

# Healthy Air at Home— A Checklist for Parents

The air that people breathe *inside* their homes often is more polluted than the *outdoor* air in even the largest cities. Young children especially are affected by indoor air pollution. Children who spend long hours breathing polluted air are more likely to develop respiratory problems, allergies, and asthma. They also face serious long-term health problems. The following will help you identify and reduce indoor air pollution. If you need more information, call ISU Families Extension Answerline at 1-800-262-3804. (Relay Iowa 1-800-735-2942.)

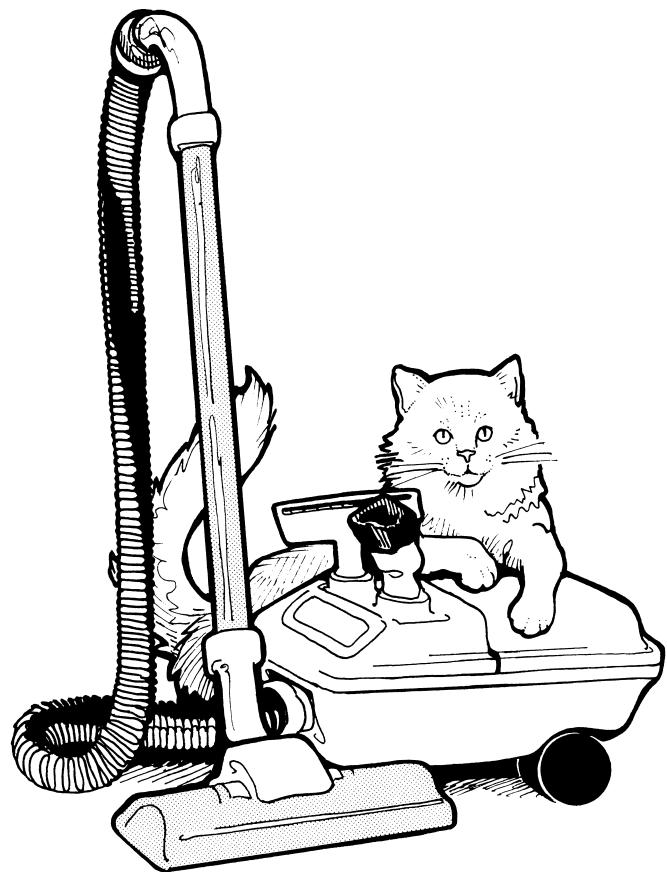
## ♦ Mold and mildew

Mold and mildew thrive in damp, dark spaces and can cause eye, nose, and throat irritations. The first line of defense is to *prevent* excess moisture and humidity levels in the home:

- Install exhaust fans vented to outdoors in kitchens and bathrooms.
- Vent clothes dryers to outdoors.
- Reduce or eliminate use of humidifiers.
- Empty water trays in air conditioners, dehumidifiers, and refrigerators frequently.
- Insulate basement walls to prevent condensation during summer.
- Put a plastic cover over dirt in crawlspaces to prevent moisture from coming in from the ground. Ventilate crawl spaces.

If the home smells musty or mildew appears on walls or furnishings, take the following actions:

- Use a dehumidifier or air conditioning to remove excess moisture from the air.
- Increase ventilation. Run fans to circulate the air.



- Throw away wet carpeting, cardboard boxes, insulation, and other things that have been wet for more than two days.
- Scrub off mold and mildew with non-ammonia soap or detergent and water. Use bleach to disinfect (one cup of liquid chlorine bleach to one gallon of water). Do not mix ammonia and bleach; the fumes are toxic.
- Protect yourself when cleaning up mold. Wear long sleeves and pants, shoes and socks, rubber gloves, a mask or respirator that will filter out mold spores, and goggles to protect your eyes. Open a window to let in fresh air while you are working.
- Keep small children, elderly and sick people, and anyone with allergies or asthma away during cleanup.

## ◆ Dust mites and animal-related allergens

Dust mites—microscopic animals found in household dust—animal dander, and cat saliva produce allergens that can cause respiratory problems. Central air systems can distribute contaminants through the home.

- Clean the house regularly to reduce the number of allergy-causing agents.
- Reduce humidity levels. Damp conditions usually lead to greater numbers of dust mites.
- Vacate areas being vacuumed if you are allergic to these pollutants (vacuuming can increase levels of airborne mite allergens), or
- Use central vacuum systems that are vented to the outdoors.
- Get air ducts cleaned by a trained professional. Poor cleaning techniques can stir up contaminants and circulate them throughout the house.

## ◆ Lead-based paint

Household dust in older homes often contains lead that gets on children's hands and toys. Eating lead-based paint chips or inhaling lead dust can cause learning and behavior problems for children. Protect children under your care by taking the following steps:

- Look for peeling and chipping paint inside and outside your home. Check window sills, the space between storm windows and inside windows, and outdoor play areas.
- Keep paint chips picked up and placed in plastic bags for disposal in land fill.
- Keep children away from areas that have chipped paint.
- Wet mop all floors and wet-clean woodwork, window sills, and other painted surfaces once or twice a week, using an all-purpose cleaner.
- Wash children's hands after play and before meals and snacks.
- Wash toys and pacifiers often.
- Call the Childhood Lead Poisoning Prevention Program Hotline at the Iowa Department of Public Health for more information about lead

poisoning and protection of children under your care at 1-800-972-2026.

