Crisis and Emergency Risk Communication Toolkit for Wildfires

Developed for Oregon Local Health Departments by the Oregon Health Authority, Public Health Division Health Security, Preparedness, and Response Program

NOTE: This document replaces and supersedes all previous versions of the communication toolkit for wildfires.

Revised and updated on May 27, 2014.
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INTRODUCTION

The Risk Communication Toolkit for Wildfires has been designed to assist with messaging during and after a wildfire event. The most likely health impacts from a wildfire emergency include the following:

- Smoke irritation to eyes, throat and lungs
- Worsening respiratory symptoms in people with underlying lung disease such as asthma and pulmonary inflammation
- Heart attacks or irregular heart rhythm in people with underlying heart disease

In order to effectively and efficiently use the communication materials included in this Toolkit, you’ll need the following items from your county’s or tribe’s communication plan:

- Media Contact List
- Local Partners Contact List
- Special Populations Agency List or 911 Card Registry
- Policies for Clearance
- Policies for Disseminating Messages

Also, for resources specific to wildfires, please refer to your local health department’s emergency operations plan.
KEY MESSAGES FOR WILDFIRES

The Crisis Phase is characterized by uncertainty, shortened response time, and intense media interest. The public is seeking timely and accurate facts about what happened, where it happened, and what is being done to address the crisis. They will question the magnitude of the crisis, the immediacy of the threat to them, the duration of the threat, and who is going to fix it.

Communicators should be prepared to answer these questions as quickly, accurately, and fully as possible. Simplicity, credibility, verifiability, consistency, and speed count when communicating in the initial phases of an emergency.

Goal: Provide up-to-date and accurate information to empower decision-making and prompt action

- Provide available information on current event
- Explain the risks of this hazard
- Provide self-efficacy messages about safety and how and where to get more information
- Explain the process of what your local health department is doing
TALKING POINTS FOR WILDFIRES

REDUCING SMOKE EXPOSURE DURING A WILDFIRE

- **If smoke levels are very unhealthy or hazardous**, the best recommendation is to get out of the smoky area. If you have the means and ability to leave, getting out of the smoky area is the best thing you can do for your health.

- If you are not able to leave the area, reduce the amount of time you spend outdoors. People with heart or lung disease, infants and children are more sensitive to health effects from wildfire smoke, so leaving the area until the smoke clears is the best thing you can do for your health.

- If you have asthma, other lung disease, or heart disease, you may be more sensitive to health effects from wildfire smoke, **follow your doctor’s advice about medicines and about your disease management plan**. Call your doctor if symptoms worsen.

- Go to Oregonsmoke.blogspot.com for the latest health and safety information about air quality and health effects. Oregon Smoke Blog has information from agencies and organizations helping with the wildfire response.

- **If you are told to stay indoors, stay indoors and keep your indoor air as clean as possible**. Keep windows and doors closed unless it is very hot outside.

- **Have enough food and medications** on hand to last several days. Minimize the amount of food that requires frying or broiling. This can add particles to indoor air.

- **Do not rely on dust masks for protection**. Paper "comfort" or "dust" masks commonly found at hardware stores trap large particles, such as sawdust. These masks will not protect your lungs from smoke. An “N95” mask, properly worn, may offer some protection.

- **Avoid strenuous work or exercise outdoors**. With the exception of firefighters and emergency personnel who are trained to work in hazardous environments, people should avoid physical exertion during smoke exposure.

- **Avoid driving** whenever possible. If driving is necessary, run the air conditioner on the “recycle” or “re-circulate” mode to avoid drawing smoky air into the car.

- **Which is worse: second-hand smoke from cigarettes or wildfire smoke?** There are no comparable data for second-hand smoke from cigarettes and forest
fires. The 2006 Surgeon General report indicates there is no safe level of exposure to second-hand smoke from cigarettes. The Centers for Disease Control and Prevention indicates that health problems from wildfire smoke depends upon how much smoke you are exposed to, how long you are exposed, your age, and your degree of susceptibility. The best thing to do is to limit your exposure to both.

WILDFIRE SMOKE AND MASKS

There are several drawbacks to recommending widespread mask use in an area affected by wildfire smoke. First, there is no evidence that simple surgical masks, bandanas, etc. have any benefit at all, so we might create a false sense of security. Second, NIOSH-certified N95 respirators might have some benefit if they are properly fit-tested and used correctly, but many people may not use the respirator correctly and won’t understand the importance of having an airtight seal. As a result, masks, and even respirators, may provide little if any protection in this setting.

