



MOTHERS & OTHERS FOR CLEAN AIR

HEALTHY INDOOR BREATHING TOOLKIT

FURNITURE

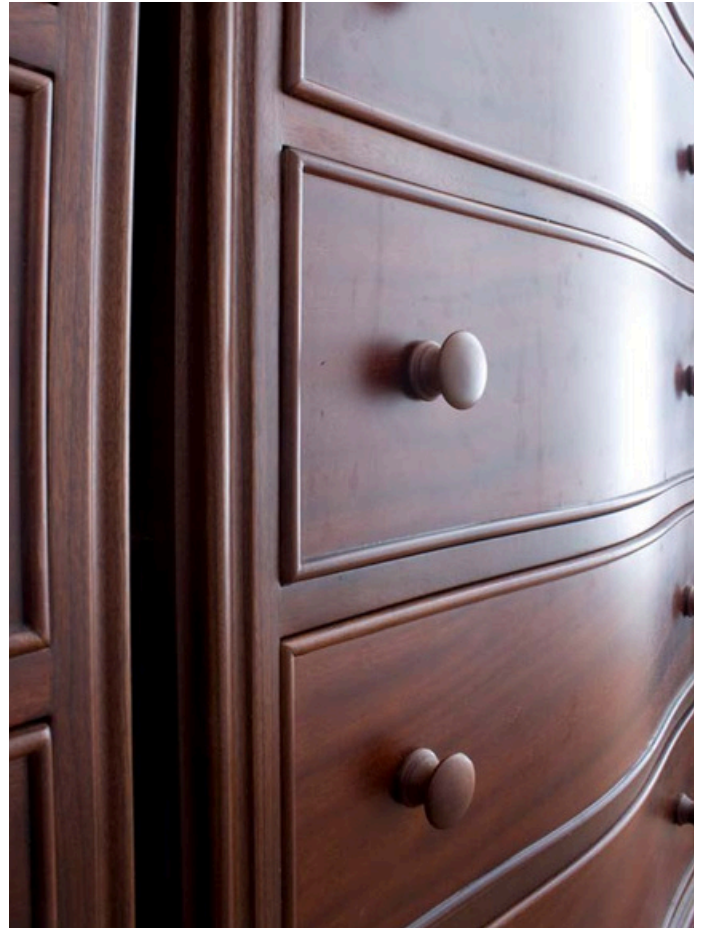


For more information about this research, visit
WWW.MOTHERSANDOTHERSFORCLEANAIR.ORG

THE PROBLEM

Furniture treated with chemical flame retardants, such as PFCs and PBDEs, can release these harmful substances into the environment.

These chemicals accumulate in the body over time, affecting hormones, lowering sperm count, damaging the thyroid, causing cancer, and harming fetal development. Children are especially vulnerable as they frequently ingest these toxins through hand-to-mouth contact.



Many pieces of furniture are made from plywood, particle board, 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.

CHEMICALS IN FURNITURE

FLAME RETARDANTS

Flame retardants are chemicals applied to foam-based furniture and upholstery to prevent fires. These chemicals can leak into the air and attach to dust particles, spreading throughout the home.

When ingested through hand-to-mouth contact, they accumulate in the body over time.

As a result, most Americans and their pets have detectable levels of flame retardants in their blood.



Flame retardants are used in memory foam mattresses and pillows



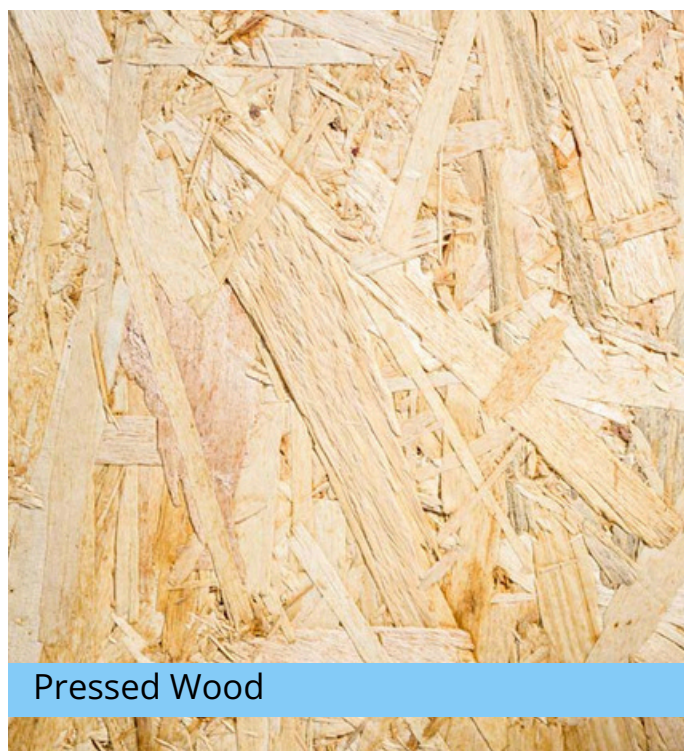
Spraying of Flame Retardant on Dressed Lumber



Flame Retardant Foam

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.



Pressed Wood

LEAD



Chipped Lead Paint

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.

[1] United States Environmental Protection Agency. "Q & A Consumer Fact Sheet on Flame Retardants."

[2] National Institute of Environmental Health Sciences. "Flame Retardants."

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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[3] National Cancer Institute. "Formaldehyde and Cancer Risk."

