

It may come as a surprise, but most of us store a multitude of organic chemicals in our homes. In fact—in the very rooms we frequent. A common culprit? Cleaning supplies. Organic chemicals are often used as ingredients in household cleaning products. These chemicals then vaporize spreading through the air as a gas, potentially creating harmful chemical combinations and even producing volatile organic compounds (VOCs).

Sadly, these aren't just daunting terms. The chemicals and VOCs emitted from common household products are hazardous to you and your family's health. [Indoor pollutants](#) can also worsen indoor air quality overall. Therefore, the household products and supplies you use and where you choose to store them matters. Under kitchen or bathroom sinks and hallway closets are popular storage locations. They're also central home areas, worsening the air in frequented spaces. So, exactly what chemicals that affect indoor air are lurking in your home?

## Cleaning Supplies & Chemicals That Affect Indoor Air Quality

Chemicals that affect indoor air are found in all kinds of household cleaning products as ingredients. From polishes and multipurpose cleaners to detergents and disinfectants, a majority of cleaning products emit chemicals. This includes regular cleaning supplies such as:

- Furniture Polish
- Laundry Detergent
- Air Freshener
- Oven Cleaner
- Spot Remover
- Aerosols
- Chlorine Bleach
- Multipurpose Sprays
- Floor Wax
- Dishwasher Liquid
- Disinfectants and Sanitizers
- Carpet Cleaner

Other products like paints and varnishes that might be stored elsewhere in the home or garage also emit VOCs. Even cosmetic and self-care products can include organic chemicals as ingredients. And aerosols of all kinds (think hairspray and deodorant in addition to air freshener and grease cleaner) negatively impact indoor air quality. Another common category to watch out for: art and hobby supplies. Certain creative activities rely on chemical-based products. All of these different factors are chemical and VOC sources and potential exposure to be aware of.

## What Are VOCs?

**VOC** simply stands for volatile organic compound. VOCs are gases emitted from (mostly) man-made chemicals. They are common indoor air pollutants because they are used in many basic household products. According to the EPA, VOC levels are actually up to two to five times higher indoors compared to outdoors.

Chemical-based products can worsen indoor air quality by emitting chemicals or VOCs when in use, during the cleaning process. Other products are dangerous when used in combination or because they can result in hazardous chemical combinations. After all, most of us clean multiple surfaces or areas at once, with different products.

There are hundreds of VOCs in existence. A more well-known VOC is **formaldehyde**. It is also regularly found in homes. This is partly due to the many potential formaldehyde sources, such as: wood furniture and materials, paints, finishes, insulation or building material and dry cleaning. And that's of course on top of formaldehyde emitted by cleaning products. Other common VOCs found in indoor living spaces include toluene (paint thinners + nail polish), styrene (plastic + insulation), methylene chloride (often used as a flame retardant) and ethanol (common cleaning product ingredient).

With so many VOCs circulating through the air, it might be hard to believe they're hazardous. But there are serious health risks associated with high VOC levels.

## What is the Risk of High VOC Levels?

It's crucial to remember that chemical-based products used in indoor spaces are serious chemical agents. It's also important to understand the potential consequences. Health symptoms noticed with certain cleaning supplies include headaches, eye, throat and nose irritation and allergic reactions. More serious VOC exposure can lead to asthma or worsening asthma, serious [respiratory conditions](#) and cancer. [Studies](#) have associated spray cleaners with a 40% increase in wheezing and a 50% increase in asthma symptoms.

## Reducing Chemicals That Affect Indoor Air in Your Space

Source control and ventilation are two helpful indoor air quality control strategies. Both are also useful options to help lessen the amount of chemicals and air pollutants circulating indoors. And when done right, source control and ventilation will drastically improve your home's indoor air quality.

### Source Control

- An important source control step is simply a general awareness of the products you're storing and using in the home. Follow product directions carefully and only use the necessary amount.
- Carefully dispose of chemical products and cleaning supplies that are no longer in use. No need to have them hang around the house!
- Try to buy products with minimal known irritants or reduced VOCs. The EPA has verified certain products that meet their "Safer Choice Standard" and offer a [searchable product database](#). These products are required to have lower VOC levels to make the list.
- Avoid [scented products](#) when possible, which have higher chemical levels. Opt for fragrance-free (aka no scent) over unscented (aka still contains extra chemicals, but the purpose is to mask the smell).

### Ventilation

- It helps to increase natural ventilation when cleaning and using chemical supplies. Open windows and/or doors to maximize the amount of fresh air coming into the space.
- It often isn't enough to rely on natural ventilation for fresh air. If natural ventilation can't be relied on for air circulation regularly, we certainly don't suggest it for reducing chemicals. The helpful alternative is [mechanical ventilation](#). A whole-home mechanical ventilation system

brings fresh outdoor air in and removes stale indoor air. Whole-home ventilation systems work with the existing HVAC system, meaning it's automatically improving (or maintaining good) air quality. [Stale indoor air](#) can make you sick because hazardous pollutants remain in living and working spaces longer. And yes, that includes VOCs and organic chemicals.

- [Heat Recovery Ventilators](#) (HRV) create an improved living space and healthier, cleaner air. HRV systems also utilize a heat transfer that is energy-efficient and helps with overall temperature control.
- [Energy Recovery Ventilators](#) (ERV) provide cleaner indoor air, regulate the exchange of new and old air while transferring moisture and heat from the stale air to the fresh air.

## Prioritize Improving Indoor Air Quality

Considering just how many VOCs and chemical emissions are likely already impacting your space's indoor air quality, we get the need to reduce their spread when possible. Focusing on source control and limiting the products that enter your home in the first place is a helpful step. Or, focusing on improving ventilation by upgrading to mechanical ventilation is a low-hassle low-maintenance solution. Whatever option you choose, or maybe even a different [IAQ control solution](#), prioritizing your home's air quality will have many benefits! We can help!