Therefore, it is important to communicate to the public not to rely on masks for protection from wildfire smoke.

For more information about effective masks and how to properly wear and choose a mask, visit:

CDC: Respirator Factsheet
http://www.cdc.gov/niosh/docs/2003-144/

California Department of Health: Protect your lungs from wildfire smoke
http://www.bepreparedcalifornia.ca.gov/Documents/Protect%20Your%20Lungs%20Respirator.pdf

NIOSH

Oregon OSHA Voluntary use of respirator protection (for employers)
http://www.orosha.org/pdf/pubs/fact_sheets/fs05.pdf

Oregon OSHA General Respirator use (for employers)
http://www.orosha.org/pdf/pubs/fact_sheets/fs06.pdf
FOR IMMEDIATE RELEASE

CONTACT: [Name]
[County] County Health Department
Phone [(XXX) XXX-XXXX]
Email [email address]

High Temperatures and Smoky Air Could Cause Health Problems

[City, State] – County public health officials urge people across the state to take precautions as temperatures and air quality reach potentially unhealthy levels.

The National Weather Service is predicting weather that could bring prolonged wildfire smoke exposure to communities in the [region affected] area. Smoke levels can rise and fall depending on weather factors including wind direction.

“The combination of high temperatures and wildfire smoke in the [affected] area may increase the risk of illness especially for older adults, young children, and people with asthma, respiratory, or heart conditions,” said [Health Officer, position].

Public health officials urge all Oregonians to take the following precautions to avoid health problems during hot, smoky conditions.

- Be aware of smoke concentrations in your area. Residents can get the latest information by visiting the Oregon Smoke blog: Oregonsmoke.blogspot.com or call 2-1-1 Info.

- Avoid outdoor activities when air quality is unhealthy and hazardous. Those with heart or lung problems, as well as young children, are especially vulnerable.

- Avoid smoke either by leaving the area or protecting yourself by staying indoors, closing all windows and doors.

- Reduce other sources of indoor air pollution such as burning cigarettes and candles; using gas, propane, and wood burning stoves and furnaces; cooking; and vacuuming.

- Individuals with heart disease or lung diseases such as asthma should follow their health care providers’ advice about prevention and treatment of symptoms.

Helpful links:

Oregon Smoke blog, for the latest on fires and air quality across the state

##
SAMPLE PRESS RELEASE #2 FOR WILDFIRES

FOR IMMEDIATE RELEASE

CONTACT: [Name]
[County] County Health Department
Phone [(XXX) XXX-XXXX]
Email [email address]

Wildfire Smoke Inhalation Prevention Information

The (INSERT FIRE NAME) is burning (ENTER LOCATION), has grown to (ENTER SIZE) and is (XX) percent contained. Hot, dry, and unstable weather will likely result in heightened fire activity and increased smoke production. The estimated containment date is (ENTER DATE).

(NAME) County health officials are providing the following information to help local residents proactively avoid illness from wildfire smoke inhalation. People with respiratory or heart disease, the elderly and children, are advised to stay indoors. Poor air quality conditions are a health threat and should be avoided by all residents in smoky communities. Remember, local smoke levels can rise and fall rapidly depending on weather factors, including wind direction.

Take the following precautions to avoid breathing problems or other symptoms from smoke:

1. Be aware of smoke concentrations in your area.
2. Avoid outdoor exertion during such conditions. Avoid strenuous outdoor activity including sports practice, work and recreation.
3. Drink lots of water - staying hydrated can keep your airways moist which will help reduce symptoms of respiratory irritation such as scratchy throat, running nose and coughing.
4. Try to avoid driving in smoky areas. If you do need to drive in these areas, keep your windows rolled up and vents closed. If you need air conditioning, make sure you set your system on “re-circulate” to avoid bringing smoke into your car.
5. Avoid smoke by staying indoors, closing all windows and doors and use a filter in your heating/cooling system that removes very fine particulate matter.
6. People with concerns about health issues, including those suffering from asthma or other respiratory problems, should follow their breathing management plans; keep medications on hand, and contact healthcare providers if necessary.

