"Furniture like couches and armchairs are treated with chemical flame retardants and other preservatives"
Furniture like couches and armchairs are treated with chemical flame retardants and other preservatives.

Two classes of these chemicals, Perfluorinated chemicals (PFC) and PBDE, are not “bound” to the material they are applied to. This means that they can come off of furniture and enter the human body through our skin, noses, and mouths.

Flame retardants are persistent, meaning they build up in our blood over time.

Growing evidence shows that these chemicals affect hormones, lower sperm count, damage thyroids, cause cancer, and are developmental neurotoxins (toxic to developing fetuses).

They are especially dangerous to children, because they frequently put their hands in their mouth after touching furniture and introduce flame retardants into their body.

Many pieces of furniture are made from plywood, particleboard, or composite wood frames. These materials are held together by glues that release formaldehyde. Formaldehyde can cause burning sensations in the eyes, nose, and throat; coughing; wheezing; nausea; and skin irritation.

Formaldehyde is known to cause cancer in animals, and growing evidence shows that it can cause cancer in humans too. It has been classified as a known human carcinogen since 2014.
**FLAME RETARDANTS**

**Flame Retardants** are a number of chemicals sprayed onto furniture to prevent the object from catching on fire. Flame retardants are used on furniture made with foam (memory foam or synthetic foam mattresses, arm chairs, etc.), as well as some fabrics which are used to upholster furniture.

The chemicals in the flame retardants can leak out of the furniture into the air in the home. The chemicals also attach themselves to dust particles.

These dust particles move everywhere in the house including attaching themselves to our hands, food, plates, etc. When flame retardants from dust get from our hands into our mouths, we swallow them and they get in our bodies. Flame retardants accumulate over the years in humans and animals. This means that there are detectable levels of flame retardants in the blood of most Americans and their house pets.
FORMALDEHYDE:

Formaldehyde is a colorless flammable gas that has a strong odor. Materials that contain formaldehyde can release it into the air as a gas. **Formaldehyde is often found in pressed wood products.** Pressed wood is the material which makes up the surfaces of many tables, desks, and cabinets, as well as the legs of couches and chairs. Formaldehyde is also found in the foams which make up some mattresses and chairs. Exposure to formaldehyde has negative effects on anyone’s health but is particularly harmful to those suffering from respiratory diseases or asthma. Formaldehyde has been classified as a known human carcinogen since 2014.

LEAD

Lead use was banned in paints in 1978. However, before 1978 lead was a widely used ingredient in paints.

**Lead can be found in painted furniture (particularly antiques and heirlooms).** The presence of lead paint in the home becomes an issue if the paint is likely to peel off. This peeling paint creates lead dust.

Once lead paint creates lead dust, we can breathe it, and it gets into our blood. In addition, children are on the floor more and explore by putting things in their mouths, including paint chips or chewing on furniture, so they are at high risk for lead poisoning.


VOLATILE ORGANIC COMPOUNDS (VOCs)

Volatile organic compounds are a class of chemical used in many adhesives, coatings, wood protectors, flame retardants, and other building materials. VOCs include a variety of chemicals released from common products, which can have negative health effects. In some cases, **VOCs inside the home are measured up to 100 times higher than outside.**

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WHY IS THIS IMPORTANT TO MY OR MY CHILD’S HEALTH?

BUYING PLYWOOD FURNITURE TREATED WITH CHEMICALS CAN CONTRIBUTE TO...

- Allergies
- Asthma
- Difficulty Breathing
- Irritation of Nose and Throat
- Hormone System Disruption

- Lower IQ
- Behavioral Problems
- Cancer Risk
- Birth Defects
HOW TO KEEP MY HOME SAFE

Without even replacing your furniture there is a lot you can do to help reduce the levels of flame retardants, formaldehyde, and lead within your home.

Keep dust levels down by mopping or wet dusting.

When dusting it is so important to use a wet cloth or fabric to actually pick up the dust. If you use a dry cloth, you simply are brushing the dust particles up into the air and then allowing them to re-settle on other household objects.

Wash your and your child’s hands often.

Frequent washing of hands reduces the amount of dust that is then being transported to your mouth and ingested.

Use a vacuum frequently to remove dust and other particles from floors and carpets.

