

# Formaldehyde In The Home

Formaldehyde is a chemical found in many building products, furnishings, fabrics, and tobacco smoke. When products containing formaldehyde are new, they can release an odor into the air by a process called off-gassing. The odor is sharp or biting. Some people are sensitive to this chemical and can develop symptoms. There are things you can do to lessen the amount of formaldehyde in your home.



## **Symptoms–**

Usually worse at home, better when away

- ◆ Burning or watery eyes
- ◆ Burning, runny or stuffy nose
- ◆ Burning or scratchy throat
- ◆ Headache, mental confusion
- ◆ Asthma attacks
- ◆ Other breathing problems
- ◆ Skin rashes

## **What You Can Do To Reduce Exposure–**

If you are sick, seek medical attention

- ◆ Avoid smoking indoors
- ◆ Buy formaldehyde-free or low emitting building products and furnishings. Ask your retailer for help with selecting these products
- ◆ Keep the home well ventilated
- ◆ Keep the indoor relative humidity below 60%
- ◆ Air out materials with a chemical odor outside of your home for a few weeks before bringing them indoors

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## What Is Formaldehyde?

Formaldehyde is a liquid chemical that turns into a gas at room temperature. It is colorless, and has a sharp, biting odor. Formaldehyde is used in manufacturing to make hundreds of types of materials ranging from pressed wood to cosmetics. It can also be formed when other chemicals break down.

## Where Is It Found?

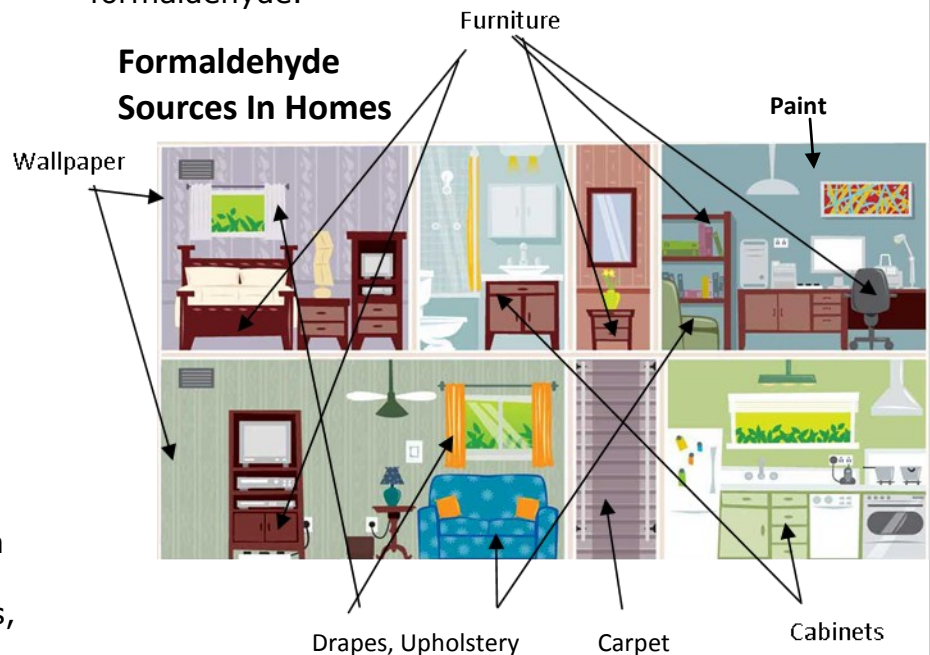
Formaldehyde is a common indoor pollutant that is present in low levels in most homes and offices. Products that are the biggest contributors to indoor pollution with formaldehyde include tobacco smoke, building and construction materials, and fabrics and finishing materials.

Some homes had urea formaldehyde foam insulation (UFFI) blown into the walls in the 1970's and 1980's. This type of insulation was banned in CT in 1981 due to faulty installation in a number of cases,

which led to improper curing and high concentrations of formaldehyde being released into the air. Studies have shown that UFFI is no longer a problem in these homes because the insulation is no longer releasing significant amounts of formaldehyde.

