

# 1. Moisture - - biological pollutants

# **■**BIOLOGICAL POLLUTANTS

**Sources:** Wet or moist walls, ceilings, carpets, and furniture; poorly maintained humidifiers, dehumidifiers, and air conditioners; bedding; household pets.

**Health Effects:** A host of illnesses and diseases may occur from biologicals; upper respiratory irritations.

- Install and use fans vented to outdoors in kitchens and bathrooms.
- Vent clothes dryer to outdoors.
- Clean cool mist and ultrasonic humidifiers daily and use only distilled water in them.
- Empty water trays in air conditioners, dehumidifiers, and refrigerators frequently.
- Clean and dry, or remove, water damaged carpets.
- Use basements as living areas only if they are leak-proof and have adequate ventilation. Use dehumidifiers, if necessary, to maintain humidity at 35-50 percent.

# 2. BIOLOGICAL POLLUTANTS

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# 3. Humidifier - - biological pollutants



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# 4. Moth Repellant - - organic pollutants

# ORGANIC POLLUTANTS

**Sources:** Household products including paints, paint strippers and other solvents; wood preservatives; aerosol sprays; cleansers and disinfectants; moth repellents and air fresheners; stored fuels and automotive products; hobby supplies and dry cleaned clothing.

**Health Effects:** Eye, nose, and throat irritation; headaches, loss of coordination, nausea; damage to liver, kidneys, and central nervous system. Some organics can cause cancer in animals; some are suspected or known to cause cancer in humans.

#### **Steps to Reduce Exposure:**

- Use household products according to manufacturer's directions.
- Use outdoors or in well-ventilated places.
- Throw away unused or little-used containers safely; buy in quantities that you will use soon.
- Use nontoxic alternatives.

# 5. Dry Cleaning - - organic pollutants

# ORGANIC POLLUTANTS

**Sources:** Household products including paints, paint strippers and other solvents; wood preservatives; aerosol sprays; cleansers and disinfectants; moth repellents and air fresheners; stored fuels and automotive products; hobby supplies and dry cleaned clothing.

**Health Effects:** Eye, nose, and throat irritation; headaches, loss of coordination, nausea; damage to liver, kidneys, and central nervous system. Some organics can cause cancer in animals; some are suspected or known to cause cancer in humans.

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- Use outdoors or in well-ventilated places.
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- Use nontoxic alternatives.

### 6. Dust Mites - - biological pollutants

# BIOLOGICAL POLLUTANTS

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- Clean and dry, or remove, water damaged carpets.
- Use basements as living areas only if they are leak-proof and have adequate ventilation. Use dehumidifiers, if necessary, to maintain humidity at 35-50 percent.

### 7. Personal Care Products - - organic pollutants



**Sources:** Household products including paints, paint strippers and other solvents; wood preservatives; aerosol sprays; cleansers and disinfectants; moth repellents and air fresheners; stored fuels and automotive products; hobby supplies and dry cleaned clothing.

**Health Effects:** Eye, nose, and throat irritation; headaches, loss of coordination, nausea; damage to liver, kidneys, and central nervous system. Some organics can cause cancer in animals; some are suspected or known to cause cancer in humans.

- Use household products according to manufacturer's directions.
- Use outdoors or in well-ventilated places.
- Throw away unused or little-used containers safely; buy in quantities that you will use soon.
- Use nontoxic alternatives.

# 8. Air Freshener - - organic pollutants

# ORGANIC POLLUTANTS

**Sources:** Household products including paints, paint strippers and other solvents; wood preservatives; aerosol sprays; cleansers and disinfectants; moth repellents and air fresheners; stored fuels and automotive products; hobby supplies and dry cleaned clothing.

**Health Effects:** Eye, nose, and throat irritation; headaches, loss of coordination, nausea; damage to liver, kidneys, and central nervous system. Some organics can cause cancer in animals; some are suspected or known to cause cancer in humans.

### **Steps to Reduce Exposure:**

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- Use outdoors or in well-ventilated places.
- Throw away unused or little-used containers safely; buy in quantities that you will use soon.
- Use nontoxic alternatives.

#### 9. Stored Fuels- - organic pollutants

# ORGANIC POLLUTANTS

**Sources:** Household products including paints, paint strippers and other solvents; wood preservatives; aerosol sprays; cleansers and disinfectants; moth repellents and air fresheners; stored fuels and automotive products; hobby supplies and dry cleaned clothing.