[4] United States Environmental Protection Agency. "Lead."

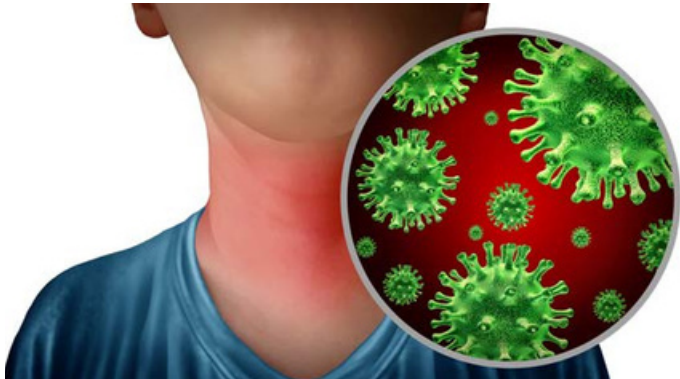
WHY IS THIS IMPORTANT

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TO MY OR MY CHILD'S HEALTH?

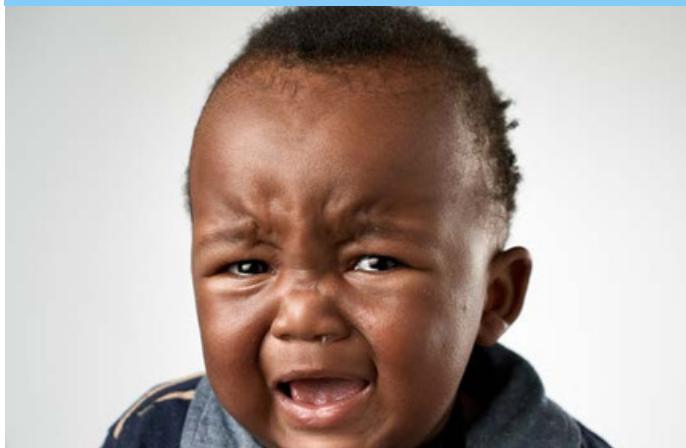
BUYING PLYWOOD FURNITURE

TREATED WITH CHEMICALS CAN CONTRIBUTE TO...



Irritation of Nose and Throat

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



Behavioral Problems

- Lower IQ
- Behavioral Problems
- Cancer Risk
- Birth Defects



Asthma

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.



Reduce dust levels by mopping or wet dusting.

Using a damp cloth effectively traps dust, while a dry cloth only spreads particles into the air, allowing them to resettle elsewhere.



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.



HOW TO KEEP MY HOME SAFE (CONTINUED)

08



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.



FURNITURE

When buying furniture, consider secondhand options to reduce indoor air pollution. Older furniture has already off-gassed harmful fumes, making it a safer choice for indoor air quality.

Be cautious with old painted furniture, as lead paint was used until 1978. Chipped, rustic finishes may contain lead, but affordable tests are available to check for safety.



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

NEW FURNITURE (CONTINUED)



Air out new furniture before bringing it inside to reduce indoor air pollution. Place it in a well-ventilated area, like a garage or near an open window, to allow harmful chemicals and VOCs to off-gas. This process, which can take about a month, helps minimize toxic emissions in 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.



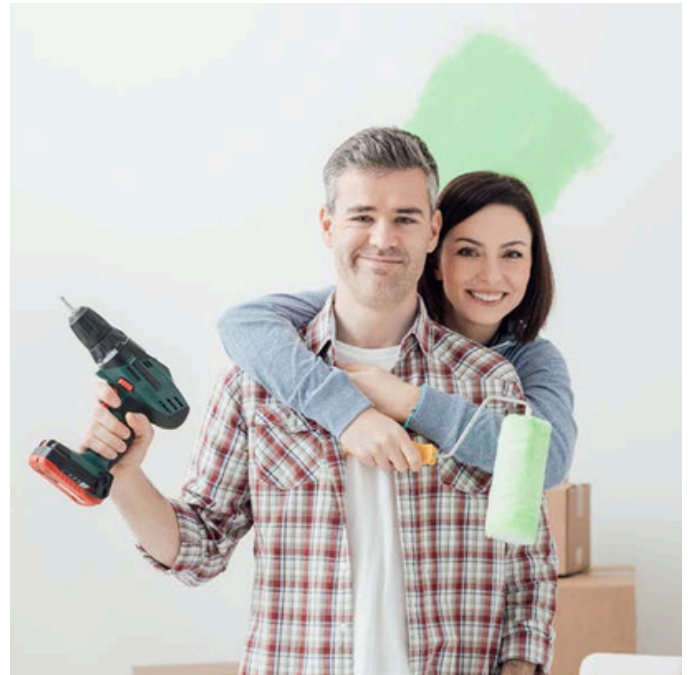
NEW FURNITURE (CONTINUED)

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



Complete painting before installing carpets, curtains, or furniture, as paint emits chemicals that can be absorbed by these items and later transferred to your body.



Buy "NO FORMALDEHYDE" wood furniture. If you can't get solid wood furniture look for pressed wood furniture which specifically says "No Formaldehyde".

NEW FURNITURE (CONTINUED)

- ✓ 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.



The mark of
responsible forestry
FSC® A000504



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.

The following woods are more renewable/sustainable:

- Pine
- Maple
- Eucalyptus
- Aspen
- Bamboo



Pine Wood Dressed Lumber

NEW FURNITURE (CONTINUED)



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.