PATIENT EDUCATION

WILDFIRE SMOKE GUIDE

Protecting your health before, during & after a smoke event

Why wildfire smoke deserves extra caution

Wildfire smoke isn't just burning trees. When homes, cars, and buildings burn, the smoke can also carry metals, plastics, solvents, pesticides, and "forever chemicals." Fine particles (PM2.5) are small enough to travel deep into the lungs and bloodstream. One large Southern California study found wildfire PM2.5 was up to **10 times more harmful** to respiratory health than the same amount of everyday pollution.

Many of these chemicals have no smell, cling to dust, and can linger indoors for weeks after the smoke clears.

Short-Term Effects

- Eye, nose, and throat irritation
- Headaches
- Allergy flares
- Asthma or COPD flares: more cough, wheeze, shortness of breath, mucus
- Heart events in people with heart disease

Long-Term Concerns

- Lung and heart disease
- Immune dysregulation
- Neurological and developmental effects
- Reproductive concerns
- Increased cancer risk
- Anxiety and depression

Who's Most at Risk

- Children (their lungs are still developing and they breathe faster)
- Older adults
- Pregnant women
- People with asthma, COPD, heart disease, long COVID, or other chronic illness
- Outdoor workers

Tucson note: Arizona's wildfire season typically peaks in late spring and early summer, before monsoon rains arrive, and smoke can drift here from fires hundreds of miles away. The same air purifiers and filters also help on dusty, windy days and during monsoon dust storms.

YOUR PLAN AT A GLANCE

BEFORE: Prepare

- Pack a "Go Bag" and a "Stay Bag"
- Buy respirators, filters, and supplies early
- Know which rooms in your home are leaky

DURING: Monitor & Filter

- Track fire and air quality daily
- Seal your home and run air purifiers
- Damp-clean daily; support your body

AFTER: Clean Up Safely

- Follow official guidance for burned areas
- Assess and clean smoke residue safely
- Check air, water, and soil

Write your plan ahead of time. Stress makes it hard to think clearly during an emergency, and filters, respirators, and supplements sell out fast once smoke arrives.

PHASE 1 · BEFORE Prepare in advance

If you live near wildland areas, be ready to leave at a moment's notice with a **Go Bag**. If you're more likely to face smoke than fire, keep a **Stay Bag** ready to shelter in place.

Go Bag if you need to evacuate

- Respirator for each person (see below)
- Medications for you and your pets, including a full backup inhaler and copies of prescriptions
- Nebulizer, if you use one
- Detox and immune-support supplements
- Copies of ID, insurance, and other important documents
- Key contacts and fire/air-quality resources
- Face masks, tissues, wet wipes
- Extra clothing, including warm layers
- Food and water for 72 hours
- First aid kit

Stay Bag if you shelter at home

- Respirator for each person
- Medications, backup inhaler, and nebulizer
- Detox and immune-support supplements
- Extra MERV 13+ furnace filters
- Extra air purifier filters
- Painter's tape to seal window and door drafts
- Cardboard to block fireplaces and exhaust vents
- Damp mop and microfiber cloths
- Food that doesn't need a gas stove
- Indoor air quality monitor (optional)

Masks & Respirators

Have one for each household member, and buy them early; they sell out during smoke events. Look for **NIOSH-approved** products, available at home improvement stores.

Option	What it protects against	Notes
N95 mask	Fine particles (PM2.5)	Effective for smoke particles when well fitted. Doesn't filter gases or chemical vapors.
P100 mask	Fine particles, with a stronger filter and seal	Better particle protection; more comfortable than a respirator for long wear.
Reusable half-face respirator (e.g., 3M 6000, 6500, or 7500 series)	Particles **and** gases/vapors, with the right cartridges	Best protection. Use combination cartridges (e.g., 3M 60926: multi-gas/vapor + P100).

Masks need a tight seal: facial hair prevents one. Children and people with heart or lung disease may find respirators hard to breathe through; talk with us first.

Clean Indoor Air

Air Purifiers

Choose units with **both a HEPA filter** (for particles) **and an activated carbon filter** (for gases and odors).

