



ALLEGHENY COUNTY HEALTH DEPARTMENT

THE HEALTH EFFECTS OF WOOD SMOKE

Wood smoke contains numerous pollutants, including air toxics. These pollutants have a negative impact on our region's air quality and can cause serious health effects in sensitive populations. Wood stoves, fireplaces and outdoor firepits are all sources of air pollution that can negatively impact a neighbor's or family member's health.



HOT INFO ABOUT OUTDOOR FIRES

WOOD AND ONLY WOOD

DON'T GO AGAINST THE GRAIN. If it's not clean, dry wood, it's dangerous, toxic and illegal.



Household trash; cardboard, plastics, colored magazines, boxes and wrappers



Coated, painted and pressure-treated wood



Driftwood, plywood, particle board or wood with glue on or in it



Wet, rotted, diseased or moldy wood



Plastic, asbestos, rubber, manure and animal remains

THE UNSEEN DANGERS OF FINE PARTICULATE POLLUTION

Particulate matter contains droplets that are so small they can be inhaled and cause serious health problems. These particles can get deep into your lungs or even into your bloodstream. Exposure to these particles has been linked to a variety of problems including:

Nonfatal heart attacks



Aggravated asthma

Decreased lung function



Premature death in people with heart or lung disease



Irregular heartbeat



WHAT'S IN WOOD SMOKE? WHERE THERE'S SMOKE THERE'S...

Methyl Chloride

Benzene **TOLUENE**

Carbon Monoxide

METHANE

Formaldehyde

NAPHTHALENE



HOW DO YOU CHOOSE YOUR WOOD? UNSEASONED VS. SEASONED

SEASONED WOOD

Has 20% or less water content and has been cut, split and stored off the ground and protected from water for 6 months to a year

- Easy to start
- Produces more heat & light
- Produces less smoke & odor



UNSEASONED WOOD

Up to half the weight of freshly cut wood is from stored water

- Most of fire's energy goes to evaporate retained liquid
- Produces a low temperature, slow burning, smoldering fire
- Can be very smoky

