

## What is wood smoke pollution?

Many of us have fond memories of campfires or holiday fireplaces and their faint smell of burning wood. However, modern wood heating appliance (wood stoves, boilers or furnaces) can create dense plumes of smoke for hours at a time. Whether visible or not, wood smoke contains:

- fine particles (PM2.5)
- carbon monoxide
- ozone
- nitrous oxides
- sulfur dioxide
- polycyclic aromatic hydrocarbons (PAHs)

## What is the health risk from wood smoke pollution?

Wood smoke can be especially harmful to the elderly, babies, children, and pregnant women. Exposure to fine particles in wood smoke can trigger or aggravate respiratory and cardiovascular problems.

## What is my risk from breathing wood smoke?

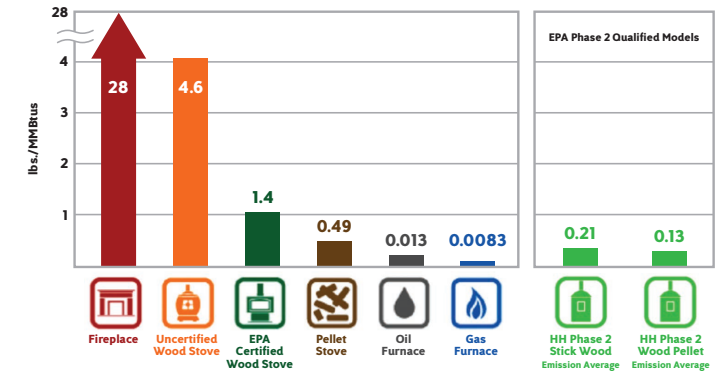
The chance a person will experience health effects as a result of exposure to smoke depends on the concentration of air pollutants they breathe and the duration of their exposure. When wood burners have short stacks or are located close to homes, there is a greater potential for smoke to create a health hazard for both the homeowner and neighbors.

## Am I safer indoors with the windows closed?

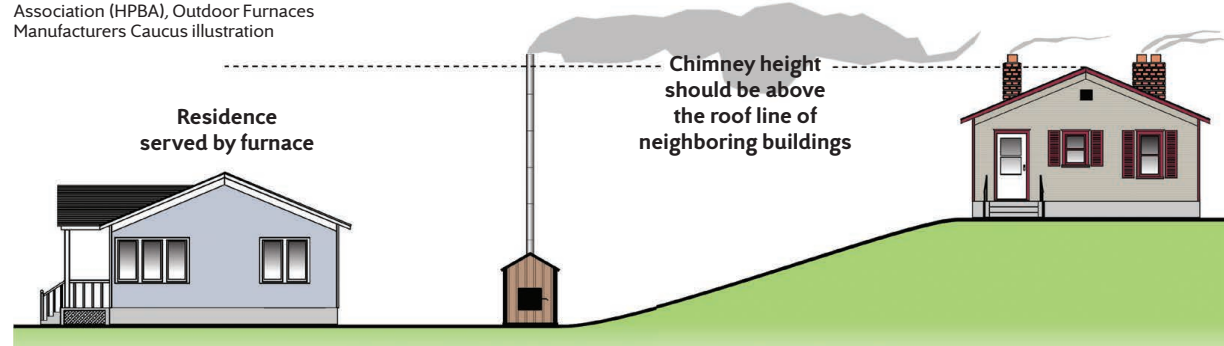
The toxic gases and fine particles in wood smoke are so small that they can penetrate into homes, even when windows and doors are closed.

Fine particle emissions of heating appliances (lbs./MMBtus of heat output)

SOURCE: U.S. Environmental Protection Agency, 2011



Adapted from Hearth, Patio and Barbecue Association (HPBA), Outdoor Furnaces Manufacturers Caucus illustration



Stack height should always be above the roof line of neighboring buildings to ensure good smoke dispersal.

## How can I reduce risk from wood smoke?

If you are a homeowner with a wood heating appliance such as a wood stove or fireplace insert:

- Use only an EPA approved wood burning appliance.
- Only burn dry wood, never burn treated lumber, trash or recyclables.
- Preheat your firebox with a small hot kindling fire, before loading with wood.
- Open the damper before opening the stove, to minimize smoke in the home.
- Extend your chimney or stack above the roofline of your and neighboring houses.
- Watch the wind and weather - burn when smoke dispersal is away from buildings.
- If you or your neighbors still experience smoke odors, switch to a natural gas burner.

Breathing wood smoke is a health risk, especially for children, the elderly, people with asthma, heart disease and other respiratory ailments. If you feel you are at risk from wood smoke pollution, contact:

Public Health Madison & Dane County  
210 Martin Luther King, Jr. Blvd.,  
Rm. 507  
Madison, WI 53703  
(608) 266-4821  
[www.publichealthmdc.com](http://www.publichealthmdc.com)

For more information about wood smoke, call Public Health Madison & Dane County: (608) 266-4821.



## Wood Smoke Risk Quiz

1. Does your home have wood stove, fireplace insert or other wood heating appliance?
2. Do you smell smoke in your home from wood being burned in your home or in your neighborhood?
3. Is the chimney or stack of your wood heater lower than the highest roofline of your or your neighbor's home?
4. Does a neighbor have a chimney or stack that is lower than the roofline of your home?
5. Does smoke from your own or a neighbor's wood burning move through your yard or up against your house?

If you answered yes to one or more of these questions, you and your family may be at risk from breathing wood smoke pollution.

# Wood Smoke Pollution

## Are You At Risk?

Breathing wood smoke can affect:

- children
- the elderly
- heart and lung ailments



 **Public Health**  
MADISON & DANE COUNTY  
*Healthy people. Healthy places.*

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