



Is a portable air purifier worth it?

BY ERIK J. MARTIN, CTW FEATURES

When you desire fresh air, Mother Nature provides a cost-free option that can be quickly accessed by simply opening your windows. But truth is, this can cause more problems than it solves, especially if you suffer from seasonal allergies or live in an urban area with ample air pollution.

If you really want to breathe in cleaner, fresher oxygen, the experts recommend considering a portable air purifier machine. This appliance helps clean the air within a room or area. It works by moving the air within the space through a filtration system that consists of a fan and either filter media or a UV light.

"Portable air purifiers target air pollutants such as dust, pollen, and volatile organic compounds" (VOCs) says Vinav Shah, an indoor air quality expert and founder of the Air Aware Network. "While different machines utilize different techniques to remove these airborne particles, they all fundamentally work by drawing the pollutants into the machine or onto other surfaces and recirculating the purified air back into the room. HEPA filters trap the particles in a fine mesh, while carbon filters work by attracting pollutants into their pores."

Peter Mann, CEO and founder of Oransi, a Radford, Virginia-based company that makes air purifier devices, says those with respiratory issues such as asthma, emphysema, or COPD, as well as people who suffer from dust and pollen allergies, make good candidates for owning and using a portable air purifier, as these individuals are more sensitive to air quality issues. These machines can also help remove smoke, smoke odors, and VOCs from cleaning supplies, new

furniture, paint, and gas cooking.

"Very young and older people can particularly benefit, as can those who live in homes or dwellings that may not be able to accommodate whole-house filters or whole-home purification systems, making a portable unit a good option," says Tony Abate, a certified indoor environmentalist and vice president and CTO at AtmosAir Solutions in Fairfield, Connecticut.

When shopping for a portable device, think carefully about sizing and capacity.

"Pick a model made for a space slightly bigger than the room where you plan to put it," suggests Josh Mitchell, an HVAC technician and owner of Airconditionerlab.com. "For instance, if your room is about 300 square feet, look for an air purifier rated for 350 to 400 square feet. This way, it can clean the air effectively without working too hard, which keeps it quieter and more energy efficient."

A good indicator of space air cleaning performance is CADR (clean air delivery rate), a rating system that can metrically show the air cleaning performance of the unit.

"The higher the CADR rating, the better. Most superior units have a CADR of 300 or more," Abate notes.

Additionally, look for features like adjustable fan speeds, timers, and automatic sensors that adjust settings based on air quality.

"And try to opt for a purifier that can use a true HEPA filter, which captures

99.97% of particles that are 0.3 microns or larger," adds Mitchell.

Mann says that a HEPA filter is the best solution "for particles such as dust, pollen, mold spores, and smoke. To remove odors, gases, and VOCs, a carbon filter is needed."

Expect to spend anywhere from around \$50 for a small basic model to \$800 or more for high-end devices with advanced features and larger capacities.

A portable air purifier should be positioned where you spend the most time. The bedroom is a particularly good spot because we spend extended amounts of time there. Other common spots include a family room or home office.

"It's crucial to place the purifier in an open area, where the airflow can reach occupants without being hindered by objects that obstruct airflow," continues Shah.

Although air purifiers can substantially improve air quality, they are not a cure-all.

"They should be used in conjunction with good ventilation practices. Don't expect an air purifier to remove all contaminants completely, especially in larger or highly contaminated spaces," cautions Mitchell.

Despite their limitations, purchasing a portable air purifier is often worth it, according to Shah.

"That's especially true for those concerned about particulate matter pollution, which is known to have negative health effects," he says. "It may also provide additional benefits to those with allergies or asthma."