# Disaster Preparedness Handbook

### An emergency planning and response guide

Personal Preparedness
Prevention
Terrorism
Biological Agents
In the Community
In the Home
Weather and Nature













This publication prepared jointly by





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### WASHINGTON MILITARY DEPARTMENT

**Emergency Management Division** Camp Murray, Washington 98430-5122

George Crawford Earthquake Program Manager

Barbara Thurman Public Education Program Manager

For more information, contact EMD at: 253-512-7000 or (800) 562-6108 Or visit our Web site at www.emd.wa.gov



### Communications Office

PO Box 47890 Olympia, Washington 98504-7890

For more information, contact DOH at: 360-236-4027 or (800) 525-0127 Or visit our Web site at www.doh.wa.gov

#### On the Web

This publication is available electronically in English and Spanish on the Department of Health's Web site at http://www.doh.wa.gov/phepr/factsheets.htm.

Many of the individual fact sheets are also available in Cambodian, Chinese, Korean, Russian and Vietnamese at the same Web address.

This publication also is available in English on the Emergency Management Division's Web site at www.emd.wa.gov.

#### **Other Formats**

For persons with disabilities, this document is available on request in other formats: 1-800-525-0127.

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## How to Use 9-1-1

Call 9-1-1 only to report a life-threatening situation requiring police, medical or fire emergency assistance. Do not call 9-1-1 unnecessarily. 9-1-1 lines must be kept open for people with true emergencies.

### When to call 9-1-1

- To get help for someone who is hurt. For example:
  - If someone is seriously injured.
  - If you see someone hurt in an accident.
- If you see someone acting suspiciously, stealing, or breaking into a home or building.
- If you smell smoke or see a fire.
- If you see people fighting and hurting each other.
- If you see someone being robbed or beaten.
- If you believe emergency assistance may be needed but are not sure, call
   9-1-1 and describe the situation.
- If you call 9-1-1 by accident, don't hang up. Explain what happened to the 9-1-1 call-taker.

### When not to call 9-1-1

- Never call 9-1-1 as a joke.
- Never call 9-1-1 to ask for information.
- Never call just to see if 9-1-1 is working.

### What to say when you call 9-1-1

- Tell the person what is wrong.
- Tell the person your name, address and telephone number.
- Do not hang up until they tell you that you should; they may have to ask you more questions.

### Teach your children the correct use of 9-1-1

Parents should use the information on this sheet to talk to children about how and when to use 9-1-1. Knowing the right thing to do can save lives.

### Keep phone lines clear during emergencies

During emergencies, telephone services become overloaded. You can help keep service available for those who need it most by making only calls that are critical. Limit fax machine and computer use as well; their use also ties up phone lines.



9-1-1

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## Preparing Your Household for Emergencies

After a disaster, you and your family should be prepared to be on your own for at least three days. Emergency response teams will be very busy and may not be able to provide immediate care to all who need it. Here is what you can do to protect yourself.

#### Before disaster strikes

- Choose a place for your family to meet after a disaster.
- Choose a person outside the immediate area for family members to contact in case you get separated. This person should live far enough away so he or she won't be involved in the same emergency.
- Know how to contact your children at their school or daycare, and how to pick them up after a disaster. Let the school know if someone else is authorized to pick them up. Keep your child's emergency release card up to date.
- Put together an emergency supply kit for your home and workplace. If your child's school or daycare stores personal emergency kits, make one for your child to keep there.
- Know where the nearest fire and police stations are.
- Learn your community's warning signals, what they sound like and what you should do when you hear them.
- Learn first aid and CPR. Have a first aid kit, a first aid manual and extra medicine for family members.
- Learn how to shut off your water, gas and electricity. Know where to find shut-off valves and switches.
- Keep a small amount of cash available. If the power is out, ATM machines won't work.
- If you have family members who don't speak English, prepare emergency cards in English with their names, addresses and information about medications or allergies. Make sure they can find their cards at all times.
- Conduct earthquake and fire drills every six months.

- Make copies of your vital records and store them in a safe deposit box in another city or state. Store the originals safely. Keep photos and videotapes of your home and valuables in your safe deposit box.
- Make sure family members know all the possible ways to get out of your home. Keep all exits clear.
- Make sure all family members agree on an emergency plan. Give emergency information to babysitters or other caregivers.

#### During an emergency or disaster

- Keep calm and take time to think. Give assistance where needed.
- Listen to your radio or television for official information and instructions.
- Use the telephone for emergency calls only.
- If you are ordered to evacuate, take your emergency kit and follow official directions to a safe place or temporary shelter.

### After the emergency or disaster is over

- Use caution in entering damaged buildings and homes.
- Stay away from damaged electrical wires and wet appliances.
- Check food and water supplies for contamination.
- Notify your relatives that you are safe, but don't tie up phone lines. They may be needed for emergency calls.
- If government disaster assistance is available, the news media will announce where to go to apply.



