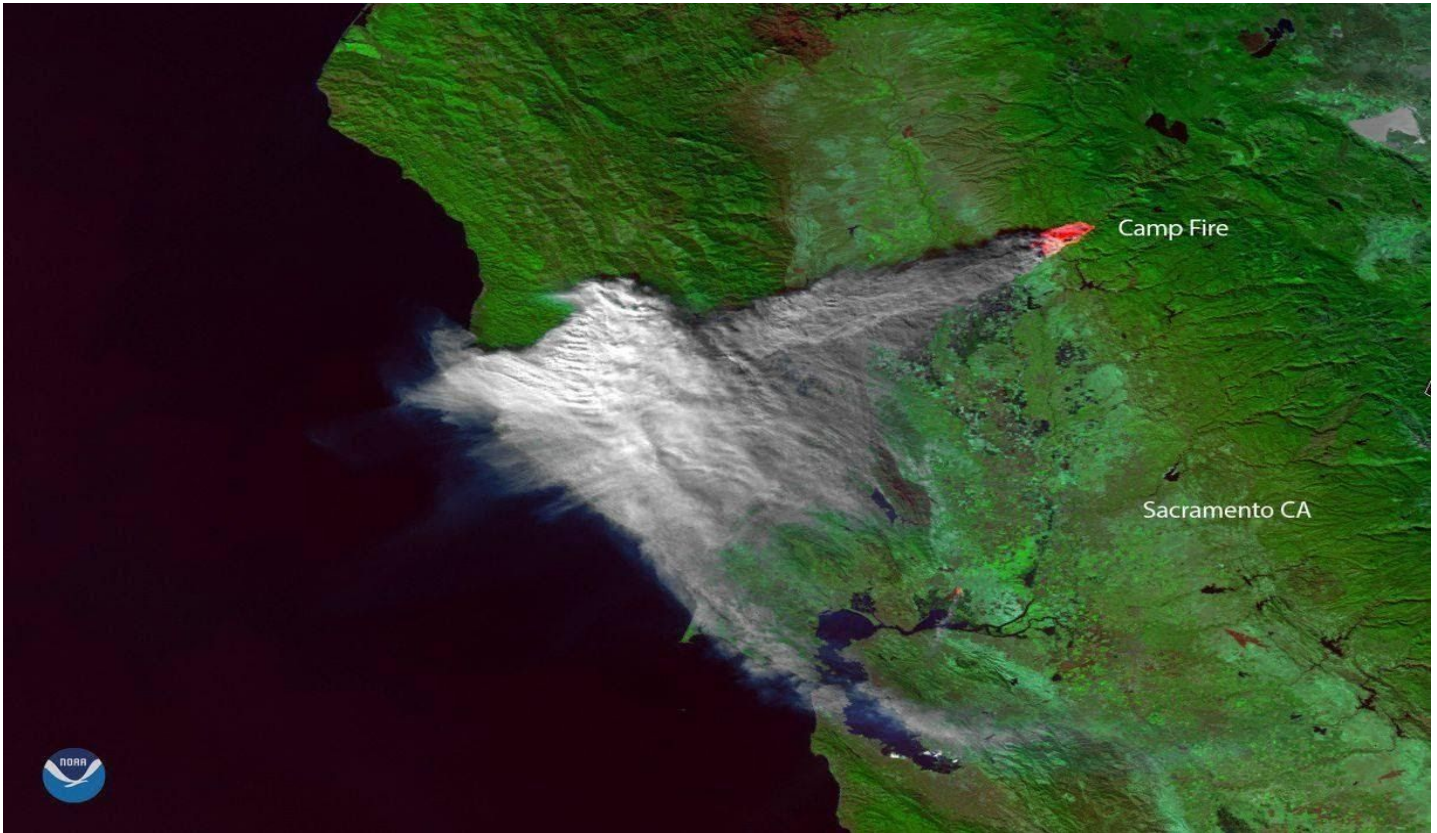


# Fires, Smoke & Health Hazards: How to protect yourself



Fires can release unprecedented amounts of toxins into the environment that have a significant effect on your health. Children and elderly are particularly vulnerable to toxic air pollution. Here are some suggestions of how to reduce your toxic exposure as well as some nutrients and therapies to support detoxification. Reach out to us if we can help and share this resource with others.