Helpful links:

Oregon Smoke blog, for the latest on fires and air quality across the state
Centers for Disease Control and Prevention fact sheet about the health threats from wildfire smoke
DEQ’s Wildfire smoke website
OHA wildfires webpage

##
SAMPLE PRESS RELEASE #3 FOR WILDFIRES

FOR IMMEDIATE RELEASE

CONTACT: [Name]
[County] County Health Department
Phone [(XXX) XXX-XXXX]
Email [email address]

Health officials urge residents to take precautions due to wildfire smoke

The Oregon Health Authority Public Health Division and the Oregon Department of Environmental Quality are offering Oregonians ways to identify poor air quality conditions and tips to stay healthy and safe during fire season.

Wildfires across the state are creating hazardous and smoky conditions. Smoke from fires in our region may begin to drift into NAME communities and rapidly degrade air quality.

"People with chronic lung or heart conditions, the elderly and children have higher risk of health problems from the fine particles in wildfire smoke," said Bruce Gutelius, M.D., M.P.H., deputy state epidemiologist with the Oregon Public Health Division. "People who suffer from asthma or other respiratory conditions should follow their breathing management plans, keep medications on hand, and contact health care providers if necessary."

DEQ and local county health departments urge residents to take the following precautions to avoid breathing problems or other symptoms from smoke:

- Be aware of smoke concentrations in your area and avoid the places with highest concentrations.
- Residents can check the current local air quality conditions on Oregon Smoke blog http://oregonsmoke.blogspot.com/ or call 2-1-1 Info.. Avoid outdoor activities when air quality is unhealthy and hazardous.
- To avoid smoke either leave the area or protect yourself by staying indoors, closing as many windows and doors as possible without letting your home overheat, and using a filter in your heating or cooling system that removes very fine particulate matter.
- Avoid strenuous outdoor activity in smoky conditions. Young children and persons with heart or lung problems are especially vulnerable.

Persons suffering from asthma or other respiratory problems should follow their breathing management plans or contact their health care providers.

Helpful links:

- Oregon Smoke blog, for the latest on fires across the state: http://oregonsmoke.blogspot.com/
- DEQ's Air Quality Index, for current air quality conditions: www.deq.state.or.us/air/
FACT SHEETS AND FAQs FOR WILDFIRES

The following fact sheets are available for download. If your agency needs these documents in additional formats, please contact your preparedness or hospital liaison. (Note: Click on button next to “Staff” to find your liaison).

Public Health and Wildfires FAQs (English)

Public health guidance for school outdoor activities

Hazy, smoky air: Do you know what to do? (English)

Hazy, smoky air: Do you know what to do? (Hay mucho humo en el aire: ¿Sabe que hacer? - Spanish)
http://public.health.oregon.gov/Preparedness/Prepare/Documents/OHA%208622_Public_Health_Wildfires_Flyer_fullpage_Spanish.pdf

CDC Be Ready! Wildfires Infographic
WEBPAGES FOR WILDFIRES

Oregon Smoke Information Blog
http://oregonsmoke.blogspot.com/

Oregon Public Health Wildfire Webpage
http://public.health.oregon.gov/Preparedness/Prepare/Pages/PrepareForWildfire.aspx

Northwest Coordination Center
http://www.nwccweb.us/index.aspx

InciWeb Incident Information System
http://inciweb.nwcg.gov/

Department of Forestry
http://www.oregon.gov/odf/Pages/index.aspx

Department of Environmental Quality
http://www.deq.state.or.us/AQ/burning/wildfires/index.htm

CDC Emergency Preparedness Wildfire Webpage
http://emergency.cdc.gov/disasters/wildfires/index.asp
SOCIAL MEDIA MESSAGES FOR WILDFIRES

Twitter Messages

The following messages can be posted on your local health agency’s Twitter feed. All posts are 140 or fewer characters.

In addition to the suggestions below, the Centers for Disease Control and Prevention’s @CDCReady and @CDCEmergency feeds can be retweeted as relevant information and links are tweeted.

#Wildfires are affecting air quality in [insert region]: http://oregonsmoke.blogspot.com/

Hazy air? Check DEQ’s Air Quality Index before heading out: http://oregonsmoke.blogspot.com/ #wildfires

Use #wildfires to get the latest wildfire info, or check http://oregonsmoke.blogspot.com/

Populations sensitive to #wildfires smoke should limit outdoor activities. http://oregonsmoke.blogspot.com/

Drink lots of water! Keeping hydrated minimizes health effects from #wildfires.