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## Checklist of Disaster Emergency Supplies

Government agencies will respond to community disasters, but citizens may be on their own for hours, even days, after disaster strikes. You should be prepared to take care of yourself and your family for at least three days.

#### **Emergency survival kit**

Store one of these at home, at work and at each child's school or daycare facility.

- Dry or canned food and drinking water for three days (for each person)
- Can opener
- First aid supplies and first aid book
- Copies of important documents (birth certificates, licenses, insurance policies, etc.)
- "Special needs" items for family members (infant formula, eye glasses, medications, etc.)
- A change of clothing
- □ Sleeping bag or blanket
- Battery powered radio or television
- □ Flashlight and extra batteries
- U Whistle
- U Waterproof matches
- Toys, books, puzzles, games
- Extra house keys and car keys
- List of contact names and phone numbers

### Additional items you can store at home for use during an emergency:

### **Cooking supplies**

- Barbecue, camp stove, chafing dish
- □ Fuel for cooking (charcoal, camp stove fuel, etc.)
- Plastic knives, forks, spoons
- Paper plates and cups
- Paper towels
- Heavy-duty aluminum foil

### Sanitation supplies

- Large plastic trash bags for trash, water protection
- Large trash cans
- Bar soap and liquid detergent
- Shampoo
- □ Toothpaste and toothbrushes
- Feminine and infant supplies
- **Toilet** paper
- Household bleach with no additives
- □ Newspaper to wrap garbage and waste

### Comfort

- Sturdy shoes
- Gloves for clearing debris
- Tent

### Tools

- Ax, shovel, broom
- Crescent wrench for turning off gas
- Screwdriver, pliers, hammer
- Coil of one-half inch rope
- Plastic tape and sheeting
- □ Knife or razor blades
- Garden hose for siphoning and fire fighting



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Developed by the Independent Living Resource Center, San Francisco, California



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## Disaster Tips for People with Visual Disabilities

The more you prepare for earthquakes or other disasters the more you will be able to protect yourself, your family and your belongings.

### Canes

- If you use a cane, keep extras in strategic, consistent and secured locations at work, home, school, volunteer site, etc., to help you maneuver around obstacles and hazards.
- Keep a spare cane in your emergency kit.

### Alternate mobility cues

- If you have some vision, place security lights in each room to light paths of travel. These lights plug into electric wall outlets and light up automatically if there is a loss of power. They will, depending on type, continue to operate automatically for 1 to 6 hours and can be turned off manually and used as a shortlasting flashlight.
- Store high-powered flashlights with wide beams and extra batteries.
- Plan for losing the auditory clues you usually rely on after a major disaster.
- Service animals may become confused, panicked, frightened or disoriented during and after a disaster. Keep them confined or securely leashed or harnessed. A leash/harness is an important item for managing a nervous or upset animal. Be prepared to use alternative ways to negotiate your environment.

### Label supplies

■ If helpful, mark emergency supplies with large print, fluorescent tape or Braille.

### Secure computers

Anchor special equipment and large pieces of furniture, such as computers and shelving. Create a computer back-up system for important data and store it off site.

### **Advocacy issues**

Advocate that TV news not only post important phone numbers, but also announce them slowly and repeat them frequently for people who cannot read the screen.



Developed by the Independent Living Resource Center, San Francisco, California

## Disaster Tips for the Hearing Impaired

This checklist will assist people who are deaf or hearing impaired to be prepared when disasters strike.

### Hearing aids

- Store hearing aid(s) in a strategic, consistent and secured location so they can be found and used after a disaster.
  - For example, consider storing them in a container by your bedside, which is attached to a nightstand or bedpost using a string or Velcro. Missing or damaged hearing aids will be difficult to replace or fix immediately after a major disaster.

### **Batteries**

- Store extra batteries for hearing aids and implants. If available, store an extra hearing aid with your emergency supplies.
- Maintain TTY batteries. Consult your manual for information.
- Store extra batteries for your TTY and light phone signaler. Check the owner's manual for proper battery maintenance.

### Communication

- Determine how you will communicate with emergency personnel if there is no interpreter or if you don't have your hearing aids. Store paper and pens for this purpose.
- Consider carrying a pre-printed copy of important messages with you, such as: "I speak American Sign Language (ASL) and need an ASL interpreter," "I do not write or read English," and "If you make announcements, I will need to have them written or signed."
- If possible, obtain a battery-operated television that has a decoder chip for access to signed or captioned emergency reports.

Determine which broadcasting systems will be accessible in terms of continuous news that will be captioned and/or signed. Advocate so that television stations have a plan to secure emergency interpreters for on-camera emergency duty.

### Alarms

Install both audible alarms and visual smoke alarms. At least one should be battery operated.