In this document you will find:

- Identifying medical emergencies
- Recommendations to implement today to reduce exposure
- Herbal support for detox and immune support
- Shock and trauma support
- Additional resources

Always prepare in advance a [GO BAG](#) and be ready to evacuate.

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# How to spot a Medical Emergency: DON'T KNOW? GET HELP!

If you observe any of these signs it's time to see help.

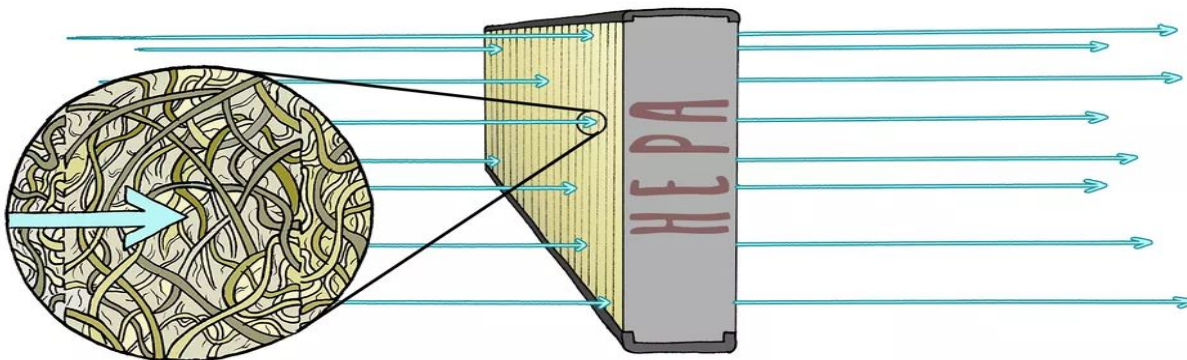
- ❖ Obvious respiratory distress
- ❖ Can't speak full sentences
- ❖ Appears confused
- ❖ Uncontrolled coughing
- ❖ Tripod position
- ❖ Audible wheezing
- ❖ Skin is pale or blue-ish, or bright red
- ❖ Use of accessory muscles while breathing (neck, belly)
- ❖ Rapid respiratory rate or pulse
- ❖ Reports frequent use of inhaler
- ❖ Reports multiple medications or serious health conditions or recent hospitalization or surgery



## Who is at the most **risk** from wildfire smoke?

- People with **heart** or **lung diseases** (cardiovascular disease, asthma, or COPD)
- **Older adults** are more likely to be affected by smoke, due to their increased risk of heart and lung diseases
- **Children's** airways are developing and they breathe more air per pound of body weight than adults

