FORMALDEHYDE

What is formaldehyde?
Formaldehyde is a colorless, pungent-smelling gas used in the building and furniture industry because of its preservative and adhesive qualities.

What are the major sources of formaldehyde?

- Pressed wood products (i.e. particleboard, plywood paneling, fiberboard)
- Household products such as laminated furniture and cabinets
- Professionally applied furniture and floor finishes
- Unvented gas stoves and kerosene space heaters
- Clothing and draperies

Why should I be concerned about formaldehyde?
Formaldehyde is a strong irritant that can cause a burning sensation to the eyes, nose and throat, wheezing and coughing, fatigue, skin rashes, headaches and nausea. Large doses can cause asthma attacks as well as damage to the liver, kidneys and the central nervous system.

What can I do to reduce formaldehyde levels?

- Inquire about the formaldehyde content of pressed wood products before you purchase them.
- Use "exterior grade" pressed wood products (lower-emitting because they contain phenol resins, not urea resins).
- Increase ventilation, particularly after bringing new sources of formaldehyde into your home.

INFORMATIONAL SOURCES FOR THIS BROCHURE INCLUDE:

Indoor Air Hazards. Montana State University Extension Service, United States Department of Agriculture, United States Environmental Protection Agency Washington DC 20460

The Inside Story, A Guide to Indoor Air Quality. United States Environmental Protection Agency Washington DC 20460

Introduction to Indoor Air Quality, A Self-Paced Learning Module. United States Public Health Service, National Environmental Health Association, United States Environmental Protection Agency Washington DC 20460

United States Environmental Protection Agency: www.epa.gov

SECOND HAND SMOKE

What is second-hand smoke?
It is the smoke that individuals breathe when they are located in the same airspace as smokers. It is a combination of more than 4,000 chemicals and is a major indoor air pollutant. It has been classified as a human carcinogen for which there is no safe level of exposure.

What are the health effects of second-hand smoke?
Non-smokers who breathe second-hand smoke suffer many of the same diseases as regular smokers. Exposure of non-smoking women to second-hand smoke during pregnancy reduces fetal growth. Post-natal exposure of infants to second-hand smoke greatly increases the risk of sudden infant death syndrome.

What are the effects of second-hand smoke to children?
Children's lungs are smaller and their immune systems are less developed, which makes them more likely to develop respiratory infections. Children breathe in more harmful chemicals per pound of weight than an adult would in the same amount of time. Health effects in children include:

- Increase in bronchitis, pneumonia and other respiratory illnesses
- Causes both acute and chronic middle-ear infections
- Triggers asthma attacks in children who already have asthma and some researchers have concluded that it actually induces asthma in healthy children

What can I do to reduce my family's risk from second-hand smoke?

- Make your home smoke-free
- Advocate for smoke-free workplaces
- Support smoke-free business establishments and restaurants
- Encourage family members who smoke to contact: Illinois Tobacco Quit Line 1-866-784-8937 or 1-866-QUIT-YES

RADON

What is radon?
Radon is a naturally occurring gas produced by the breakdown of uranium in soil, rock and water. You cannot see, smell or taste radon. Radon gas rises up through porous soil under a home or building and enters through gaps or cracks in the foundation.

How does radon affect my health?
Just like smoking, breathing radon can cause lung cancer. It causes no immediate symptoms or health risk but is the second leading cause of lung cancer in the United States. Smokers are especially at risk if radon is present. The health risks grow dramatically with the length of exposure. Any home (old or new) can have elevated radon levels.

How can I reduce my radon exposure?
Testing is easy and inexpensive. Radon test kits can be purchased at your local hardware store or at the McHenry County Dept. of Health (Environmental Division). Action should be taken to reduce levels if the test results indicates an annual average of radon levels of 4pCi/L (picocuries per liter of air) or higher.

Indoor radon levels can be lowered by installing a radon mitigation system that collects radon before it enters the home and discharges it.

If you have any questions regarding indoor air quality or would like additional information, contact:

McHenry County Department of Health
(815) 334-4585
Fax (815) 338-7661
Or visit our web site: www.mcdh.info

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03

INDOOR AIR QUALITY

The Air We Breathe . . .

MCDH

McHenry County Department Of Health
Division Of Environmental Health
2200 North Seminary Ave.
Woodstock, Illinois 60098

Indoor Air Quality

The quality of the indoor air that you breathe is affected by many variables including the type of building construction, amount and quality of ventilation, use of household chemicals, the presence of pets, certain hobbies, humidity, etc. Individuals who have respiratory sensitivities can be especially affected by the quality of indoor air. This brochure addresses some of the more common indoor air pollutants and simple things that you can do to improve your indoor air quality. For severe situations an indoor air quality specialist should be contacted.