### Advocacy

- Recruit interpreters to be Red Cross emergency volunteers.
- Maintain advocacy for TV stations to broadcast all news and emergency information in open caption format.
- When you travel, ensure hotels have services for deaf and hearing-impaired persons, including audible alarms. Ask for them when you check in.



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Developed by a group of health care professionals through a grant from the American Red Cross Northern California Disaster Preparedness Network



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## Disaster Tips for People with Medical Needs

In a disaster, people with special medical needs have extra concerns. This information will help you and your family prepare for a disaster.

### Medications

- Always have at least a three-day supply of all your medications.
- Store your medications in one location in their original containers.
- Have a list of all of your medications: name of medication, dose, frequency, and the name of the prescribing doctor.

### **Medical supplies**

Have an extra three-day supply of any medical supplies you use, such as bandages, ostomy bags, or syringes.

### Electrically powered medical equipment

For all medical equipment requiring electrical power — beds, breathing equipment, or infusion pumps check with your medical supply company and get information regarding a back-up power source, such as a battery or generator.

### Oxygen and breathing equipment

- If you use oxygen, have an emergency supply (enough for at least a three-day period).
- Oxygen tanks should be securely braced so they do not fall over. Call your medical supply company regarding bracing instructions.
- If you use breathing equipment, have a three-day supply or more of tubing, solutions, medications, etc.

### Intravenous (IV) and feeding tube equipment

- Know if your infusion pump has battery back-up, and how long it would last in an emergency.
- Ask your home care provider about manual infusion techniques in case of a power outage.
- Have written operating instructions attached to all equipment.

### Emergency bag

- In the event that you have to leave your home, have a bag packed at all times that contains:
  - A medication list.
  - Medical supplies for at least three days.
  - Copies of vital medical papers such as insurance cards, power of attorney, etc.

### People who can help

- An important part of being prepared for a disaster is planning with family, friends and neighbors. Know who could walk to your home to assist you if other means of transportation are unavailable.
- Discuss your disaster plans with your home health care provider.
- Ask your local fire department if they keep a list of people with special medical needs; ask to be included if they do maintain a list.
- Keep a list handy of people who can help and their phone numbers.

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## Disaster Tips for People with Mobility Disabilities

The following information will assist people with mobility disabilities and will help make them more confident when disaster strikes.

### Storage

- Store emergency supplies in a pack or backpack attached to a walker, wheelchair, scooter, etc.
- Store needed mobility aids (canes, crutches, walkers, wheelchairs) close to you in a consistent, convenient and secured location. Keep extra aids in several locations, if possible.

### Emergency supply kit

- Keep a pair of heavy gloves in your supply kit to use while wheeling or making your way over glass or debris.
- If you use a motorized wheelchair or scooter, consider having an extra battery available. A car battery can be substituted for a wheelchair battery, but this type of battery will not last as long as a wheelchair's deep-cycle battery. Check with your vendor to see if you will be able to charge batteries by either connecting jumper cables to a vehicle battery or by connecting batteries to a specific type of converter that plugs into your vehicle's cigarette lighter in the event of loss of electricity.
- If your chair does not have punctureproof tires, keep a patch kit or can of "seal-in-air product" to repair flat tires, or keep an extra supply of inner tubes.
- Store a lightweight manual wheelchair, if available.
- Arrange and secure furniture and other items to provide paths of travel and barrier free passages.
- If you spend time above the first floor of a building with an elevator, plan and practice using alternative methods of evacuation. If needed, enlist the help of your personal support network.

- If you cannot use stairs, discuss lifting and carrying techniques that will work for you. There will be instances where wheelchair users will have to leave their chairs behind in order to safely evacuate a structure.
- Sometimes transporting someone down stairs is not a practical solution unless there are at least two or more strong people to control the chair. Therefore, it is very important to discuss the safest way to transport you if you need to be carried, and alert them to any areas of vulnerability. For example, the traditional "fire fighter's carry" may be hazardous for some people with respiratory weakness.
- You need to be able to give brief instructions regarding how to move you.



Children who experience an initial traumatic event before they are 11 years old are three times more likely to develop psychological symptoms than those who experience their first trauma as a teenager or later. Children are able to cope better with a traumatic event if parents and other adults support and help them with their experiences. Help should start as soon as possible after the event.



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## **Helping Children After a Disaster**

It's important to remember that some children may never show distress, while others may not give evidence of being upset for several weeks or even months. Other children may not show a change in behavior, but may still need your help.

### Children may exhibit the following behaviors after a disaster:

- Be upset over the loss of a favorite toy, blanket, etc., which is important to them.
- Change from being quiet, obedient and caring to loud, noisy and aggressive, or change from being outgoing to shy and afraid.
- Develop night-time fears (nightmares, fear of the dark or sleeping alone).
- Be afraid the event will reoccur.
- Become easily upset, crying and whining.
- Lose trust in adults. After all, their adults were not able to control the disaster.
- Revert to younger behavior (bed wetting, thumb sucking).
- Want to stay close to parents. Refuse to go to school or day care.
- Feel they caused the disaster because of something they said or did.
- Become afraid of wind, rain or sudden loud noises.
- Have symptoms of illness, such as headaches, vomiting or fever.
- Worry about where they and their family will live.