A HEPA FILTER IS MADE UP OF A MAZE OF RANDOM FIBERS THAT AIR IS FORCED THROUGH



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## ★ Reduce Exposure

- **Use common sense.** If it looks smokey outside, it's probably not a good time to mow the lawn or go for a run.
- **Pay attention to local air quality reports.** Stay alert to smoke-related news coverage, health warnings and Air Quality Index at [airnow.gov](http://airnow.gov).
- **Remove shoes** when entering your home.
- **Change clothes** when returning home.
- Before going to bed, **bathe or shower** and wash hair thoroughly.
- Protect your lungs with a **mask**- N95 or P100 (more below)
- **If you have asthma, lung or heart disease, if you are an older adult, or if you have children** make sure you follow your doctor's directions about taking your medicines and following your asthma management plan. Call your doctor if your symptoms worsen and consider when you should leave the area. When smoke is heavy for a prolonged period of time, fine particles can build up indoors, even though you may not be able to see them.
- Keep children, elderly and pets indoors
- Run a **HEPA air purifier**, ideally with additional activated carbon filter for gasses. Set it up in the most commonly used room and move to the bedroom at night.
- **Run your air conditioner if you have one.** Keep windows & doors closed. Switch the fresh air intake to closed and set to recirculate to filter indoor air to prevent bringing additional smoke inside. Note: If you don't have an air conditioner, staying inside with the windows closed may be dangerous in extremely hot weather. In these cases, seek alternative clean air shelter.
- **Avoid toxic cleaners**, spraying aerosol products, frying or broiling meat, as they all can further increase particle levels and compromise your health.
- **Wet mop** floors and wet dust surfaces to remove ash, then clean with an all-natural cleaning solution.
- **Don't vacuum.** This stirs up particles already inside your home. Wet mop instead.
- **If you are advised to stay indoors**, take steps to keep indoor air as clean as possible. When smoke levels are high, try to avoid using anything that burns, such as wood fireplaces, gas logs, gas stoves - and even candles or incense! And don't smoke. That puts even more pollution in your lungs, and in the lungs of people around you.



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**Masks:** Wearing a mask can be effective in reducing exposure to smoke particles, however they should only be used after first implementing other, more effective methods of exposure reduction. Masks alone might not be enough, as the smoke is putting your body in contact with toxic heavy metals and gases. This can lead to burning eyes, headaches, fatigue, aches, fuzzy thinking, and of course, breathing problems. Surgical masks, dust masks, and bandanas or other face coverings do not offer protection from particulate pollution. Children should not wear these masks – they do not fit properly and can impede breathing. If the air quality is poor enough that a child requires a mask, the child should remain indoors, in a safe place, grab your [Go Bag](#) and evacuation should be considered. The best things you can do to take care of your lungs in a situation like this is reducing the amount of heavy breathing you engage in, such as a cardio workout. You can also focus on breathing *through your nose* as much as possible. This is our body's first built-in filtration that can help sift out some of the toxicity you breathe. This is one time where staying indoors, and not opening your windows is a better idea.

## ★ Nutritional Support

- Stay hydrated and take electrolytes
- Choose healthy nutrient-dense foods like broths, soups, and dark greens
- Avoid pro-inflammatory foods like sugar, fried foods, white foods, alcohol, & factory-farmed meats/ dairy
- Eat lots of fresh vegetables and fruits
- Encourage children to self-select veggies and fruits to ensure they eat them
- Eat fermented foods for probiotic support
- Choose naturally detoxifying foods like broccoli, cauliflower, kale, brussels sprouts, cabbage, collard greens, spinach, beets, carrots, asparagus, apricots, plums, pumpkins, squash, and sweet potatoes
- Consider chelators like activated charcoal and zeolite clay

## Supplements Can Help Boost Your Immune System

Taking cleansing [supplements](#) that contain N-acetyl Cysteine, Glutathione, and Alpha-Lipoic Acid are good choices as they aid the liver in detoxifying the body naturally. Another key to taking care of your body when you're exposed to these toxins is taking high doses of Vitamin C, along with Vitamin D and Omega fatty acids. These together help boost your immune system and the added Vitamin C will help your tissues heal. Some people prefer to get these as a super hydrating IV drip or via a [nebulizer](#).

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## ★ Herbal & Supplemental Support

- **Glutathione:** Super antioxidant. It can help your lungs function better, boost your immune system, and help your liver with the detoxification process. It comes in a liposomal – liquid – form that you can let dissolve in your mouth, as well as in capsule form. If you get it in capsule form, make sure it's the right type, N-acetyl Glutathione, which is the stable form.
- **N-Acetyl-Cysteine:** an amino acid that is a precursor to glutathione, the body's most powerful antioxidant, and helps promote optimal detoxification. NAC is heavily researched for its role in optimizing lung health, and is also used for rapid recovery after workouts. It is also beneficial for protection against normal exposure to heavy metals.
- **Quercetin + Nettles:** Quercetin is an antioxidant and has anti-inflammatory effects and helps prevent heart disease. Research suggests that nettle's anti-inflammatory actions are attributed to its ability to interrupt the production and actions of inflammation-producing cytokines, prostaglandins and leukotrienes.
- **Detox-Antiox™:** This synergistically combines an extensive array of nutrients that combat free radicals and help support the detoxification of chemicals and heavy metals.