WHY CHILDREN & SMOKE DON'T MIX



THERE OUGHT TO BE A LAW AND THERE IS

HIDDEN POLLUTION

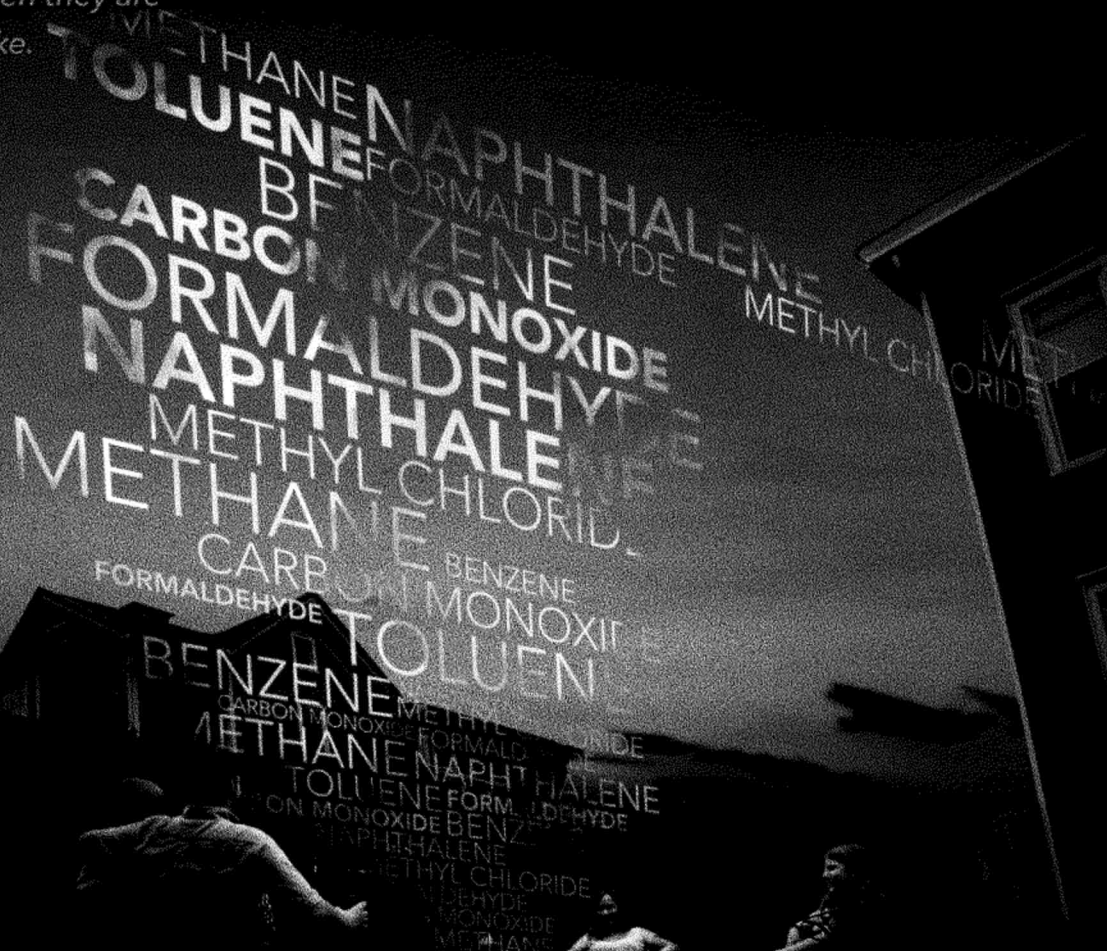


Allegheny County does not currently meet the federal air quality standards for fine particulate pollution, as measured annually. Fine particulate pollution, or PM2.5, can come from a variety of sources: power plants, industrial plants, motor vehicle traffic and even a backyard fire pit.

Wood smoke contains numerous air toxics, and contributes to high levels of regional air pollution. While for some, bonfires and campfires have never posed a problem, many people may experience increased asthma symptoms, breathing difficulty and other health effects when they are exposed to wood smoke.

With the numerous hills and valleys in Allegheny County, wood smoke can become trapped near the ground, smoking out entire neighborhoods, or it can be carried across a hilly backyard and directly into a neighbor's bedroom.

Most of us are familiar with what happens when you get caught downwind of a campfire—your eyes water, you begin to cough, it's hard to breathe—so it should come as no surprise that even the smallest backyard bonfire might affect your family and your neighbors.



HEALTH EFFECTS OF WOOD SMOKE

The effects of wood smoke can vary depending on the person. Even if you have never experienced a negative side effect, your family members and neighbors may.

Fine particulate pollution is a primary component of wood smoke. Numerous scientific studies have linked fine particulate pollution with decreased lung function, aggravated asthma, irregular heartbeat, nonfatal heart attacks and premature death in people with heart or lung disease.