### Things parents can do to help their children:

- Talk with the children about how they are feeling. Assure them that it's OK to have those feelings.
- Help the children learn to use words that express their feelings, such as "happy," "sad," "angry," etc.
- Children should not be expected to be brave or tough. Tell them it's OK to cry.

- Don't give children more information than they can handle about the disaster.
- Assure fearful children you will be there to care for them; consistently reassure them.
- Go back to former routines as soon as possible. Maintain a regular schedule for the children.
- Reassure the children that the disaster was not their fault.
- Let the children have some control, such as choosing clothing or what meal to have for dinner.
- Re-establish contact with extended family.
- Help your children learn to trust adults again by keeping promises you make.
- Help your children regain faith in the future by making plans.
- Get needed health care as soon as possible.
- Spend extra time with the children at bedtime.
- Make sure the children eat healthy meals and get enough rest.
- Allow special privileges for a short period of time, such as leaving the light on when they go to bed.
- Find ways to emphasize to the children that you love them.
- Allow the children time to grieve losses.
- Develop positive anniversary activities to commemorate the event. These may bring tears, but they are also a time to celebrate survival and the ability to get back to a normal life.



Washington Poison Center toll-free hotline: 800-222-1222



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## **Accidental Poisoning**

Poisons can be found in everyday items located in all areas of your home – kitchen, closets, bathrooms, attic, garage, dining room, laundry room, storage areas and basements. To help prevent accidental poisoning, follow these poison prevention tips.

### **Poison Prevention Tips**

- Use child-resistant containers (but remember: child-resistant containers are not completely childproof).
- Keep potentially poisonous products in their original containers (see below for product list).
- Place potentially poisonous products out of reach immediately after use.
- Put *Mr. Yuk* stickers on all poisonous products in and around your home, and teach children what the stickers mean.
  - For more information on *Mr. Yuk*—or to order *Mr. Yuk* stickers—visit the Washington Poison Center's Web site at: www.wapc.org
- Keep emergency numbers (including the Washington Poison Center) next to your phone.

### Make sure these products are stored safely:

- Prescription and over-the-counter medications (including aspirin and vitamins).
- Disinfectants, deodorants and air fresheners.
- All kinds of sprays.
- Polishes and cleansing powder.
- Fertilizers and weed killers.
- Insect and rodent poison; slug bait.
- Paint remover and turpentine.
- Cosmetics.
- Soaps, detergents and shampoo.
- Toilet bowl and drain cleaners.
- Lye and bleach.
- Kerosene and lighter fluids.
- Insect repellent.
- Mothballs and pesticides.

Note: Special care should also be taken with house plants as many may be poisonous if eaten by humans or pets.

### What to do when someone is poisoned:

If it is a life-threatening emergency, call 9-1-1. If you suspect a possible poisoning or for more information on potential poisons—call the Washington Poison Center at 1–800-222-1222.

Be prepared to answer the following questions:

- What was taken? (Exact name of the product.) Bring product container to the phone if possible.
- When was it taken?
- How much was taken?
- Who took it? Body size makes a big difference in determining a poisonous dose.
- The name, condition, age and weight of the patient.
- Address and telephone number from where you are calling.

### About the Washington Poison Center

The **Washington Poison Center** is a 24-hour telephone service providing information and emergency response for poisonings. Staffed by nurses, pharmacists and poison information specialists — and supported by a board-certified clinical toxicologist — the center handles over 70,000 calls a year. To learn more, visit the center's Web site at **www.wapc.org** 



### **Preventing the Spread of Germs**

Here are some simple tips that will help keep respiratory infections and many other contageous diseases from spreading, especially during the cough, cold and "flu" season.

Respiratory infections affect the nose, throat and lungs; they include influenza (the "flu"), colds, pertussis (whooping cough) and severe acute respiratory syndrome (SARS). The germs (viruses and bacteria) that cause these infections are spread from person-to-person in droplets from the nose, throat and lungs of someone who is sick.

You can help stop the spread of these germs by practicing "respiratory etiquette," or good health manners. Cover your nose and mouth every time you sneeze, cough or blow your nose; put used tissues in the trash; wash your hands well and often whenever you or someone you are close to is sick. If you have a fever, cough or rash, clinics and hospitals may give you a face mask to wear in waiting areas and exam rooms, so be prepared.

Here are some tips to help prevent spreading your germs to others, and to avoid catching someone else's germs.

