Indoor Air Quality Assessment Checklist

You can use this checklist to:
1) determine if health symptoms experienced at home are the result of an indoor air-quality problem;
2) isolate probable sources of an air-quality problem; and
3) evaluate a home for potential problems when symptoms are not present.

This checklist is not suitable for certifying a home is free from air-quality problems. If you need such certification, contact local or state health officials for names of appropriate professional engineering firms.

The checklist includes several parts. The first is an assessment of symptoms. This is followed by a series of questions designed to determine if symptoms are linked to the home. The remaining sections pose questions pertaining to each of several major indoor air quality contaminants. For each contaminant there is a reference for further information.

Description of Symptoms

Complete the table below using names to distinguish various household members. The other information is to help evaluate the air quality problem. Known health problems, allergies for example, should be listed only if they are related to air quality symptoms. Indicate which persons have problems by placing the symptom codes, listed below, for that person in the “Air Quality Symptoms” column.

<table>
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<tr>
<th>Occupant (first name)</th>
<th>Age</th>
<th>Sex</th>
<th>Known Health Problem(s)</th>
<th>Air Quality Symptom(s) (use codes below)</th>
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Air Quality Symptoms - Several health symptoms are described below. List the letter(s) as appropriate. For example, if a family member is experiencing nausea note the letter “b” under health symptoms for that person.

- a. no symptoms
- b. nausea
- c. eye irritation
- d. burning or stinging eyes
- e. respiratory irritation/problems
- f. nasal congestion/runny nose
- g. dizziness
- h. headache
- i. other describe

1. In which room or rooms do these symptoms usually occur? ________________________________________
2. At what time of day do these symptoms usually occur? ________________________________________
Is It an Indoor-Air Quality Problem?

1. When were symptoms first noticed? (month and year)
   _____________________________________________________________________

2. When do health symptoms occur, or when are they the worst?
   __ spring __ summer __ fall __ winter
   __ all year __ not sure __ other

3. Do symptoms persist when the individual leaves the home? __ Yes __ No

4. Check any new events, changes or hobbies in your home environment that began within a month of the date given in question number 1. If you identify changes in the home environment, turn to the section(s) of the assessment that match the letter in parentheses after the item.
   __ new home (B, C, D & F)
   __ recently moved into home (B, C, D, E, F & G)
   __ new construction (B, D, F & H)
   __ new smoker (A, B & F)
   __ new weatherization (B, D, G & H)
   __ new carpet (B & F)
   __ new furnishings (B & F)
   __ new furnace (with its own air supply) (B & G)
   __ addition of gas heating, cooking or clothes dryer (B & G)
   __ new hobby using varnishes, paints, stains, etc. (A, B & D)
   __ additional use of home, pet or plant pesticides (B & E)
   __ persistent odors, describe:
   _____________________________________________________________________
   _____________________________________________________________________
   _____________________________________________________________________
   _____________________________________________________________________
   __ other, list:
   _____________________________________________________________________
   _____________________________________________________________________
   _____________________________________________________________________
   _____________________________________________________________________

Asbestos

1. When was your home built? ________

2. If your home was built before 1975, indicate whether any of the following types of materials are present:
   __ plaster-like or corrugated-paper pipe insulation on hot or cold water pipes
   __ boiler insulation
   __ felt-like covering on warm-air duct

Unless you know the composition, ceiling or floor tiles should be analyzed for asbestos before disrupting. If you answered yes to one or more of these questions, asbestos fibers might be in the air of your home. Exposure to these fibers increases your chances of developing cancer. See UW-Extension publication Stalking Friable Asbestos in the Home (B3443) for further information.
Tight Home Syndrome

1. How many floors does your home have? (Do not count basement unless it is routinely used for living space.) # floors _________

2. Approximately how many square feet are there on each floor? The basement should be considered a floor only if it is routinely used for living space. Multiply the width of the house by its length to find the square footage.

   floor #1_______  floor #2_______  
   floor #3_______  other floors_______

   Total sq.ft.:_______

3. Age of home:
   __ incomplete
   __ less than 1 year  __ 5-25 years
   __ 1-5 years  __ more than 25 years

4. Weatherization, check which ones are used in home:
   __ window weatherstripping
   __ door weatherstripping
   __ new windows or storms
   __ plastic on windows
   __ wall or ceiling air/vapor retarder
   __ caulking

5. Exhaust fans are located in:  __ kitchen  __ bathrooms  __ neither

6. Exhaust fans are used:
   __ regularly, whenever room is occupied
   __ occasionally, when needed
   __ never
   __ don’t know

7. Is air conditioning present? __ Yes __ No

8. Are other house ventilation systems (i.e. attic fans, air-to-air heat exchangers used)?
   __ Yes __ No

   If yes, what are they? ________________________________________

9. Are signs of mold growth visible? __ Yes __ No

10. Do you have persistent condensation on windows in winter? __ Yes __ No

Inadequate ventilation can cause concentrations of contaminants to increase and can result in high humidity levels. See UW-Extension publication *Moisture Problems in the Home* (B3371) for further information and remaining sections of this checklist for more detailed questions about other contaminants.

