



Indoor Air Filters Cleaning Your Home's Air

YOU AND YOUR FAMILY CAN BREATHE EASIER AT HOME BY USING THE RIGHT AIR FILTER.

Many air pollutants are present indoors. One way to make the air cleaner in your home is to use an air cleaning device like a portable air filter or a whole-house filtration system. Air filters can reduce levels of pollutants in the air, like fine particulate matter (PM_{2.5}). Indoor pollutants result from outdoor pollution from traffic, industry, wood smoke and pollen, as well as cigarette smoke, cooking, and dust inside the home. There are many air filter options available. Filters alone cannot remove all pollutants from your home, but the right filter can reduce most air pollution.

Filters can be small, plug-in portable filters or whole-house filters.

Plug in, portable
air filter



Plug in, portable air
filter



Whole-house forced-air
ventilation system



Forced air systems use
furnace filters



The best air filter depends on your situation:

**The size, location,
and type of home
you have.**



**Your family's
health concerns**



Your budget



Filters must be maintained and used properly to get the most health benefits. Filters work best with simple but regular maintenance.



Filters should be replaced every **3 to 24 months**, depending on the type of filter and the level of pollution present in your home. Keep your filter system turned on as much as you can to get the most air quality improvements.

**When properly used, air filters will remove pollution from your family's home.
Less air pollution can improve health for you and your family!**

CAPHE is a community-based participatory research project. In collaboration with community partners, CAPHE works to improve health in Detroit by promoting clean air for Detroit residents.

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Do you have a forced-air heating system?

If your home heating system has registers or vents that release warm air in winter (or cool air in summer if you use air conditioning), then you have a forced-air system. All forced air systems should have a furnace filter, but sometimes it is missing.

High-efficiency filters are often the best and most budget-friendly way to improve air quality in your home.

1. Check the filter size

The filter must be the exact size. Typical dimensions are 24 x 12 x 1 inch or 2 x 24 x 1 inch. You can find the filter size by:

- looking at your existing filter's frame
- looking at your owner's manual
- measuring the dimensions of the filter slot.

2. Check the MERV (Minimum Efficiency Reporting Value) on the filter.

A higher MERV rating means that the filter will remove more particles. Filters with MERV ratings between 11 and 13 are most effective and are recommended in homes. Filters with MERV ratings between 7 and 13 can be effective.

3. Follow the instructions provided with the filter to remove the old filter and install the new one.

4. Run your system.

Forced air systems with good filters will clean the air only when the system is operating: when it is heating or cooling the house. Your system can be operated in the "fan" mode, which you can set using your thermostat's controls. This is effective when windows are closed.

Where can I buy filters for my forced-air system?

Most hardware stores and department stores sell air filters. There are many good brands. Avoid fiberglass filters since these provide very little filtering. You can also order filters online, especially if you need a size that is difficult to find.

How much do air filters cost? A quality in-home air filter can cost between \$15 and \$60; most cost about \$15 to \$20. Keep in mind that these filters need to be replaced regularly, ideally each season (4 times per year).

Don't have a forced air system?

If your home has radiators, baseboard heaters (electric or hot water), or some other type of heating system that does not use forced air, you can still improve the air quality using a portable air filter. These can be placed where you and your family spend most of your time, like living rooms and bedrooms.

1. Check the MERV (Minimum Efficiency Reporting Value) rating on the filter or system. A higher rating means that the filter will remove more particles.

- Filters with MERV ratings between 11 and 13 are most effective and are recommended in homes. Filters with MERV ratings between 7 and 13 can be effective.
- Some filters are HEPA (high-efficiency particle arrestance) certified, which can be very effective, especially for smaller particles. HEPA filters usually cost more, but they typically last longer than standard filters.
- **We do NOT recommend** buying an ionizer, ion-generating, or electronic filter. These filters may not work well, and some emit harmful levels of ozone.

2. Check the CADR (Clean Air Delivery Rate), which shows how large an area or room the filter can handle. For example, a 17 ft. x 17 ft room needs a filter with a CADR of 200, while a 25 ft. x 25 ft room needs a CADR of around 400.

3. It is best to match the room size to the CADR (even approximately is fine).

4. Purchase an in-home air filtration system that suits your family's needs and budget.

Where can I buy a portable filtration system?

Most local hardware stores and many supermarkets sell portable filtration systems.

How much do portable air filters cost?

Most portable air filtration systems will cost between \$125 and \$450. Keep in mind that portable systems need to have filters replaced regularly.

Citations

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