### Keep your germs to yourself:

- Cover your nose and mouth with a tissue when sneezing, coughing or blowing your nose.
- Throw out used tissues in the trash as soon as you can.
- Always wash your hands after sneezing, blowing your nose, or coughing, or after touching used tissues or handkerchiefs. Wash hands often if you are sick.
- Use warm water and soap or alcoholbased hand sanitizers to wash your hands.
- Try to stay home if you have a cough and fever.
- See your doctor as soon as you can if you have a cough and fever, and follow their instructions. Take medicine as prescribed and get lots of rest.

If asked to, use face masks provided in your doctor's office or clinic's waiting room; follow their instructions to help stop the spread of germs.

#### Keep the germs away:

- Wash your hands before eating, or touching your eyes, nose or mouth.
- Wash your hands after touching anyone else who is sneezing, coughing, blowing their nose, or whose nose is running.
- Don't share things like cigarettes, towels, lipstick, toys, or anything else that might be contaminated with respiratory germs.
- Don't share food, utensils or beverage containers with others.



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## **About Terrorism**

Terrorists look for visible targets where they can avoid detection before or after an attack, such as international airports, large cities, major public events, resorts, and high-profile landmarks. Preparing for terrorism is critical, just as for other types of disasters.

- Be aware of your surroundings.
- If you see what appears to be a dangerous situation, call 9-1-1 and explain your concerns to a call-taker. The call-taker will help determine what actions should be taken.
- Take precautions when traveling. Be aware of conspicuous or unusual behavior. Do not accept packages from strangers. Do not leave your luggage unattended.
- Learn where emergency exits are located, and how to quickly evacuate a building, transportation corridor, or congested public area.
- Stay clear of heavy or breakable objects that could move, fall or break in an explosion.

### Prepare for building explosion

The use of explosives by terrorists can result in collapsed buildings and fires. People who live or work in a multi-level building should follow these guidelines.

- Know the emergency evacuation procedures that are in place.
- Know where the fire exits are located, and be able to find them in the dark.
- Keep fire extinguishers in working order. Know where they are located and know how to use them.
- Learn first aid and CPR.
- Keep and maintain a disaster supply kit on each floor of the building.

### If an explosion occurs

- Immediately get under a sturdy table or desk if things are falling around you.
- Heavy smoke and poisonous gases collect first along the ceiling. Stay below the smoke at all times.

### If trapped in debris

If you have a flashlight, use it to help rescuers locate you.

- Stay in your area so that you don't kick up dust.
- Cover your mouth with a handkerchief or clothing.
- Tap on a pipe or wall so that rescuers can locate you. Use a whistle if one is available. Shout only as a last resort

   shouting can cause a person to inhale dangerous amounts of dust.

### If there is a fire, observe these procedures

- Stay low to the floor and exit the building as quickly and calmly as possible.
- Cover your nose and mouth with a wet cloth, if possible.
- Test closed doors for heat with the palm of your hand and forearm on the lower and upper portions of the door. If it is not hot, brace yourself against the door and open it slowly. If it is hot or warm to the touch, do not open the door. Seek an alternate escape route.

### **Biological agents**

- Biological agents are organisms or toxins that may harm people, livestock or crops. Because biological agents cannot necessarily be detected and may take time to grow and cause disease, it is almost impossible to know that a biological attack has occurred.
- If the government were to become aware of a biological attack through an informant or warning by terrorists, they would most likely instruct people to either seek shelter where they are and seal the premises (shelter-in-place), or evacuate immediately.
- A person affected by a biological agent requires the immediate attention of professional medical personnel. Some agents are contagious, and victims may need to be quarantined. Also, some medical facilities may not be receiving victims for fear of contaminating the hospital population.



9-1-1

More information on bio-

terrorism preparedness

and response is available

on the Web from the

**Centers for Disease** 

**Control and Prevention** 

at www.bt.cdc.gov

This information was

taken from the Federal

**Emergency Management** 

Administration's fact

sheet, "Terrorism."

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## **Shelter-in-Place**



Chemical agents are poisonous gases, liquids, or solids that have toxic effects on people, animals and plants. Most chemical agents cause serious injuries or death. Severity of injury depends on the type and amount of the chemical agent used, and the duration of exposure.

Were a chemical agent attack to occur, authorities would instruct people to either seek shelter where they are and seal the premises (shelter-in-place), or evacuate immediately. If the order is to remain in your home, office or school, you will need to follow these directions for "shelter-in-place."





Close all windows and doors.



■ Turn off ventilation systems (heating and air-conditioning, fireplace dampers, etc.).



Go into a room with the fewest doors and windows and seal the room.

### How to shelter-in-place

- Dampen towels and place over the crack under the door.
- Cut plastic sheeting to fit over the windows and vents. Secure the plastic with duct tape.
- Tape around the door.
- Turn on the radio.
- Don't ventilate (air out) or leave your sealed shelter until you are told to do so.