Stay safe from #wildfires. Visit http://oregonsmoke.blogspot.com/

Facebook Posts

A benefit to posting on Facebook is that conversations can be had among fans (although this can require additional moderation).

All of the above tweets can be cross posted as Facebook messages, but the following suggestions have images and links that can also be posted. For more suggestions, visit the Centers for Disease Control and Prevention’s Facebook page at https://www.facebook.com/cdcemergency to repost useful links, webpages, photos, and tips.

Wildfires are unpredictable and can quickly send smoke into Oregon communities. DEQ’s Air Quality Index (AQI) is a color-coded tool which shows air pollution levels. Green is good, yellow is moderate, orange is unhealthy for sensitive groups, and red is unhealthy for all groups. http://www.deq.state.or.us/aqi/index.aspx

Need an excuse to avoid yard work? As smoky wildfire air persists, avoid strenuous outdoor activities. Find your community’s air quality levels at the Oregon Smoke blog: http://oregonsmoke.blogspot.com/.
To protect yourself and your family from wildfire smoke, limit outdoor activities during poor air quality times. Check the Oregon Smoke blog for the latest information:
http://oregonsmoke.blogspot.com/

High smoke levels can have hazardous impact on health. People with respiratory or heart disease, the elderly, and children should follow their breathing management plans or contact their healthcare providers. Check the Oregon Smoke blog for the latest information: http://oregonsmoke.blogspot.com/

Hazy outside? Scratchy throat? People in smoky areas should drink lots of water. Keeping hydrated reduces the amount of smoke that can travel deep into your lungs. Check the Oregon Smoke blog for the latest information: http://oregonsmoke.blogspot.com/

Do you bike to work? To reduce exposure to smoky wildfire air, bike commuters should avoid overly strenuous rides and stay hydrated. Consider taking public transportation. Check the Oregon Smoke blog for the latest information: http://oregonsmoke.blogspot.com/
KEY MESSAGES FOR WILDFIRE RECOVERY

During the Recovery phase, information focuses on clean up, mitigation, recovery, and rebuilding efforts. Health risks to the public may also change during this phase. Communication and education efforts should focus more heavily on new or emerging risks and actions to mitigate those risks.

Goal: Provide information about ongoing cleanup, mitigation, recovery, and rebuilding efforts

- Increase public understanding of new and emerging risks
- Provide information and actions for risk avoidance behaviors and response behaviors
- Use the event as a “teachable moment” to highlight future preparedness messages
FOR IMMEDIATE RELEASE

CONTACT: [Name]
[County] County Health Department
Phone [(XXX) XXX-XXXX]
Email [email address]

Indoor Air Quality after the [Insert Name] Wildfire

[City, State] – With the immediate danger from the [insert name] wildfire behind us, county public health officials urge residents near the fire zone to take precautions as air quality levels could still be affected.

Residents can take the following steps to protect their health from potential indoor air quality issues during clean-up and re-occupancy.

- Stay inside. Limit outdoor time of children and pets. Do not let them play around burned structures.
- Keep windows and doors shut.
- Wet all ash and debris thoroughly before packing inside a 6mm plastic sheet liner.
- Clean and replace filters on air conditioning units and furnaces (set on “fan only”) as they become clogged.
- Stay hydrated. Be aware of high heat if your home is not air conditioned.
- An N95 particulate mask may worn to protect from smoke and ash dust.

Helpful links:
- Oregon Smoke blog for the latest on fires and air quality across the state
- DEQ's Air Quality Index, for current air quality conditions
- Centers for Disease Control and Prevention tips for worker safety during fire clean-up

###
FOR IMMEDIATE RELEASE

CONTACT: [Name]
[County] County Health Department
Phone [(XXX) XXX-XXXX]
Email [email address]

Critical Information for Residents to Prepare Homes and Reduce Risks

[City, State] – County public health officials are encouraging residents to take precautions and prepare their homes for the next wildfire season. As this wildfire season ends, residents are urged to take steps to prevent damage before the next wildfire strikes.

Public health officials urge that the following precautions be taken throughout the year to reduce wildfire damage to homes and property:

- Build or restock your emergency kit.
- Install and test smoke and carbon monoxide detectors on every floor of your home.
- Clear leaves and other debris from gutters, eaves, porches, and decks to prevent embers from igniting your home.
- Remove dead vegetation within the 30-100 feet surrounding your home.
- Prune large trees on your property so the lowest branches are 6 to 10 feet off the ground.
- When planting, choose native and less-flammable plants that are slow-growing. Please them in areas where they can be more easily maintained.