- One per main room, sized for the space; larger or extra units for high ceilings and open floor plans
- Invest in quality units for the bedroom and main living area first
- Avoid purifiers that produce ozone
- Stock extra filters; they clog faster during heavy smoke

Central Air & Car

- Use a **MERV 13 or higher** furnace filter and run the system on **recirculate**
- Change the filter often during smoke season
- Replace your car's cabin air filter before the season and keep a spare

No purifier? Make a DIY box-fan filter

Attach a MERV 13 furnace filter to a box fan. The EPA has simple instructions (search "EPA DIY air cleaner"). These remove particles but not gases.

Indoor Air Monitor

Many smoke pollutants are invisible. A home air monitor (e.g., IQAir AirVisual Pro or AirKnight) shows whether your indoor air is safe, room by room. Buy before smoke season.

Nebulizers

If you have asthma, COPD, or other breathing conditions, keep your nebulizer ready (a battery-powered portable model helps if you need to leave or lose power) and order extra tubing. **Ask us in advance** whether a prescription nebulized therapy is right for you. Only use sterile, prescribed solutions.

PHASE 2 • DURING Monitor, filter & protect

Know Your Risk

Fire Activity

- **Watch Duty** app: real-time wildfire and evacuation updates
- **Pima County** emergency alerts: sign up to get local notices

Outdoor Air

- **AirNow.gov** (EPA): official Air Quality Index and forecasts
- **PurpleAir**: neighborhood-level sensor map
- Smoke particles can be harmful even when the sky looks clear; check before you go out.

Indoor Air & Water

- Check your indoor monitor; if levels keep rising, move to a cleaner location
- If you're concerned about water contamination, test it (e.g., Tap Score)

Keep Smoke Out of Your Home

Every Home

- Close all windows and outside doors; check the seals
- Use one door for people and pets coming and going
- Seal unused vents (fireplace, stove, bathroom) with cardboard and tape
- Run air purifiers in each main room
- Central air on recirculate with a MERV 13+ filter

Older or Drafty Homes

Older homes let in more smoke.

- Seal gaps around windows and doors with painter's tape
- Find your most airtight rooms and make them your "clean air rooms"
- Close off rooms that stay smoky

If your indoor air isn't safe, relocate, especially with children or family members with health conditions.

Daily Habits During Smoke

Do

- Stay indoors with windows closed
- Damp-mop and wipe surfaces with microfiber cloths **daily**
- Remove shoes at the door
- Shower, wash your hair, and change clothes after any smoke exposure
- Wear your respirator when you must go outside
- Filter drinking and cooking water (reverse osmosis is best; see our Clean Water Guide)

Don't

- Exercise outdoors
- Vacuum: it stirs up fine particles (wear a mask if you must)
- Use gas stoves, fireplaces, candles, or incense
- Smoke or allow smoking indoors
- Rely on a cloth or surgical mask for smoke protection

Nourish & Support Your Body

Eat to Protect

- Organic, whole-foods Mediterranean-style diet
- Omega-3 fats from fish, nuts, and seeds
- A rainbow of fruits and vegetables
- Broccoli sprouts, onions, garlic, berries
- Green tea, up to 3 cups a day as tolerated
- Fermented foods
- Plenty of filtered water

Supplements During Smoke Events typical adult doses

- **Vitamin C:** 1,000 mg 3× daily
- **NAC:** 1,800 mg daily (divided)
- **Liposomal glutathione:** 500 mg daily
- **Sulforaphane:** 30–50 mg daily
- **Quercetin:** 500 mg 2× daily
- **Curcumin:** per product (usually 2–4 capsules)
- **Resveratrol:** 450 mg daily
- **Vitamin E (mixed tocopherols):** up to 400 IU daily
- **Omega-3 (EPA + DHA):** 1.6 g daily
- **B-complex:** 1 each morning
- **Probiotic:** per product

Ask us first if you take blood thinners, are pregnant or breastfeeding, or have a medical condition. Vitamin E, omega-3s, curcumin, and resveratrol can increase bleeding risk.