**Health Effects:** Eye, nose, and throat irritation; headaches, loss of coordination, nausea; damage to liver, kidneys, and central nervous system. Some organics can cause cancer in animals; some are suspected or known to cause cancer in humans.

- Use household products according to manufacturer's directions.
- Use outdoors or in well-ventilated places.
- Throw away unused or little-used containers safely; buy in quantities that you will use soon.
- Use nontoxic alternatives.

#### 10. Vehicle Exhaust - - carbon monoxide pollutants

# **≜**CARBON MONOXIDE

**Sources:** Unvented kerosene and gas heaters; leaking chimneys and furnaces; down-drafting from wood stoves and fireplaces; gas stoves. Automobile exhaust from attached garages. Environmental tobacco smoke.

**Health Effects:** Persistent headaches, nausea, fatigue, blurred vision, rapid heartbeat, loss of muscle control, flu-like symptoms that clear up upon leaving the house.

#### **Steps to Reduce Exposure:**

- Keep gas appliances properly adjusted.
- Consider purchasing vented gas space heaters and furnaces.
- Use proper fuel in kerosene space heaters.
- Install and use exhaust fan vented to outdoors over gas stoves.
- Open flues when gas fireplaces are in use.
- Choose properly sized wood stoves that are certified to meet EPA emission standards.
- Make certain that doors on all wood stoves fit tightly.
- Have a trained professional inspect, clean, and tune up central heating system (furnaces, flues, and chimneys) annually. Repair any leaks properly.
- Do not idle car inside garage

#### 11. Paint Supplies - - organic pollutants

# **≜**ORGANIC POLLUTANTS

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**Health Effects:** Eye, nose, and throat irritation; headaches, loss of coordination, nausea; damage to liver, kidneys, and central nervous system. Some organics can cause cancer in animals; some are suspected or known to cause cancer in humans.

- Use household products according to manufacturer's directions.
- Use outdoors or in well-ventilated places.
- Throw away unused or little-used containers safely; buy in quantities that you will use soon.
- Use nontoxic alternatives.

# 12. Paneling(pressed wood) - - formaldehyde pollutants

# **■ FORMALDEHYDE**

**Sources:** Pressed wood products (hardwood plywood wall paneling, particleboard, fiberboard) and furniture made with pressed wood products, urea-formaldehyde foam insulation, combustion sources and environmental tobacco smoke, durable press drapes, some textiles, and glues.

**Health Effects:** Eye, nose, and throat irritation; wheezing and coughing; fatigue, skin rash and severe allergic reactions. May cause cancer. May also cause other effects listed under "organic gases."

#### Steps to Reduce Exposure:

- Use "exterior grade" pressed wood products (lower-emitting because they contain phenol resins, not urea resins).
- Use air conditioning and dehumidifiers to maintain moderate temperature and reduce humidity levels.
- Increase ventilation, particularly after bringing new sources of formaldehyde into the home.
- Insist on a carpet or carpet pad with little or no formaldehyde content.

### 13. Respirable Particles pollutants

# **€**RESPIRABLE PARTICLES

**Sources:** Fireplaces, wood stoves, kerosene heaters, and environmental tobacco smoke.

**Health Effects:** Eye, nose, and throat irritation; respiratory infections and bronchitis; lung cancer.

- Keep gas appliances properly adjusted.
- Consider purchasing vented gas space heaters and furnaces.
- Use proper fuel in kerosene space heaters.
- Install and use exhaust fan vented to outdoors over gas stoves.
- Open flues when gas fireplaces are in use.
- Choose properly sized wood stoves that are certified to meet EPA emission standards.
- Make certain that doors on all wood stoves fit tightly.
- Have a trained professional inspect, clean, and tune up central heating system (furnaces, flues, and chimneys) annually. Repair any leaks properly.
- Do not idle car inside garage.

### 14. Tobacco Smoke - - environmental tobacco smoke pollutants

# **■**ENVIRONMENTAL TOBACCO SMOKE

Sources: Cigarette, pipe, and cigar smoking.

**Health Effects:** Eye, nose, and throat irritation; headaches; bronchitis; pneumonia. Increased risk of respiratory and ear infections in children. Can cause lung cancer and may contribute to heart disease.

#### **Steps to Reduce Exposure:**

- Stop smoking and discourage others from smoking.
- Do not allow smoking in your home.

## 15. Carpet - - biological(wet)



**Sources:** Wet or moist walls, ceilings, carpets, and furniture; poorly maintained humidifiers, dehumidifiers, and air conditioners; bedding; household pets.