### Remember

- If ordered to evacuate, do so immediately and carefully follow directions. Do not wander about; know where you are going and how to get there.
- Avoiding chemical exposure should be your primary goal. Leaving your sheltered area to rescue or assist victims can be a deadly decision.



- Stay in the room until told by the authorities that it is safe to come out.
- In a chemical emergency, there is very little an untrained volunteer can do to help victims. Stay in your sheltered area until authorities determine it is safe to come out.
- If you were outside before taking shelter and think you may have been exposed to a chemical agent, there are several things you can do. If you are in a sealed shelter, take off at least your outer clothes, put them in a plastic bag and seal the bag. If water is available, wash or take a cool to warm (not hot) shower, using lots of soap and water. Do not put the soap in your eyes, just lots of water. If you leave the area, tell emergency responders or medical staff at your destination you may have been exposed. Tell the emergency responders about the sealed bag so that they can arrange for its safe removal after the emergency.
- If you have symptoms of exposure, call 9-1-1 immediately and follow their instructions.



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## **Bomb Threats**

Bomb threats are usually received by telephone, but they may also be received by note, letter or email. All bomb threats should be taken very seriously and handled as though an explosive were in the building.

Your place of employment should have a plan in place instructing what to do when a bomb threat is received.

- If you receive a bomb threat, get as much information from the caller as possible.
- Take good notes when talking to the person on the telephone. Keep the caller on the line, and write down everything that is said.
- Be aware of background noise, special voice characteristics, music, machinery, etc.
- If you are at work, have a coworker call 9-1-1 and building security immediately. Plan how you are going to alert your coworker.

- If you receive a bomb threat, do not touch any suspicious packages.
- Clear the area around the suspicious package, and notify police immediately.
- While evacuating a building, avoid standing in front of windows or other potentially hazardous areas.
- Do not restrict sidewalks or other areas used by emergency officials.
- If you find a bomb, don't touch it or attempt to move it. Call for help and evacuate the area immediately.

			Bomb Th	reat Checklist
Exact time	of call:			
Exact word	s of caller:			
QUESTIO	NS TO ASI	K:		
1. When is	the bomb	going to exp	olode?	
2. Where i	s the bomb	?		
3. What do	bes it look l	ike?		
4. What ki	nd of bomb	o is it?		
5. What w	ill cause it t	to explode?		
-	-			
8. Where a	are you call	ing from? _		
	-	-		
	•			
	-			
CALLER'S Calm			<b>at apply</b> ) Slurred	If voice is familiar, whom did it sound like?
Stutter	01011	Crying Loud	0101100	If voice is faithfait, whom did it sound likes
Giggling	-			Were there any background noises?
	Nasal	Lisp	-	were mere any background noises?
Disguised	Sincere	Squeaky	Normal	
Remarks				
	-			
renepitone i				



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## **Chemical Agents**



Chemical warfare agents are gases, liquids, or solids that can poison people, animals, and plants. Chemical warfare agents can cause injuries and death. How serious the injuries are depends on the type of chemical, the amount, and the length of exposure.

### What are chemical agents?

The main chemical warfare agents are sulfur mustard (mustard gas) and nerve agents such as Sarin and VX. These agents are typically released as a vapor or liquid. During a chemical attack, the greatest danger would come from breathing the vapors. If a large amount of chemical were released as an aerosol, people's skin might be exposed to the agent as droplets.

### Sulfur mustard: symptoms and treatment

- Sulfur mustard can cause skin to become red and irritated. Larger amounts will make the skin blister.
- Sulfur mustard can damage your eyes causing irritation, redness and swelling of the lids.
- Breathing in sulfur mustard can cause throat irritation, sinus pain and coughing. Breathing in large amounts will damage the lungs.
- If you are exposed to sulfur mustard, it may take four to eight hours before you feel symptoms. However, after a relatively small exposure, symptoms may take up to 24 hours to develop.
- Medical staff can treat you with soothing lotions, eye drops and pain medication. If infections develop, you may be given antibiotics.

### Nerve agents: symptoms and treatment

- A small amount of vapor can make pupils smaller, dim or blur vision, and cause eye pain, a runny nose or shortness of breath.
- Moderate amounts of vapor can cause muscle weakness, nausea, vomiting and diarrhea.
- Exposure to large amounts of vapor can cause interruption of breathing, muscle weakness, loss of consciousness, convulsions and death.
- Effects usually appear seconds to minutes after breathing the vapor of a nerve agent.
- Exposure to small amounts of vapor may cause only smaller than normal pupils and may take an hour to appear.