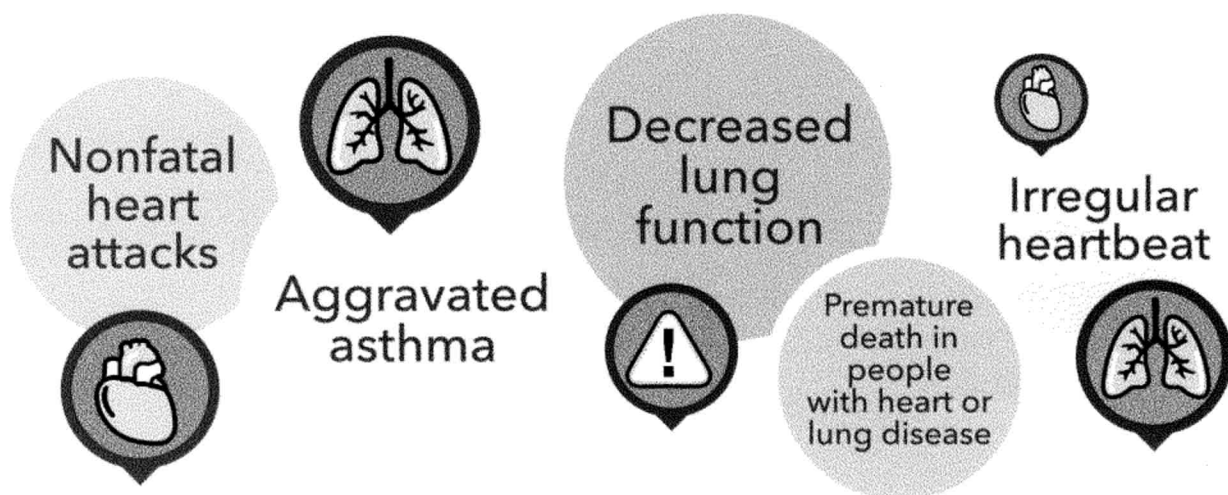
Short-term exposures to particles (hours or days) can aggravate lung disease, causing asthma attacks and acute bronchitis, and may also increase susceptibility to respiratory infections.

If you have heart or lung disease, such as congestive heart failure, angina, chronic obstructive pulmonary disease, emphysema or asthma, you may experience health effects earlier and at lower smoke levels than healthy people.

Children also are more susceptible to smoke for several reasons:

their respiratory systems are still developing; they breathe more air (and air pollution) per pound of body weight than adults; and they're more likely to be active outdoors.

Even if you aren't a member of a sensitive population, wood smoke can cause coughs, headaches, eye and throat irritation and illness such as bronchitis in otherwise healthy people.



COMPLAINTS

ACHD operates a 24-hour complaint line. All air pollution related complaints—not just about wood smoke—can be reported. Complaints will be investigated by ACHD staff and violations can be issued when necessary.

Violators of ACHD's Open Burning regulation can be fined for noncompliance. Fines can begin around \$250 and can increase with repeated non-compliance.

Wood burning is legal in Allegheny County, however, all open burning must be done in compliance with the ACHD regulation.



ACHD COMPLAINT LINE
412.687.2243

Learn the regulation and resulting fines at burnfactsallegheny.info

Open Burning Regulation

FACT SHEET



Open burning may only be conducted in accordance with ACHD Article XXI §2105.50 "Open Burning." Municipal ordinances may only be equal to or more stringent than ACHD regulations.



No person shall conduct, or allow to be conducted, the open burning of any material, except where the Department has issued an open burning permit, or where the open burning is conducted in accordance to Article XXI §2105.50 and is done in a manner which contributes a negligible amount of air contaminants.



No material other than clean wood, propane or natural gas may be open burned EXCEPT for:

- Commercially available fire logs, paraffin logs or wood pellets
- Paper or commercial smokeless fire starters in order to start a fire
- Charcoal for the preparation of food only



Fires may be no larger than 3' wide by 3' long by 2' high.

ALLEGHENY COUNTY HEALTH DEPARTMENT
Air Quality Program
 301 39th Street Building #7
 Pittsburgh, PA 15201-1811
 PHONE: (412) 578-8103 FAX: (412) 578-8144

burnfactsalleggheny.info



FOR A FULL COPY OF ACHD REGULATIONS:
www.achd.net/air/pubs/pdf/Article21.pdf



Fires must be at least 15 feet from the nearest neighbor's dwelling or inhabited area, including:

- Property line
- Sidewalk
- Roadway
- Public access area



Wood burning activities are prohibited on Air Quality Action days, with the exception of burning for the commercial preparation of food.