HOUSEHOLD PRODUCTS & HOBBIES

What are products that I should be aware of?
Solvents, paints, paint strippers, wood preservatives, aerosol sprays, hobby supplies, adhesives, pesticides and some cleaners and disinfectants.

What are the particular ingredients that I should be concerned about?
This varies depending on the product, but products containing volatile organic compounds evaporate into the air quickly and are of special concern. Some of these products include petroleum distillates, mineral spirits, carbon tetrachloride and chlorinated solvents.

What are some of the health effects?
Health effects can vary depending on the product and may include:

Short Term: Eye, nose, throat irritation, headache

Long Term: Loss of coordination, nausea, damage to liver, kidney & central nervous system

How can I minimize potential problems?
Follow manufacturer's directions and use outdoors when possible. Never mix any chemical products. If using indoors, open windows and use exhaust fan. Refer to Material Safety Data Sheets for specific product information.

CARBON MONOXIDE

What is carbon monoxide?
Carbon monoxide is a non-irritating, odorless, colorless gas that is somewhat lighter than air. Carbon monoxide (CO) is a by-product from the incomplete burning of fuels (i.e. coal, wood, charcoal, natural gas, fuel oil, kerosene, gasoline).

How does carbon monoxide get into my home?
Carbon monoxide build-up can occur when:

- Chimneys or flues become blocked
- A fuel burning furnace has a cracked or rusted heat exchanger
- Space heaters, ovens, ranges or grills are used without adequate ventilation
- Vehicle exhaust enters a building

What are the signs of CO poisoning?
CO interferes with the blood's ability to carry oxygen. Organs with the highest demand for oxygen (brain and heart) are most sensitive. Low levels can cause nausea, dizziness, weakness and muscle aches. Higher doses can impair judgment, cause paralysis or coma and death.

How can I reduce carbon monoxide exposure?

- Have a professional inspect furnaces and heating systems regularly
- Have chimney and flue cleaned professionally
- Open flues when fireplaces are in use
- Make sure burner flames on furnaces are blue – not yellow orange
- Never run a car or gas engine in an enclosed space
- Discourage or prohibit smoking indoors
- Install a carbon monoxide detector

If you suspect carbon monoxide poisoning, leave the building immediately and call for help!

CARBON DIOXIDE

What is carbon dioxide?
Carbon dioxide (CO^2) is a colorless, odorless gas at room temperature. High CO^2 levels can indicate problems with the ventilation system.

What causes carbon dioxide to build to dangerous levels?

- Air-tight buildings/homes with a minimum of outside air circulation
- Combustion of fossil fuels
- A lot of people in a small area

What symptoms are associated with high carbon dioxide levels?
Carbon dioxide is a very mild central nervous system depressant. Health effects include headache, depression, nausea, dizziness, sweating and disorientation.

How can I reduce my exposure to CO^2?

- Be sure fresh air is entering the building, especially where large numbers of people gather

and

- Have ventilation systems inspected and maintained regularly

ASBESTOS

What is asbestos and why should I be concerned about it?
Asbestos is a naturally occurring mineral that can separate into long, flexible, microscopic fibers. Exposure to asbestos fibers does not result in immediate symptoms, but cancer and other health effects can develop after years of exposure. Smokers are at higher risk of developing asbestos-induced lung cancer.

How does asbestos get into my home?
Asbestos was a common building construction material up until 1990 (floor tiles, insulation, fire proofing materials, etc.). People are exposed to asbestos by breathing or ingesting it when asbestos containing materials are damaged or disturbed.

What can I do if my home has asbestos?
Leave it undisturbed as long as it is intact. Contact a professional if asbestos containing materials are to be removed from your home.

MOLD

Where will I find mold?
Mold thrives in warm and humid conditions and can grow on anything if moisture is present.

What are the most common areas for mold to grow?
Anywhere in your home that has unchecked excessive moisture such as:

- Walls, ceilings, bathrooms and basements
- Poorly maintained humidifiers and air conditioners
- Places in the home where leakage has occurred (i.e. roofs, pipes, walls)
- Indoor areas that have been flooded, especially susceptible are wallpaper, drywall, carpet and upholstery

What are some of the health effects?
Allergic reactions are the most common health problem. Symptoms include watery eyes, runny nose, sneezing, nasal congestion, itching, coughing, headache, dizziness, fatigue and difficulty breathing. Certain toxic molds can cause serious illness or death.

What can I do to prevent mold problems?
Without moisture, mold can not get started.

- Keep humidity levels below 50% and make sure there is plenty of ventilation
- Use an air conditioner or a dehumidifier during humid months (clean regularly)
- Add mold inhibitors to paints before application in areas subject to moisture
- Clean bathrooms regularly
- Do not carpet bathrooms
- Remove, replace or steam clean previously soaked carpets and upholstery

What can I do to remove mold?
Small areas can be cleaned with bleach and water. Contact a professional in mold remediation for larger clean-up areas.