If you are exposed to a large amount of a nerve agent and have a runny nose, difficulty breathing, or nausea and vomiting, you may be treated with the medicines *atropine* or *pralidoxime* 

### What you should do if there is a chemical attack

- If there is a chemical attack, authorities will tell you either to evacuate the area immediately, or to seek shelter. See "How to shelter-in-place" below.
- If you have symptoms of exposure, call 9-1-1 immediately.
- If you were outside before taking shelter and think you may have been exposed to a chemical agent:
  - Take off your outer clothes, put them in a plastic bag and seal the bag. Tell emergency staff about the sealed bag so that they can remove it safely.
  - Wash or take a cool shower (do not use hot water). Use lots of soap. Do not put soap in your eyes.
  - If you leave the area, tell emergency or medical staff at your new location that you may have been exposed.

### How to "shelter-in-place"

- Stay indoors.
- Close all windows and doors.
- Turn off heating and air-conditioning; close all vents and fireplace dampers.
- Go to the room with the fewest doors and windows.
- Dampen towels and place them over the crack at the bottom of each door in the room. Tape around the doors.
- Cut plastic sheeting to fit over the windows and vents. Tape the plastic in place with duct tape.
- Turn on the radio.
- Don't air out or leave your sealed shelter until you are told to do so. Leaving your shelter to rescue or help victims can be a deadly decision. There is nothing an untrained person can do that would help the victim of a chemical attack.



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## **Radioactive** Materials

One possible source of radiation exposure is a "dirty bomb." A dirty bomb is a small explosive device packaged with radioactive materials. The explosion of this type of bomb is more dangerous than the radioactive materials it might spread. During any event that releases radiation, your best protection is to follow the recommendations of authorities.

### Stay inside

Stay inside your home or office unless instructed by authorities to leave. Close the windows, turn off the heating or airconditioning and stay near the center of the building. Once the initial blast is over, radioactive materials can be spread in the smoke and debris in the air. By staying inside you will reduce any potential exposure to airborne radioactive material. If there is a basement, go there.

### Listen to the radio

■ When you learn that radioactive materials have been released in an area near you either accidentally or intentionally—tune your radio to the emergency broadcasting network for instructions. Government agencies will let you know how to protect yourself. Keep a battery-powered radio handy in case electrical power goes out in your area.

### **Follow instructions**

The best way to avoid exposure to radiation is to do what experts advise. If told to evacuate, do so promptly. Take items you will need for an extended absence, such as prescription medicines and clothing. Listen for news about the location of the radioactive cloud. Even if it has already passed, radioactive contamination may have fallen on the ground and experts will recommend the best ways to safely leave the area.

### If you suspect you are contaminated

If you believe you have been exposed to radioactive materials, you should carefully remove and your outer layer of clothing and put it in a plastic bag; then take a warm shower to rinse off any radioactive materials. Place the sealed bag in a room away from people.

### Seek help if needed

 Special assistance centers will be set up as soon as possible. If this hasn't happened yet, go to a police or fire station located outside of the affected area.
 If you were near the explosion or believe you were in the path of the cloud, tell the staff at the assistance center.

### Watch what you eat

 Avoid drinking fresh milk or eating fruits and vegetables grown in the affected area. Wait until the Department of Health announces that produce and dairy products are safe to eat and drink.
 Milk, fruit and vegetables are okay to eat if they were bought or picked before the radiation was released and were stored indoors. Food stored in cans or bags is also safe to eat. Be sure to thoroughly rinse off containers before opening.



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### Anthrax





Camp Murray, WA 98430-5122

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Web site: www.doh.wa.gov 360-236-4027; (800) 525-0127

### What is anthrax?

 Anthrax is a rare disease caused by a bacterium, which is capable of forming spores that can survive in the environment for long periods of time. Anthrax most commonly occurs in animals, such as cattle, pigs, sheep and goats. Anthrax infection can occur in three forms: cutaneous (skin), inhalational (lung), and gastrointestinal (stomach and intestines). In an intentional exposure, such as a bioterrorism event, breathing in the spores is the most likely route of exposure that might lead to a serious infection.

### How is anthrax spread? What are the symptoms?

- You can get anthrax by handling infected animals or other materials containing anthrax spores, eating infected meat or breathing in spores. The bacteria are resistant to drying and can remain alive for long periods of time. The disease is NOT passed from person to person. Symptoms depend on how a person is exposed to the disease, and usually occur within one to seven days after exposure, but can take as long as 60 days to develop.
- Inhalational anthrax (through the lungs) is the most serious type of anthrax and is caused by inhaling anthrax bacteria into the lungs. Initial symptoms may resemble those of flu or a common cold, such as fever, cough, headache, chills, weakness, difficulty breathing and chest discomfort. After several days, the symptoms may progress to severe breathing problems and shock. This type of anthrax infection is often fatal if not treated promptly.
- Cutaneous anthrax (through cuts in the skin) is caused when anthrax bacteria make direct contact with skin that has a cut or break in it. Initial symptoms include an itchy bump. Later stage symptoms include a small blister, which evolves into a painless sore with a black center. Lymph glands in the infected area may also swell.