PHASE 3 • AFTER Clean up safely

If your home or property burned: do NOT clean up burned structures, belongings, vehicles, or debris yourself. Ash from burned buildings can contain asbestos, heavy metals, and other hazards. Follow your local health department's guidance on whether and how debris can be handled. If you're cleared to go through debris, wear a disposable coverall (like Tyvek), a respirator, gloves, and goggles.

The steps below are for homes in a smoke-affected area that were not burned.

How Much Cleaning Do You Need?

Wipe test: wipe a white paper towel or cloth across a windowsill or wall.

What you find	What it means
No ash or soot on surfaces	A thorough cleaning on your own should be enough.
Light ash or soot, some particles in the air, or a noticeable smoke smell	Clean thoroughly yourself, or hire a professional.
Heavy ash or soot, lots of particles, or a strong smoke smell	Professional cleaning or remediation is likely needed. Check with your insurance company, which may cover it or recommend companies. A certified indoor environmental professional (IEP) can inspect before you start.

Protect Yourself While Cleaning

Gear Up

- NIOSH-approved P100 mask or respirator with combination cartridges
- Gloves, goggles, long sleeves, long pants, closed shoes and socks
- Wash ash off skin, eyes, or mouth right away
- Afterward: shower, wash your hair, and launder your clothes
- A saline nasal rinse can help clear your nose and sinuses (use only distilled or boiled water)

Who Should Stay Away

- People with heart or lung disease, including asthma
- Older adults
- Pregnant women
- Children and pets

Bag debris and put it straight into the trash can.

Cleaning Step by Step

1	**HVAC first**	Consider an HVAC inspection. Change your MERV 13+ furnace filter **monthly until the smell is gone**, and seal gaps around the filter holder with tape or foam. Duct cleaning may help, especially if ducts are poorly sealed.
2	**Run air purifiers**	HEPA + carbon purifiers on the highest setting when people are in the room, until the smell is gone. Change filters per the manufacturer.
3	**Wet-clean hard surfaces**	Wipe walls and hard surfaces with diluted soapy water to keep dust from going airborne. **Avoid harsh chemical cleaners and vinegar**, which can react with chemicals in the ash.
4	**Then vacuum, carefully**	Once outdoor air is "good," open windows, wear a respirator, and vacuum floors, rugs, drapes, and furniture with a **HEPA vacuum on bare-floor mode** (no beater bar). Damp-wipe surfaces again afterward. Clean rugs and furniture outdoors if possible; some items may not be salvageable.
5	**Replace detectors**	Heavy smoke can damage smoke and carbon monoxide detectors. Replace them as soon as possible.
6	**Keep new ash out**	Keep windows closed while air is poor. Leave shoes outside, wipe pets' paws, rinse patios and outdoor toys (directing water away from storm drains), and skip leaf blowers.

About that lingering smell: The post-fire odor comes from volatile organic compounds (VOCs). They settle on surfaces and soak into porous materials, and can keep off-gassing for **weeks to months**, more when it's warm. Carbon filters help; levels should drop slowly over time. **Skip ozone generators, hydroxyl generators, and chemical odor sprays.**

Beyond Your Home

Your Car

- Replace the cabin air filter
- Damp-wipe interior surfaces
- Wear a respirator when driving through unhealthy air

Your Water

- Follow any boil-water notices
- Flush your pipes to bring in fresh water
- Consider testing (e.g., Tap Score)
- Reverse osmosis for drinking and cooking; consider shower filtration

Your Soil & Garden

- Ash can contaminate the top layer of soil, and plants can absorb it
- Before eating from your garden, consider testing soil for metals, PFAS, pesticides, and other toxins
- Remediation may mean removing the top layer of soil

We're here to help. If smoke exposure leaves you with lingering cough, breathing trouble, headaches, or fatigue, call us. Ask about IV nutrient therapy and other detox support. **Seek emergency care right away** for chest pain, severe shortness of breath, or confusion.

Sources: U.S. EPA & AirNow wildfire smoke guidance; CDC; Aguilera et al., Nature Communications (2021); EPA DIY air cleaner guidance; local health department recommendations. This handout is for educational purposes and is not a substitute for individualized medical advice.

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