Monitors.

Scan code to go to EPA web page

See reverse for a table of what you can measure and why.

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What pollutants can be monitored and why

Here is a list of what you can measure with readily available IAQ monitors and what you should do if your monitor indicates an elevated level of pollutants.

Pollutant	Why	Risk to Health	What to do
Temperature & Humidity	Too much moisture indoors leads to the risk of mold and bacteria growth, and attracts unwanted pests). Some devices can calculate dewpoint, the point at which moisture in the air becomes liquid moisture on a surface (like dew on the grass in the morning). Preventing moisture is the key to preventing mold growth.	Mold causes a broad array of allergy-type symptoms for those who are sensitive to it (itchy eyes, runny nose, coughing, sneezing, mild rashes), and is a common trigger for those with asthma. More serious health effects are limited to those with underlying chronic health issues, such as autoimmune disease.	If your indoor humidity is consistently above 60%, reduce levels with dehumidification and ventilation.
Carbon Dioxide (CO2)	CO2 is what people emit every time they exhale. Monitoring CO2 is a useful way to identify if you and your family are getting enough fresh air ventilation in your home.	High levels of CO2 can lead to fatigue, lack of productivity, and temporary reduction in cognitive function. High CO2 (above 1000 parts per million) is often an indicator of inadequate ventilation, causing increased exposure to pollutants trapped indoors.	When CO2 levels rise above 1000 ppm, increase ventilation in the space.
Radon	Radon is a colorless, odorless radioactive gas that comes up out of the ground and gets trapped indoors. 1 out of every 3 Maine homes likely has a radon problem.	Radon causes lung cancer. It is the #1 cause of lung cancer in nonsmokers, and the #2 cause of lung cancer nationwide.	If your radon in air levels are frequently at or above 4.0 pCi/l, install a radon in air mitigation system.
Small Particles (PM 2.5)	Small particles floating indoors can be inhaled deep down into the lungs. These particles are generated by combustion appliances, wildfires, and every day living: dust, skin, home repair debris, viruses, etc.	Small particle pollution can increase the risk of short term lung infections and long term lung disease, as well as cardiovascular disease, inflammation, and reduced life expectancy. Small children and the elderly are particularly susceptible to health effects from exposure to small particle pollution.	1. Prevent exposure to small particle pollution at the source (use kitchen range hoods that vent outdoors, use HEPA vacuum cleaners, and seal off areas being renovated from the rest of the home.) 2. Increase ventilation 3. Use air cleaning devices
Volatile Organic Compounds (VOCs)	VOCs are found in household cleaning products, personal care products, paints and varnishes, furnishings, and much, much more. Almost anything with a significant odor is giving off VOCs.	Common symptoms include eye and nose irritation, coughing, headaches, nausea, and dizziness. Long-term exposure can damage vital organs and cause cancer.	1. Reduce the use of products that release VOCs indoors. 2. Increase ventilation. 3. Use an air cleaning device capable of capturing gases and VOCs.
Carbon Monoxide (CO)	Carbon monoxide is a byproduct of burning fossil fuels. Like many indoor pollutants, it is colorless, tasteless, and odorless.	Exposure to low-levels of CO can cause headaches, dizziness, and exacerbation of asthma and heart or lung conditions. High levels of CO can cause death.	1. Regularly service all devices that burn fossil fuels 2. Prevent CO from coming into living spaces from attached garages 3. Increase ventilation. Note: CO detectors are required in most single family homes as well as all rental properties in Maine.
Nitrogen Dioxide (NO2)	NO2 is generated when things are burned indoors: gas ovens and cooktops, unvented heating appliances, fire places and wood stoves, cigarettes, candles, etc.	Exposure to NO2 can irritate airways (coughing, wheezing, tightness in the chest), as well as exacerbate asthma and contribute to development of long-term lung disease, such as COPD.	Regularly maintain all combustion appliances, use a rangehood exhausted outdoors every time you cook or bake, only use direct vented combustion appliances. Use an air cleaning device designed to capture gas pollutants.