Helpful links:

- Fire Adapted Communities provide steps to make your home safer: http://fireadapted.org/role/residents-and-homeowners.aspx?icid=home_rotator
- Firewise Communities/USA helps communities prepare for wildfires: http://www.firewise.org/information/who-is-this-for/homeowners.aspx
- U.S Fire Administration/FEMA safety outreach materials for wildfires

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Revised and updated on May 27, 2014
SOCIAL MEDIA MESSAGES FOR WILDFIRE RECOVERY

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In addition to the suggestions below, the Centers for Disease Control and Prevention’s @CDCReady and @CDCEmergency feeds can be retweeted as relevant information and links are tweeted.

Use #wildfire to get the latest wildfire info or check the Oregon Smoke blog for the latest information: http://oregonsmoke.blogspot.com/

Hazy air? Check DEQ’s Air Quality Index before heading out: http://www.deq.state.or.us/ataqi/index.aspx #wildfire

Drink lots of water. Keeping hydrated minimizes health impacts from #wildfires.

Is your family prepared for the next #wildfire season? Find out how to stay prepared. http://1.usa.gov/ZnLxuL #wildfire


Update or build your emergency kit. http://public.health.oregon.gov/Preparedness/Prepare/Pages/BuildAKit.aspx #wildfire

Facebook Posts

A benefit to posting on Facebook is that conversations can be had among fans (although this can require additional moderation).

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Wildfires are unpredictable and can quickly reignite and send smoke into Oregon communities. DEQ’s Air Quality Index (AQI) is a color-coded tool which shows air pollution levels. Green is good, yellow is moderate, orange is unhealthy for sensitive groups, and red is unhealthy for all groups. check the Oregon Smoke blog for the latest information: http://oregonsmoke.blogspot.com/
To protect yourself and your family from wildfire smoke, limit outdoor activities during times of poor air quality. Check the Oregon Smoke blog for the latest information: http://oregonsmoke.blogspot.com/

Hazy outside? Scratchy throat? People in smoky areas should drink lots of water. Keeping hydrated reduces the amount of smoke that can travel deep into your lungs. Check the Oregon Smoke blog for the latest information: http://oregonsmoke.blogspot.com/

For over 70,000 American communities wildfires are not a matter of if, but when. Do you live in a fire prone area? Talk to your neighbors, community and business leaders to find out what they are doing about wildfire preparation. Take responsibility for wildfire risk and become prepared today. To learn more visit http://www.fireadapted.org

After a disaster, such as a wildfire, you may feel sad, mad, guilty, or numb. This is a difficult time, but there are things you can do to help cope with the stress and stay healthy even during the cleanup time that follows. Visit http://emergency.cdc.gov/disasters/wildfires/afterfire.asp
Wildfire Smoke and Your Health

When smoke levels are high, even healthy people may have symptoms or health problems. **The best thing to do is to limit your exposure to smoke.** Depending on your situation, a combination of the strategies below may work best and give you the most protection from wildfire smoke. The more you do to limit your exposure to wildfire smoke, the more you’ll reduce your chances of having health effects.

- **Keep indoor air as clean as possible.** Keep windows and doors closed. Use a high-efficiency particulate air (HEPA) filter to reduce indoor air pollution. Avoid smoking tobacco, using wood-burning stoves or fireplaces, burning candles, incenses or vacuuming.
- **Listen to your body and contact your healthcare provider or 911 if you are experiencing health symptoms.**
- **If you have to spend time outside when the air quality is hazardous:** Do not rely on paper or dust masks for protection. N95 masks properly worn may offer some protection.
- **Stay informed:** The Oregon Smoke blog has information about air quality in your community: [oregonsmoke.blogspot.com](http://oregonsmoke.blogspot.com)
- **Reduce the amount of time spent outdoors.** Avoid vigorous outdoor activities.
- **Reduce the amount of time spent in the smoky area.**
- **Drink plenty of water.**
Frequently asked questions about wildfire smoke and public health

Wildfire smoke

Q: Why is wildfire smoke bad for my health?
A: Wildfire smoke is a mixture of gases and fine particles from burning trees and other plant material. The gases and fine particles can be dangerous if inhaled. In wildfires, carbon monoxide is mainly a risk to people (like firefighters) who work near smoldering areas. Smoke can irritate your eyes and your respiratory system, and worsen chronic heart and lung diseases. The amount and length of smoke exposure, as well as a person’s age and degree of susceptibility, play a role in determining if someone will experience smoke-related health problems. If you are experiencing serious medical problems for any reason, seek medical attention immediately.