### Demulcents soothe & protect the respiratory tract

- Slippery elm (*Ulmus rubra*-- only use organic!)
- Marshmallow root (*Althaea Officinalis*)
- Licorice root (*Glycyrrhiza glabra*)
- Mullein leaf (*Verbascum thapsus*)

### Acute immune boost

- Elderberry (*Sambucus spp*)
- Echinacea (*E. purpurea*)
- Yarrow (*Achillea millefolium*)
- Ginger (*Zingiber officinalis*)

### Deep immune support

- Medicinal mushrooms: reishi, turkey tail, cordyceps
- Huang Qi (*Astragalus membranaceus*)
- Dang Shen (*Codonopsis pistularis*)

### Antitussives and expectorants

- Gum weed flower (*Grindelia spp*)
- Wild cherry bark (*Prunus serotina*)
- Yerba santa leaf (*Eriodoyction californica*)



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## Bronchodilators- clear the sinuses

- Lobelia (L. inflata)
- Ragweed (Ambrosia spp.)
- Goldenseal (Hydrastis canadensis--only use organic cultivated!)
- Steam inhalation of eucalyptus, thyme or peppermint

## Rest & Relax with nervines

- Skullcap (Scutellaria lateriflora)
- California poppy (Eschscholzia californica)
- Passionflower (Passiflora incarnata)
- Chamomile (Matricaria recutita)
- Valerian (Valeriana officinalis)
- Vervain (Verbena hastata)
- Aconite (Aconitum Napellus)



## ★ Gentle Detoxification and Cool Inflammation

- Magnesium can help make sure your bowels are healthy and you go regularly
- [Optimized Wellness Baths](#) with epsom salts are great ways for kids to naturally detox
- Antioxidants: flavonoids in fruits, vegetables and spices (green tea, turmeric, rosemary)
- Glutathione precursors: sulfur-rich foods (alliums, brassicas), magnesium, B vitamins, zinc, selenium
- Liver support: milk thistle, turmeric, burdock root, dandelion root



## Shock/Trauma

With sudden loss, or trauma, your body goes into shock. Not necessarily the type of shock that would put you in the **emergency room**, but the sort where you feel glazed, and overwhelmed, and you may not be able to focus or think clearly, in a time when you might need to. Reach out to a family member or loved one for support.



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## Here are some things that will help you overcome this initial shock:

**Rescue Remedy:** a Bach flower remedy that helps with trauma or emotional stress – comes in liquid or tablets that you can take several times a day.

**Holy Basil:** an ayurvedic herb that helps support your adrenals – in times of severe stress, it will support your energy.

**Cold Laser:** Specific frequencies and [cold laser](#) protocols can be used to non-invasively help to relax your nerve system from the inside out and facilitate healing.

**Activated Oxygen Therapy:** This form of oxygen, [O3](#), can help hyper oxygenate tissues providing great relief and recovery especially from respiratory issues.

**Acupuncture:** acupuncture treatment will do amazing things to help you feel better.

### Additional Resources:

If you are not sure how to prepare your Go Bag, watch this video.

Indoor Environment Group - [Air Quality Tips](#)

EPA - [air quality](#)

Fire impact [podcast](#)

\*The advice contained here is not meant to constitute medical diagnosis or treatment and has not been evaluated by the Food & Drug Administration or any other medical body. We do not aim to diagnose, treat, cure or prevent any illness or disease. Information is shared for educational purposes only. If you are pregnant, elderly, take prescription medications, or suffer from a chronic lung or heart condition, please consult with a qualified health practitioner prior to self-treating with herbs, supplements or any other remedies. If you are experiencing respiratory distress, seek emergency medical attention.

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