**Health Effects:** A host of illnesses and diseases may occur from biologicals; upper respiratory irritations.

- Install and use fans vented to outdoors in kitchens and bathrooms.
- Vent clothes dryer to outdoors.
- Clean cool mist and ultrasonic humidifiers daily and use only distilled water in them.
- Empty water trays in air conditioners, dehumidifiers, and refrigerators frequently.
- Clean and dry, or remove, water damaged carpets.
- Use basements as living areas only if they are leak-proof and have adequate ventilation. Use dehumidifiers, if necessary, to maintain humidity at 35-50 percent.

### 16. Sub-Floor(pressed wood) - - formaldehyde pollutants

# ORGANIC POLLUTANTS

**Sources:** Household products including paints, paint strippers and other solvents; wood preservatives; aerosol sprays; cleansers and disinfectants; moth repellents and air fresheners; stored fuels and automotive products; hobby supplies and dry cleaned clothing.

**Health Effects:** Eye, nose, and throat irritation; headaches, loss of coordination, nausea; damage to liver, kidneys, and central nervous system. Some organics can cause cancer in animals; some are suspected or known to cause cancer in humans.

#### **Steps to Reduce Exposure:**

- Use household products according to manufacturer's directions.
- Use outdoors or in well-ventilated places.
- Throw away unused or little-used containers safely; buy in quantities that you will use soon.
- Use nontoxic alternatives.

# 17. Drapes(durable press) - - formaldehyde pollutants



**Sources:** Pressed wood products (hardwood plywood wall paneling, particleboard, fiberboard) and furniture made with pressed wood products, urea-formaldehyde foam insulation, combustion sources and environmental tobacco smoke, durable press drapes, some textiles, and glues.

**Health Effects:** Eye, nose, and throat irritation; wheezing and coughing; fatigue, skin rash and severe allergic reactions. May cause cancer. May also cause other effects listed under "organic gases."

- Use "exterior grade" pressed wood products (lower-emitting because they contain phenol resins, not urea resins).
- Use air conditioning and dehumidifiers to maintain moderate temperature and reduce humidity levels.
- Increase ventilation, particularly after bringing new sources of formaldehyde into the home
- Insist on a carpet or carpet pad with little or no formaldehyde content.

#### 18. Fireplace - - carbon monoxide pollutants

# CARBON MONOXIDE

**Sources:** Unvented kerosene and gas heaters; leaking chimneys and furnaces; down-drafting from wood stoves and fireplaces; gas stoves. Automobile exhaust from attached garages. Environmental tobacco smoke.

**Health Effects:** Persistent headaches, nausea, fatigue, blurred vision, rapid heartbeat, loss of muscle control, flu-like symptoms that clear up upon leaving the house.

#### **Steps to Reduce Exposure:**

- Keep gas appliances properly adjusted.
- Consider purchasing vented gas space heaters and furnaces.
- Use proper fuel in kerosene space heaters.
- Install and use exhaust fan vented to outdoors over gas stoves.
- Open flues when gas fireplaces are in use.
- Choose properly sized wood stoves that are certified to meet EPA emission standards.
- Make certain that doors on all wood stoves fit tightly.
- Have a trained professional inspect, clean, and tune up central heating system (furnaces, flues, and chimneys) annually. Repair any leaks properly.
- Do not idle car inside garage

#### 19. Household Chemicals - - organic pollutants

# **≜**ORGANIC POLLUTANTS

**Sources:** Household products including paints, paint strippers and other solvents; wood preservatives; aerosol sprays; cleansers and disinfectants; moth repellents and air fresheners; stored fuels and automotive products; hobby supplies and dry cleaned clothing.

**Health Effects:** Eye, nose, and throat irritation; headaches, loss of coordination, nausea; damage to liver, kidneys, and central nervous system. Some organics can cause cancer in animals; some are suspected or known to cause cancer in humans.

- Use household products according to manufacturer's directions.
- Use outdoors or in well-ventilated places.
- Throw away unused or little-used containers safely; buy in quantities that you will use soon.
- Use nontoxic alternatives.

### 20. Floor Tile - - asbestos pollutants

# **≜**ASBESTOS

**Sources:** Deteriorating of damaged insulation, fire-proofing, or acoustical materials.

**Health Effects:** No immediate symptoms. Chest and abdominal cancers and lung diseases. Smokers are at higher risk of developing asbestos-induced lung cancer.

