

---

# Protecting Children from Wildfire Smoke and Ash

---

## Background

- Children are especially at risk for health effects from exposure to wildfire smoke and ash, mostly because their lungs are still growing.
- Wildfire concerns include the fire itself, the smoke and ash, and the chemicals from materials that have burned, such as furniture.
- Smoke can travel hundreds of miles from the source of a fire. Pay attention to local air quality reports during fire season, even if no fire is nearby.

## Health Effects from Wildfire Smoke and Ash

- Children who breathe in wildfire smoke and ash can have chest pain and tightness; trouble breathing; wheezing; coughing; nose, throat, and eye burning; dizziness; or other symptoms.
- Children with asthma, allergies, or chronic health issues may have more trouble breathing when smoke or ash is present.

## Preparing for Wildfires

- Pay attention to local air quality reports. Stay alert to smoke-related news coverage and public health advisories.
- Look up your local [Air Quality Index \(AQI\)](#) on the [AirNow](#) (www.airnow.gov) web site.
- If [Enviroflash](#) is available for your area, sign up for air quality alerts. (<http://www.enviroflash.info/>).

- Create a "clean room" in your home. Choose a room with few windows and doors. Buy a portable air cleaner you can use in this room. Never use an ozone-generating air cleaner.
- Stock up on food, medicine and child care supplies before the threat of a wildfire.
- Remember that you may need to leave your home. Plan for it and prepare your children.

## During Wildfires

- Continue to listen to local reports and public health warnings.
- Keep children indoors with the doors and windows closed. Use your "clean room". If you have an air conditioner, run it with the fresh-air intake closed to keep outdoor smoke from getting indoors. Use your portable air cleaner as well. Reduce health risks by avoiding strenuous activities.
- Keep the indoor air as clean as possible. Do not smoke. Do not use gas, propane, or wood-burning stoves, fireplaces, or candles. Never use ozone-generating air cleaners. Never use natural gas or gasoline-powered generators indoors. Do not use spray cans. Do not fry or broil meat. Do not vacuum. All of these can lead to poor air quality.
- A good time to open windows to air out the house and clean away dust indoors is once air quality improves (check AirNow for updates).
- Use common sense to guide your child's activity. If it looks or smells smoky outside, if local air quality is reported as poor, or if local officials are giving health warnings, wait until air quality improves before your family is active outdoors.

## Special considerations:

- If your child has any problem breathing, is very sleepy, refuses food and water, or other health concerns, reduce his/her exposure to smoke and seek medical help right away.
- If your child has asthma, allergies, or a chronic health condition, he/she is at high risk from health effects related to wildfire smoke and ash. Seek medical advice as needed. For children with asthma, follow the asthma action plan.
- Do not rely on masks for protection from smoke. Paint, dust and surgical masks, even N95 masks, are not made to fit children and will not protect children from breathing wildfire smoke. Humidifiers or breathing through a wet washcloth do not prevent breathing in smoke.

## Evacuation

- Seek shelter in another place (e.g., public air shelter) if your family does not have an air conditioner OR air cleaner OR if it is too warm

in your home to stay inside with the windows closed. Plan to take the quickest route to the shelter to limit exposure to smoke.

- Bring all medication (taken by each family member) with you.
- Reduce smoke in your vehicle by closing the windows and vents and operating the air conditioning with the fresh intake closed to keep outdoor smoke from getting into car. Never leave children in a car or truck alone.

## After a Wildfire

- Make sure ash and debris have been removed before bringing your child back to home or school.
- Children should not be doing any cleanup work. Fires may deposit large amounts of ash and dust with harmful chemicals. Avoid bringing polluted ash and dust back to areas used by children (such as a home or car). Remove shoes at the doorway, wash clothing separately, and change out of clothing before you have contact with your children.

## For more information:

**Learn more about wildfire smoke:** *Wildfire Smoke, A Guide for Public Health Officials:*

[https://www3.epa.gov/airnow/wildfire\\_may2016.pdf](https://www3.epa.gov/airnow/wildfire_may2016.pdf)

**Get air quality information:** Check the [airnow.gov](http://airnow.gov) website, or your state air quality agency's website.

**Air Quality Flag Program:** This visual tool alerts schools and organizations and their communities to the local air quality forecast. <https://airnow.gov/flag>

**Learn about home air cleaners:** <https://www.epa.gov/indoor-air-quality-iaq/guide-air-cleaners-home>

**Find certified air cleaning devices:** <http://www.arb.ca.gov/research/indoor/aircleaners/certified.htm>

**Contact Poison Control at 1-800-222-1222** for emergency concerns regarding ingestion or exposure to hazards.

**Contact your Pediatric Environmental Health Specialty Unit** with children's environmental health questions: [www.pehsu.net](http://www.pehsu.net)

Document Authored by Marissa Hauptman, MD, MPH, Laura Anderko, PhD, RN, Jason Sacks, MPH, Lora Strine, Scott Damon MAIA, Susan Stone, MS, Wayne Cascio, MD, Martha Berger, MPA. Aspects of this fact sheet were adapted from 2011 PEHSU Factsheet: Health Risks of Wildfires for Children - Acute Phase Guidance by James M. Seltzer, M.D., Mark Miller, M.D., M.P.H, and Diane Seltzer, M.A.—Region 9 Western States Pediatric Environmental Health Specialty Unit.

This document was supported in part by the American Academy of Pediatrics and the American College of Medical Toxicology and funded (in part) by the cooperative agreement award number FAIN: U61TS000237 and UG1TS000238 from the *Agency for Toxic Substances Disease Registry (ATSDR)*. The U.S. EPA supports the PEHSU by providing funds to ATSDR under Inter-Agency Agreement number DW-75-92301301. Neither U.S. EPA nor ATSDR endorses the purchase of any commercial products or services mentioned in PEHSU publications.

This factsheet is dedicated in memory of Dr. James M. Seltzer as well as the first responders and others who have been affected by wildfires.