Q: Why is everyone talking about particulate matter?
A: The particulate matter (also called “PM”) in wildfire smoke poses the biggest risk to the public’s health. The potential health effects vary based on the type of plants burning, atmospheric conditions and, most importantly, the size of the particles. Particles larger than 10 micrometers usually irritate only the eyes, nose and throat. Fine particles 2.5 micrometers or smaller (PM2.5) can be inhaled into the deepest part of the lungs, and may cause greater health concern.

Health effects of wildfire smoke

Q: Who is most likely to have health effects from wildfire smoke exposure?
A: Smoke may worsen symptoms for people who have pre-existing health conditions and those who are particularly sensitive to air pollution. Sensitive groups include:

- Persons with asthma or other chronic respiratory disease
- Persons with cardiovascular disease
- Persons ≥ 65 years of age
- Infants and children
- Pregnant woman
- Smokers, especially those who have smoked for several years
Q: How can I tell if wildfire smoke is affecting me or my family?
A: Wildfire smoke can cause the following:

- Watery or dry eyes
- Persistent cough, phlegm, wheeze, scratchy throat or irritated sinuses
- Headaches
- Shortness of breath, asthma attack or lung irritation
- Irregular heartbeat, chest pain or fatigue
- Nonfatal and fatal heart attacks

People with chronic heart disease or lung disease such as asthma and chronic obstructive pulmonary disease (COPD) may be more likely to have serious health effects from wildfire smoke.

Q: What should I do if I am having a health problem from smoke?
A: If you have a medical emergency from smoke, you should call 911 or go to the hospital emergency room immediately. Contact your healthcare provider for advice on how to prevent and treat symptoms from exposure to wildfire smoke.

Strategies to reduce smoke exposure

Q: How can I protect myself and my family from the harmful effects of smoke?
A: Limit your exposure to the smoke:

- Stay indoors whenever possible with the doors and windows closed.
- Avoid vacuuming, which can stir up dust.
- Reduce other sources of indoor air pollution such as smoke from tobacco, wood-burning stoves and burning candles.
- Use high-efficiency (HEPA) air-cleaning filters, if available.
- When driving in a vehicle, keep windows closed with air conditioning set to recirculate.
- Drink plenty of water to help reduce symptoms of scratchy throat and coughing.

Leaving the area of thick smoke may be best for those with health conditions that put them at higher risk for illness from wildfire smoke.

Q: What can I do to deal with eye irritation from wildfire smoke?
A: Wildfire smoke can cause burning, redness and tearing in the eyes. To relieve the symptoms, you can use over-the-counter artificial tear drops and drink enough water. Running a humidifier may also provide relief. Consult with a healthcare provider if symptoms last longer than several days. If you are in an area where there is a lot of ash or fine dust, consider wearing goggles.
Q: **Should I wear a dust mask or N95 respirator?**

A: N95 respirators are filter masks that fit over the nose and mouth. When properly fitted, an N95 respirator can filter 95% of smoke particles. However, N95 respirators do not filter toxic gases and vapors.

Most people will find it difficult to correctly use N95 respirators. It is important that the respirator fits properly and air does not leak around the sides. If it does not fit properly, the respirator will provide little if any protection, and may offer a false sense of security. Proper fit testing requires special equipment and training.

N95 respirators can make breathing more difficult and lead to increased breathing and heart rates. Respirator use by those with heart and respiratory diseases should only be done under a healthcare provider’s supervision.

Even healthy adults may find that the increased effort required for breathing makes it uncomfortable to wear a respirator for long periods of time. Decisions on whether to use respirators or masks as personal protection should be made on a case-by-case, day-to-day basis.

Q: **What is the difference between an N95 respirator and a dust mask?**

A: N95 respirators are tested and certified by the National Institute for Occupational Safety and Health (NIOSH) for use in certain work places. N95 respirators are tested to ensure they filter at least 95% of airborne particles. If an employer requires an employee to wear a respirator, the employee must be trained and fitted to wear a NIOSH-approved respirator. Voluntary use of respirators by employees does not eliminate all employer responsibilities under Oregon OSHA regulations.

