

FACT SHEET

HEPA Air Cleaner

Should you use an Air Cleaner?

Many factors need to be considered in determining whether the use of an air cleaner is appropriate in a particular setting. EH&S is available to provide technical information and guidance; however, the ultimate decision to purchase and use an air cleaner is the responsibility of the occupant or Department. Review the information provided below and if you still have questions, please contact EH&S for assistance.

Air Cleaning

Air cleaning is one of several methods of reducing indoor air pollutants. In order of effectiveness, these methods include:

1. Removal of the source contaminant
2. Control of source contaminant emissions
3. Ventilation
4. Air Cleaning

Air cleaning can be used in addition to source control and ventilation. However, air cleaning alone cannot adequately remove all pollutants typically found in indoor air. Source contaminant control practices such as wet wiping horizontal surfaces and keeping carpets clean by regular vacuuming and periodic steam cleaning are also effective methods of decreasing common allergen loads such as dust and pollen.

Will Air Cleaning Reduce Health Effects?

- Air cleaners may reduce the health effects of some common indoor air contaminants. One example would be small solid substances suspended in the air such as dust.
- Some controversy exists about whether air cleaners can reduce the allergic reactions produced by larger particles such as pollen, house dust allergens, some molds, and animal dander. Most of these large particles are found where they settle on surfaces in the home or office, rather than in the air. They are not typically removed by an air cleaner unless they are disturbed and re-suspended in the air.

Additional Factors to Consider Before Purchasing an Air Cleaner

Air cleaning is one of several methods of reducing indoor air pollutants. In order of effectiveness, these methods include:

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1. You will need to perform manufacturer-recommended maintenance according to schedule. Replace filters as indicated by the manufacturer. Performance of the air cleaner will suffer if the filter change-out and maintenance schedule is not followed.
2. Understand that gases and odors from particles collected by the air cleaning unit may be re-dispersed into the air.
3. Realize that some devices scent the air to mask odors, which may lead to a false perception that the odor-causing pollutants have been removed.
4. Be aware that air cleaners usually produce noise. You may be bothered by noise from the personal air cleaning unit, even at a low-speed setting.
5. Consider the ongoing maintenance costs of the unit. Maintenance costs, such as purchasing replacement filters, may be significant.

Air Cleaners EH&S Recommends

- Mechanical air cleaners that draw air through a fibrous or metal filter with different size pores that trap particles. The unit should be equipped with a High-Efficiency Particulate Air (HEPA) filter designed to remove respirable particles from the air. If the purpose of the air cleaner is to control odors, the unit should also have a charcoal filter since this filter is designed to trap odor-causing compounds.
- Air cleaning units that are sized appropriately for the room. Air cleaning units have air volume limitations which are identified by a “Clean Air Delivery Rate” (CADR). The CADR is the measurement of cubic feet of clean air delivered per minute. EH&S recommends air cleaners that have a CADR of between 200 (17ft x 17ft rooms) and 400 (25 ft x 25 ft rooms.) Most air cleaners have their CADR listed at www.cadr.org/consumer.htm.

Air Cleaners EH&S Does NOT Recommend

Electronic air cleaners that include Ozone Generators and Ion Generators, which act by charging the particles in a room. The charged particles are then attracted to walls, floors, draperies, etc., and are not effectively removed. In addition, ion generators and electronic air cleaners may produce ozone (a lung irritant), particularly if they are not properly installed and maintained.

Where to Purchase Personal Air Cleaners

- Personal air cleaners can be found locally at stores such as Walmart, Sears, Target, Costco, etc.
- Personal air cleaners are sold by numerous online vendors and through BearBuy vendors such as Grainger. Search for “Portable HEPA Air Cleaners” to see a selection of products available.