#### **Steps to Reduce Exposure:**

- Use trained and qualified contractors for control measures that may disturb asbestos and for clean up.
- Follow proper procedures in replacing wood stove door gaskets that may contain asbestos.

### 21. Cabinets(pressed wood - - formaldehyde) pollutants



**Sources:** Pressed wood products (hardwood plywood wall paneling, particleboard, fiberboard) and furniture made with pressed wood products, urea-formaldehyde foam insulation, combustion sources and environmental tobacco smoke, durable press drapes, some textiles, and glues.

**Health Effects:** Eye, nose, and throat irritation; wheezing and coughing; fatigue, skin rash and severe allergic reactions. May cause cancer. May also cause other effects listed under "organic gases."

- Use "exterior grade" pressed wood products (lower-emitting because they contain phenol resins, not urea resins).
- Use air conditioning and dehumidifiers to maintain moderate temperature and reduce humidity levels.
- Increase ventilation, particularly after bringing new sources of formaldehyde into the home.
- Insist on a carpet or carpet pad with little or no formaldehyde content.

### 22. Unvented Gas Stove - - nitrogen dioxide pollutants

# **■**NITROGEN DIOXIDE

Sources: Kerosene heaters, unvented gas stoves and heaters. Environmental tobacco smoke.

**Health Effects:** Eye, nose, and throat irritation; may cause impaired lung function and increased respiratory infection in young children.

### **Steps to Reduce Exposure:**

- Keep gas appliances properly adjusted.
- Consider purchasing vented gas space heaters and furnaces.
- Use proper fuel in kerosene space heaters.
- Install and use exhaust fan vented to outdoors over gas stoves.
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- Have a trained professional inspect, clean, and tune up central heating system (furnaces, flues, and chimneys) annually. Repair any leaks properly.
- Do not idle car inside garage

### 23. Pipe Wrap - - asbestos pollutants



Sources: Deteriorating of damaged insulation, fire-proofing, or acoustical materials.

**Health Effects:** No immediate symptoms. Chest and abdominal cancers and lung diseases. Smokers are at higher risk of developing asbestos-induced lung cancer.

- Use trained and qualified contractors for control measures that may disturb asbestos and for clean up.
- Follow proper procedures in replacing wood stove door gaskets that may contain asbestos.

#### 24. Soil Gas - - radon pollutants



**Sources:** Earth, uranium and rock beneath home; well water.

**Health Effects:** No immediate symptoms. Estimated to cause about 10% of lung cancer deaths. Smokers are at higher risk of developing radon-induced lung cancer.

#### **Steps to Reduce Exposure:**

- Test your home for radon. Easy-to-administer home test kits, that include lab analysis, are sold at most hardware stores and often can be obtained through local departments of health.
- Get professional advice before planning and carrying out radon reduction measures.
- Seal cracks and other openings in basement floor.
- Ventilate crawl space.
- Install active sub-slab depressurization system. A heat recovery ventilator (air-to-air heat exchanger) can also help.
- Treat radon-contaminated well water by aerating or filtering through granulate activated charcoal.

## 25. Unvented Clothes Dryer--biologocal (moisture) pollutants

# BIOLOGICAL POLLUTANTS

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### 26. Pesticides - - pesticides pollutants

# **●PESTICIDES**

**Sources:** Products used to kill household pests (insecticides and termiticides). Also, products used on lawns and gardens that drift or are tracked inside the house.

**Health Effects:** Irritation to eye, nose, and throat; damage to central nervous system and kidneys; cancer.

#### **Steps to Reduce Exposure:**

- Use strictly according to manufacturer's directions.
- Mix or dilute outdoors.
- Apply only in recommended quantities.
- Take plants or pets outside, where possible. Increase ventilation when using indoors.
- Use non-chemical methods of pest control where possible.
- If you use a pest control company, select it carefully.
- Do not store unneeded pesticides inside home; dispose of unvented containers safely.
- Store clothes with moth repellents in separately ventilated areas, if possible.
- Keep indoor spaces clean and well-ventilated in order to eliminate or minimize use of air fresheners.

## 27. Stored Hobby Products - - organic pollutants



**Sources:** Household products including paints, paint strippers and other solvents; wood preservatives; aerosol sprays; cleansers and disinfectants; moth repellents and air fresheners; stored fuels and automotive products; hobby supplies and dry cleaned clothing.

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- Use household products according to manufacturer's directions.
- Use outdoors or in well-ventilated places.
- Throw away unused or little-used containers safely; buy in quantities that you will use soon
- Use nontoxic alternatives.