Radon

Radon is not responsible for any known short-term health problems. However, exposure increases the chances of developing lung cancer. See UW-Extension publication *Radon Gas in the Home* (B3442) for information.
Cleaners and Solvents

1. Does your family do more than occasional woodworking or hobby activity in the home? ___ Yes ___ No

   If yes, describe: _______________________________________________________
   ____________________________________________________________________

2. Does your family daily use any aerosol sprays in the home? ___ Yes ___ No

3. Check the cleaning products you frequently use:
   ___ oven cleaners           ___ carpet shampoos
   ___ ammonia                ___ tub-and-tile cleaners
   ___ disinfectants          ___ air fresheners
   ___ dusting sprays or furniture polishes ___ self-cleaning floor waxes
   ___ general-purpose household cleaners ___ dry-cleaning fluids or spot removers
   ___ home cleaners in aerosol spray form ___ scouring powders that contain
   ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________

4. Do you use or store mothballs in your home? ___ Yes ___ No

5. Check any of the following products you frequently use in your home?
   ___ paint stripper          ___ paint thinner
   ___ wood stains             ___ turpentine
   ___ furniture polish        ___ artist’s paints
   ___ mineral spirits          ___ varnish, lacquer or shellac

6. Do you store any of the following in your house?
   ___ paints                  ___ solvents
   ___ kerosene                ___ lubricating greases or oils
   ___ pool disinfectants

7. Do you frequently dry clean clothing or household furnishings? ___ Yes ___ No

   Many of these solvents have been linked to short-term health problems such
   as nausea or dizziness and long-term health problems such as cancer or birth
   defects. If answers to questions in this section indicate frequent exposure to
   solvents see UW-Extension publication Solvents: Chemical Hazards in the
   Home (G3027).

Pesticides

1. Do you store any of the following in your house?
   ___ pesticides ___ herbicides ___ insecticides

2. Do you have large numbers of plants indoors? ___ Yes ___ No

3. Do you frequently use pesticides indoors on pets, house plants or insects?
   ___ Yes ___ No

4. Have you ever had your home treated for insects or other pests? ___ Yes ___ No
   If so, give most recent date and name of product used. __________________________

   Pesticides are poisons. More than occasional use of pesticides in your home
   and surrounding area may cause respiratory problems. If you are
   experiencing health problems you suspect are associated with pesticides,
   consult your physician or local health professional as soon as possible. See
   UW-Extension publication Pesticides: Chemical Hazards in the Home (G3026)
   for more information.
Formaldehyde

1. Have composition wood products such as particleboard, furniture or cabinets been used extensively in home construction in the last two years?  __ Yes  __ No

2. Has new carpeting been installed in the home in the last two years?  __ Yes  __ No

   If yes, was it installed over concrete?  __ Yes  __ No

3. Have new drapes, rugs or upholstery been installed in the home in the last two years?  __ Yes  __ No

Exposure to formaldehyde can cause a variety of symptoms, including burning eyes and respiratory problems. See UW-Extension publication Formaldehyde in the Home (B3441) for more information.

Combustion Sources

1. Do you have a frequent smoker (smokes more than one pack per day) in the home?  __ Yes  __ No

2. Do you have an attached garage?  __ Yes  __ No

3. Do you use a gas stove or oven for cooking?  __ Yes  __ No

4. How old is your gas stove or oven?  ____________  Years

5. Do you have a gas water heater?  __ Yes  __ No

6. Is your primary winter heat source a:
   __ fireplace  __ coal furnace or boiler
   __ oil furnace or boiler  __ gas furnace or boiler
   __ wood stove or furnace  __ active or passive solar heat
   __ electric furnace or boiler (LP or natural)  __ electric baseboard or space heater
   __ unvented gas or kerosene space heater

7. If you use a backup or supplementary heating system, it is a:
   __ oil furnace or boiler  __ combination furnace
   __ gas furnace or boiler  __ wood stove or furnace
   __ fireplace  __ electric baseboard or space heater
   __ electric furnace or boiler (LP or natural)  __ active or passive solar heater
   __ unvented gas or kerosene space heater

8. How old is your primary heating source?  ____________  Years

   Give the date of most recent professional servicing.  _____________________________

9. Do you have a gas clothes dryer:  __ Yes  __ No

10. Does your clothes dryer exhaust:
   __ indoors  __ outdoors  __ indoors during winter only

   If any combustion equipment is being used and household members complain of drowsiness during the day, carbon monoxide may be the cause. If so, leave the home and have the equipment checked immediately. For information on hazards associated with combustion appliances see UW-Extension publication Combustion Products in the Home (B3440).
House Dust and Biological Contaminants

1. Would you describe your home as unusually dusty? __ Yes __ No
2. Is dust or dirt staining walls, ceilings, furniture or draperies? __ Yes __ No
3. Do home occupants have hobbies that create dust? __ Yes __ No
4. Do you ever use a humidifier or vaporizer in the house? __ Yes __ No
5. Do you ever use an air conditioner in the house? __ Yes __ No
6. Do you ever use a dehumidifier in the house? __ Yes __ No
7. Indicate whether your home has any of the following water problems:
   __ leaky roof __ wet basement __ leaky pipes __ other, describe: ________________________________________
8. Is firewood stored indoors? __ Yes __ No
9. Do any furry pets live indoors? __ Yes __ No

For further information on house dust and corrective actions, see UW-Extension publication House Dust and Biological Contaminants (G3462). Available Summer 1989.

Ordering Extension Publications

To order a UW-Extension publication, contact your local county UW-Extension office (under Extension in the government listings in your phone book) or contact UW-Extension Publications, 30 N. Murray St., Rm. 245, Madison WI, 53715; (608) 262-3346.

References

EPA Indoor Air Quality Implementation Plan: Appendix A.
Charles Lane and Laura Oatman, Home Indoor Air Quality Assessment, Cold Climate Housing Information Center, University of Minnesota, CD-FO-3398-1988.

Marty Kanarek, Department of Preventive Medicine, University of Wisconsin-Madison provided consultation in the early stages of the preparation of this bulletin. The staff of the Division of Health, Wisconsin Department of Health and Social Services, provided assistance in developing and reviewing this manuscript.