It is best to use a High Efficiency Particulate Air (HEPA) vacuum. These vacuums are better at removing the invisible particles.
Make sure you have proper ventilation in your home.

Your heating/cooling appliance should have an air filter on it. Air filters for home use are rated using a Minimum Efficiency Reporting Value scale (MERV) between 1-13.

To successfully keep your home’s air safe, try to purchase filters between 8-13 MERV. In a common American home, the air filter should be replaced approximately once a year.

Reduce the humidity in your home.

Humidity can be reduced with proper ventilation. If necessary, consider purchasing a dehumidifier.
When you buy furniture, there are a few things to consider to make sure the furniture doesn't make air pollution inside your home. If possible consider buying used furniture. Shop secondhand stores for good quality old furniture which won't give off the fumes that new furniture might. Older pieces in the home will have off-gassed for many years (or were made without VOCs).

Do use caution when buying old painted furniture. Lead paint was used until 1978. Read more in the Paints section. That rustic chipped look so many love could actually be from lead paint. If you have a concern there are easy to use and inexpensive tests available.

**WHEN BUYING NEW FURNITURE**

- **Look for proper labelling.** Buy furniture that is labeled TB117-2013. This label should read: “The upholstery materials in this product contain NO added flame retardant chemicals.”
- **Always contact the manufacturer** if you are unsure or if the label does not clearly state this. Natural latex foam cushions are a good alternative to polyurethane foam.
- **Look for Certifications.** Look for any of the following certifications ensuring low pollution:
  - Global Organic Textile Standard (GOTS)
  - Global Organic Latex Standard (GOLS)
  - Oeko-Tex Standard 100
  - Greenguard Gold
  - SCS Global Services
How to Buy New Furniture (Cont.)

**Air out your new furniture.** When you buy new furniture, you should leave it outside (for example, in your garage or other safe area) or in a room with an open window for a while. Airing out your furniture like this allows the worst of the air pollution to off-gas. Off-gas is the term we use to say the chemicals, VOCs, and gases are escaping from your furniture into the air. With new furniture, you want all those chemicals to be outside, and not in your home where you breathe them. It is especially important to air out furniture when you don’t know what chemicals have been used in the furniture. The length of time needed to off-gas varies by product. Furniture commonly needs about a month.

After your furniture has aired out enough, the furniture is much less likely to release toxic chemicals inside your home.

**Avoid buying products with polyurethane foam.** Instead, buy products and furniture filled with cotton, polyester, and wool.

**Buy solid wood furniture.** When buying new wood furniture try to purchase furniture that is made from solid wood instead of pressed wood.
If you cannot obtain solid wood furniture, look for the following certifications ensuring low pollution:

- California Phase 2 Compliant
- NAF or “formaldehyde free”
- ULEF
- TSCA Title VI compliant

If you are painting your home, finish painting before installing carpets, curtains, and furniture. Paint emits chemicals that can be absorbed by furniture. These chemicals can get into your body when you touch the furniture.

Buy "NO FORMALDEHYDE" wood furniture. If you can’t get solid wood furniture look for pressed wood furniture which specifically says "No Formaldehyde".
Buy furniture made from sustainable wood. Some sustainable woods are certified by either the American Tree Farm System or Forest Stewardship Council (FSC).

Any furniture using woods with these certifications are a good choice for your home.

Additionally, the following woods are the fastest growing meaning they are the most renewable/sustainable. Purchasing furniture made from these woods are a good choice for your home.

These are the following woods examples:

- Pine
- Maple
- Eucalyptus
- Aspen
- Bamboo
Buy furniture upholstered with natural fabrics. The best fabrics to use are:

- Wool
- Silk
- Bamboo
- Cotton
- Flax/Linen
- Hemp
- Abaca
- Jute
- Kenaf
- Pina
- Coir
- Kapok

Buy furniture filled with natural fillers instead of synthetic foam. The best natural fillers are:

- Down
- Wool
- Cotton Batting
- Wool by-Products
- Soy
- Recycled Natural Fibers
- Silk
- Hemp
- Horse Hair
- Linen
- Natural Rubber Latex
- Jute Webbing
- Buckwheat Hulls

If you have allergies, please consult with your allergist about what kind of furniture to get.