Dust masks and surgical masks that are not NIOSH certified are not tested for filtration effectiveness and may not offer a consistent level of protection from particles. This means that they may offer little protection.

Q: **Will a wet towel or bandana provide any help?**

A: Probably not. A wet towel or bandana may stop large particles, but not the fine, small ones that can get down into the lungs. They will likely provide little protection.

Q: **What should I do about closing up my house when it is so hot in there?**

A: Make sure you don’t get overheated if you live without air conditioning and have the doors and windows closed. Consider visiting family members, neighbors or public buildings that have air conditioning and air filtration. Leaving the area of thick smoke may be best for those with health conditions that put them at higher risk for illness.
Q: I'll probably need to go out some time. Is there a time of day when smoke is less of a problem?

A: This varies depending on the fire and the conditions. Check the Department of Environmental Quality (DEQ) Air Quality Index. If there is an air quality monitor near you, the website can give you information about what time of day the smoke levels are lowest. The DEQ Air Quality Index can be found on the Oregon Smoke Blog: www.oregonsmoke.blogspot.com.

Q: What should I do if I must drive to work?

A. You can reduce smoke exposure by keeping the windows closed and using the air conditioner on the recirculate setting. This can reduce exposure to particles, but not to the toxic gases in wildfire smoke.

Q: Do air-purifying machines help remove smoke particles inside buildings?

A: Portable air cleaners with HEPA filters and/or electrostatic precipitators (ESP) can reduce indoor particle levels, but most are not effective at removing gases and odors. Air cleaners using ozone will not remove particles unless they also use HEPA filters and/or ESP technology. Also, humidifiers or dehumidifiers are not air cleaners and will not do much to reduce the amount of particles in the air during a smoke event.

Q: I operate a nonresidential building with outside air intakes. Should I close the outside air intakes during a wildfire smoke event?

A. Every nonresidential building has a uniquely designed ventilation system, and any changes, even temporary ones, can affect building occupants and indoor air quality. If your building is strictly an office environment, it may be wise to cut back or eliminate outside intake into the building during a wildfire smoke event. If the building has labs or special ventilation systems, it may not be wise to reduce outside air flow if ventilation is needed to prevent the build up of chemicals in the building. We recommend you consult with a heating, ventilation and air-conditioning professional or someone who knows your special ventilation needs for guidance on this issue.
More information

Q: Where can I find information about ongoing wildfires in Oregon?
A: The Oregon Smoke Blog has more information about wildfires in Oregon: www.oregonsmoke.blogspot.com.

Q: Where can I find information about air quality in my community?
A: Check the local air quality index (AQI) on the Oregon DEQ’s website: www.deq.state.or.us/aqi/index.aspx.

Q: Our community has an outdoor event scheduled for this evening. Should we cancel it?
A: It depends on the level of smoke exposure. Check with your local health department.

Q: Is climate change affecting wildfires?
A: Hotter, drier weather may increase the likelihood of bigger and more destructive wildfires. The total area burned, number of fires and size of the fires are all increasing across the western United States, including Oregon. It is not certain this is due to “climate change,” but it is happening. As forest fires increase, so does exposure to wildfire smoke.

Q: How does wildfire smoke affect pets and livestock?
A: The effects of smoke are similar for humans and animals. High levels of smoke may irritate your animal’s eyes and respiratory tract. Strategies to reduce animals’ exposure to smoke are also similar to those for humans: reduce the time spent in smoky areas, provide animals with plenty of water, limit activities that will increase breathing and reduce exposure to dust or other air pollutants. If your pet or livestock is coughing or having difficulty breathing, contact your veterinarian.

Q: How can wildfires affect drinking water quality?
A: Wildfires destroy plants that stabilize soil. By burning ground cover, fires also release chemicals such as nitrates and phosphates that affect water quality. Erosion and release of these chemicals into surface water can decrease the quality of drinking water. Nitrates and phosphates can also promote growth of harmful algae. Flame retardants used by firefighters may find a way to drinking water sources. Water suppliers can monitor the drinking water source upstream of the intake to determine if unhealthy chemicals are in the raw water. Public drinking water systems can take steps to protect drinking water quality by applying post-fire erosion control techniques in the watershed.

This document can be provided upon request in an alternate format for individuals with disabilities or in a language other than English for people with limited English skills. To request this publication in another format or language, contact the Public Health Division at 971-673-1222, 971-673-0372 for TTY.