Subscribe to receive email, text or smart phone app notifications of burn ban days at:
www.allegghenycounty.us/alerts



Burning may be prohibited/reduced if considered a nuisance, based on the following criteria:

- The severity of the amount of air pollutants
- The duration or frequency of open burning
- The topography of the surroundings
- The meteorological conditions



Open burning permits are available for ceremonies fostering of agriculture, abatement of a public health hazard and firefighting instruction; however, all permitted open burning is prohibited on Air Quality Action Days.

Contact ACHD at (412) 578-7963
 for more information

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ACHD COMPLAINT LINE:
412-687-2243

More information on open burning and the Air Quality Program can be found online at:

burnfactsalleggheny.info



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CARBON
MONOXIDE
METHANE
BENZENE
FORMALDEHYDE
TOLUENE
NITROGEN
DIOXIDE
SULFUR
DIOXIDE
NAPHTHALENE
PROPIONALDEHYDE
ACETALDEHYDE
FURFURAL
FORMIC ACID
GUAIACOL PHENOL
SYRINGOL CATECHOL
PHENANTHRENE
ANTHRACENE
HYLANTHRACENES
BENZO(E)PYRENE
BENZO(A)PYRENE



POLLUTANTS IN WOOD SMOKE

Wood smoke contains numerous pollutants. Some are on EPA's list of six common pollutants, also known as criteria pollutants, like carbon monoxide, fine particulate pollution and sulfur dioxide.

Wood smoke also contains numerous air toxics. Air toxics, also known as hazardous air pollutants, are pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects.

Concentrations of air toxics and other emissions in wood smoke vary depending on the wood burned and the temperature at which it is burned.

An example of some of the pollutants in wood smoke are listed to the left.

The only way to completely minimize your risk of exposure to these pollutants is to refrain from burning entirely.

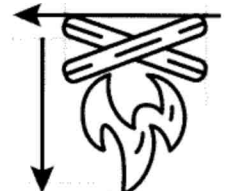
List of emissions from Summary of the Emissions Characterization and Noncancer Respiratory Effects of Wood Smoke, Timothy V. Larson & Jane Q.Koenig, From Table 2, PA-453/R-93-036, 46p. (US EPA December 1993)

BURNING

REGULATIONS

On January 1st, 2015, The Allegheny County Health Department implemented a new Open Burning regulation. This regulation pertains to all burning which occurs outside of a contained device—campfires, bonfires, chimineas and even small fire pits in your backyard fall under this regulation.

3' WIDE X 3' LONG X 2' HIGH
The MAXIMUM SIZE ALLOWED for any burn pile



15 FEET
The DISTANCE REQUIRED from an open-air fire to the NEAREST PROPERTY LINE



The only **ALLOWABLE FUEL** that can be used in open burning, other than **PROPANE** or **NATURAL GAS**, is **CLEAN, DRY WOOD**

NO BURN DAYS
When Allegheny County is forecasted TO HAVE AN AIR QUALITY **ACTION DAY**, all recreational burning is **PROHIBITED**



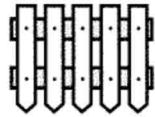
Sign up to **RECEIVE NOTIFICATIONS** of **No Burn Days** at alleghenycounty.us/alerts

WHAT YOU CAN DO

The easiest way to avoid fines, minimize your contribution to regional air pollution and protect the health of your family and neighbors, is to not burn. All fires will produce smoke, and all smoke can affect your health.



Sign up to receive notifications of No Burn Days at:
alleghenycounty.us/alerts
 Know when you can't burn.



Be a good neighbor. Even on days when burning is allowed, be considerate of your neighbors. Watch where your smoke is going—it may pass by you and go straight into someone else's bedroom.



Call ACHD when you suspect a fire is not in compliance with local open burning regulation, is dangerous, contains fuel other than clean, dry wood, or when smoke has become a nuisance. 412-687-2243.



If you have a device such as a wood stove or fireplace, make sure they are properly maintained and cleaned on a regular schedule. EPA-certified devices can produce up to 90% less pollution than non-certified devices—see if you can upgrade yours.