- If you plan to do painting or remodeling in an older home, contact the Iowa Department of Public Health (1-800-972-2026) for information about how to do it safely.

## ◆ Radon

Radon is a radioactive gas that is found in most Iowa soils. It is difficult to detect because it can't be seen, smelled, or tasted. Radon is the leading cause of lung cancer among non-smokers. Children may be especially susceptible to radon, because of their higher respiratory rates and developing lungs. The Iowa Radon Survey has shown Iowa to have the highest percentage of homes with radon levels above the Environmental Protection Agency's (EPA) action guidelines of 4 pCi/L. Testing is the only way you can find out whether you have a radon problem. Every home should be tested.

- Purchase inexpensive do-it-yourself radon test kits by contacting the Iowa Air Coalition at 1-800-206-7818.



- Follow instructions on the detector package for monitoring radon levels. The detector is usually left in place for two to seven days.
- Mail the detector to the testing laboratory identified on the package. Wait for test results to be returned.
- If test results are above 4pCi/L, conduct another short-term test.
- If the second test shows radon levels above 4 pCi/L, the EPA suggests that action be taken to reduce radon levels. Contact a trained professional to mitigate the radon problem. The Iowa Radon Hotline (1-800-383-5992) at the Iowa Department of Public Health can provide a current list of credentialed mitigators who are allowed to work in the state.
- Retest the home after mitigation has been completed to see that radon levels have been reduced below the 4 pCi/L action guideline.

## ♦ Tobacco smoke

“Second-hand smoke” increases the risk of lung cancer in nonsmokers. Very young children exposed to smoking at home are more likely to be hospitalized for bronchitis and pneumonia. To reduce these serious health risks:

- Stop smoking and discourage others from smoking.
- Ask smokers to smoke outdoors.
- Keep cigarettes, cigarette butts, and all tobacco products away from children. Tobacco is poisonous when eaten.

## ♦ Asbestos

Until the 1970s, asbestos was contained in many types of home building products and insulation materials. The mere presence of asbestos in the home is not hazardous, but if asbestos materials are disturbed, they may release fibers into the air. Breathing high levels of asbestos fibers can lead to an increased risk of lung and chest cancer and lung diseases. To reduce exposure to asbestos:

- Regularly check materials that contain asbestos (pipe and furnace duct insulation, resilient floor tiles, ceiling tiles, and sound-proofing materials)

for signs of wear or damage. Tears or abrasions may release asbestos fibers into the air, which will then be circulated through the central heating and cooling system.

- Do not disturb asbestos materials that are in good condition.
- Keep children away from any areas that contain asbestos if they may damage it by hitting, rubbing, or handling it.
- Don’t dust, sweep, or vacuum debris that may contain asbestos. Clean with a wet mop.
- Don’t use abrasive pads or brushes on power strippers to remove wax from asbestos flooring.
- Don’t saw, sand, scrape, or drill holes in asbestos materials.
- Obtain professional advice before remodeling.
- Seek professional advice when you need to remove or clean up asbestos.



## ♦ Carbon monoxide

Unvented kerosene and gas heaters, leaking chimneys, faulty furnaces, and automobile exhaust from attached garages may release carbon monoxide into the home. Carbon monoxide can cause fatigue, dizziness, nausea, and death. Infants and pregnant women can be especially sensitive to carbon monoxide exposure.

- Do not use unvented heaters inside the home.
- Never use a gas range or oven to heat your home.
- Have a trained professional inspect, clean, and tune-up heating system (furnaces, flues, and chimneys) each year. Repair any leaks.
- Watch for heavy moisture condensation on windows and walls that could indicate high levels of carbon monoxide. *Immediately* call the gas utility company or a heating contractor to inspect your home.
- Do not idle car inside garage.

## ♦ Formaldehyde

Formaldehyde is widely used in carpeting, permanent press fabrics, furniture, and pressed wood products. Formaldehyde emissions will generally decrease as products age. Some people can develop chemical sensitivity after exposure to formaldehyde, causing watery eyes, throat irritations, nausea, breathing difficulties, and asthma attacks. To reduce formaldehyde exposure:

- Avoid the use of pressed wood products and other formaldehyde-emitting goods.

- Open a window or turn on a fan for ventilation after installing new carpeting or bringing other formaldehyde sources into the home.
- Use air conditioning and dehumidifiers to maintain moderate temperature and reduce humidity levels.



For more information:

Answerline Web site:  
[www.extension.iastate.edu/answerline](http://www.extension.iastate.edu/answerline)

Healthy Home Web Tool:  
[www.uwex.edu/healthyhome/tool](http://www.uwex.edu/healthyhome/tool)

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