## Health Effects

Some people exposed to formaldehyde may develop symptoms, depending upon how much and how long they are exposed. The most common symptoms are eye, nose and throat irritation. Exposure can also cause headache, mental confusion, can trigger asthma attacks and other breathing problems, and may cause skin rashes. Very high exposures have caused cancer of the nasal passages of those who work with formaldehyde.



## Sources of Formaldehyde



Combustion Sources:	Building & Construction Materials:	Fabrics:
<ul style="list-style-type: none"> <li>*Tobacco smoke;</li> <li>*Cooking byproducts;</li> <li>*Wood stoves;</li> <li>*Byproducts from fuel burning appliances like gas stoves &amp; kerosene space heaters</li> </ul>	<ul style="list-style-type: none"> <li>*Glues, adhesives, caulks;</li> <li>*Particle &amp; pressed board, plywood, oriented strand board (OSB);</li> <li>*Paints &amp; coatings;</li> <li>*Insulation materials like some foam insulation and fiberglass bats</li> </ul>	<ul style="list-style-type: none"> <li>*Draperies;</li> <li>*Upholstery;</li> <li>*Wall coverings;</li> <li>*Carpet;</li> <li>*Permanent press</li> </ul>

## How Do I Know If I Have A Problem In My Home?

Even though formaldehyde is in so many products, the good news is that the amount of gas released into the air (called off-gassing) lessens with the passage of time. This is why we focus on new sources. If you have a new home or any new sources such as those in Table 1 that are less than a year old, and you have symptoms that are worse when you are home and better when you are away from the home, you might be affected by formaldehyde in your home.

It is important to understand that other things in your home may cause similar symptoms. If the symptoms do not go away, it is advisable to seek medical care. Tell your health care provider about possible sources in your home.

## Is There A Test I Can Do To Check For Formaldehyde?

Yes, there is an air test that can measure the amount of formaldehyde in the air. You can do the test yourself by purchasing a passive formaldehyde detector online or through certain retail vendors. This test is a screening tool. Positive tests may be confirmed by a professional (industrial hygienist) using more sophisticated equipment. Forty parts per billion (40 ppb) is the CT DPH recommended guideline. You should know that health officials do not recommend testing unless you have symptoms and have new sources in the home.



Formaldehyde  
Passive Monitors

## How Can I Reduce My Exposure To Formaldehyde In My Home?

To reduce your exposure, you need to reduce the sources.

- ◆ Use formaldehyde-free building materials and furnishings.
- ◆ Use low-emitting building materials. Choose pressed wood made with phenol formaldehyde (PF) resin or methylene diisocyanate (MDI) resin. These off-gas much less formaldehyde than pressed wood made with urea formaldehyde (UF) resin when new. PF & MDI products are more resistant to moisture and may be labeled "exterior grade," "weather resistant," or "moisture resistant."
- ◆ Avoid products made with UF coatings like cabinets, solid & wood flooring, and furniture. UF coatings emit very high amounts of formaldehyde when new.
- ◆ Avoid using bare or uncoated pressed wood products containing urea formaldehyde (UF). These are usually:
  - ◆ Hardwood plywood (paneling & furniture)
  - ◆ Particleboard (shelves, countertops, cabinets, furniture, floor underlayments & some laminate flooring, more)
  - ◆ Medium density fiberboard (MDF) (doors, shelves, countertops, cabinets, floor underlayments & some laminate flooring, more)
  - ◆ UF Particleboard sold as "hardboard"
- ◆ Air out things like new carpets, drapes, & pressed wood furniture outside of your home for a few weeks before bringing them indoors.
- ◆ Keep the indoor temperature and relative humidity below 78-80°F and 60-65% RH. Formaldehyde off-gasses more when it is hot and damp.
- ◆ Avoid smoking indoors.

For more information, contact: CT DPH Environmental & Occupational Health Assessment Program  
860-509-7740; <http://www.ct.gov/dph/ieq>