■ Gastrointestinal anthrax (stomach and intestines) is caused by the ingestion of anthrax bacteria. It is characterized by an acute inflammation of the intestinal tract. Initial symptoms include nausea, vomiting, loss of appetite, and fever, followed by abdominal pain, vomiting of blood, and severe diarrhea.

### Recognizing possible anthrax contamination

- If you have symptoms, consult a health care provider. If you believe you have been intentionally exposed to anthrax, you should contact law enforcement officials immediately.
- If you receive a letter or package that may contain anthrax:
  - Set the package down gently and leave it undisturbed to avoid release of spores into the air.
  - Immediately wash your hands thoroughly with soap and warm water.
  - Call 9-1-1 to report the incident. Follow the instructions of the 9-1-1 operators until help arrives.
  - Remember: Do not handle the package further unless necessary.

### **Treatment for anthrax**

Antibiotics can be used to prevent or treat an infection in persons exposed to anthrax. All forms of the disease need to be treated promptly. Since anthrax is not spread from person to person, there is no need to immunize or treat contacts of persons ill with anthrax, such as household members, friends, or coworkers, unless they also were exposed to the same source of infection. An anthrax vaccine also can prevent infection, but it is currently not available for the public. Antibiotics should be used to prevent or treat anthrax only under the direction of your health care provider or local health department.

### Botulism





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### What is botulism?

Botulism is a rare, muscle-paralyzing disease caused by a toxin made by *Clostridium botulinum (C. botulinum)*, a bacteria found naturally in the soil. There are three main types of botulism: *foodborne, infant,* and *wound*. Botulism toxin could be used as a biological weapon because it can be breathed in or swallowed.

### How is botulism spread? What are the symptoms?

- You can get botulism from eating contaminated food or when a wound is contaminated by the bacteria. The disease is NOT spread from person to person. The symptoms of botulism appear within a few hours to several days after exposure to the toxin, depending on how much toxin a person has been exposed to.
- Regardless of how the toxin enters the body, the results are the same. As the disease progresses, symptoms may include double or blurred vision, drooping eyelids, slurred speech, difficulty swallowing, dry mouth, and muscle weakness (starts with shoulders and descends through body). Finally, breathing muscles may be paralyzed causing death unless mechanical breathing assistance is available.
  - Foodborne botulism occurs when a person eats food contaminated with the toxin-producing bacteria. This usually results from poor home-canning techniques. The first symptoms may include nausea and vomiting. Foodborne botulism can occur in all age groups, and is a public health emergency because the source of the contaminated food must be identified as quickly as possible to prevent others from becoming ill.
  - Infant botulism occurs in a small number of infants each year who have *C. botulinum* bacteria in their intestinal tract.

• Wound botulism occurs when wounds are infected with *C. botulinum*, for example, when a wound is contaminated during an outdoor injury by contact with contaminated soil. The bacteria can only infect damaged skin.

#### **Preventive measures**

- If you have symptoms, please consult a healthcare provider as soon as possible. If you believe you have been ntentionally exposed to botulism, you should contact law enforcement officials immediately.
- There is no vaccine to prevent botulism. You can reduce risk of exposure by following safe food handling and cooking practices and by keeping wounds or cuts clean and properly bandaged.

### **Treatment for botulism**

Immediate treatment is essential. The Centers for Disease Control and Prevention maintains a supply of antitoxin to treat botulism. This antitoxin can only be obtained by healthcare providers from health departments when botulism is suspected or confirmed. The antitoxin reduces the severity of symptoms if it is given early in the course of the disease. Most patients eventually recover.

## **Pneumonic Plague**



### What is plague?

Plague is an uncommon infectious disease of animals and humans caused by *Yersinia pestis* (*Y. pestis*) bacteria. *Y. pestis* is present in wild rodents and their fleas in many areas around the world, including most of the western United States. The disease can be treated with antibiotics.

### **Types of plague**

Plague can be transmitted and cause illness in one or more of these forms:

- When the *Y. pestis* bacteria enters the body through the bite of an infected flea or through a cut or break in the skin, the resulting disease is called **bubonic plague**. "Bubos" are swollen painful lymph nodes. Bubonic plague is the most common form of the disease and untreated it may progress to *septicemic* plague (see below).
- When Y. pestis bacteria accumulate in the bloodstream, septic shock occurs and the resulting disease is called septicemic plague.
- When *Y. pestis* bacteria are inhaled, they lodge in the lungs and the resulting disease is called **pneumonic plague**. Pneumonic plague is of particular concern because it can be spread from person to person.

### How is pneumonic plague spread? What are the symptoms?

Pneumonic plague occurs when the *Y. pestis* bacterium is inhaled. The disease may be spread through face-to-face contact when an infected person coughs or sneezes. Because it enters the body by being inhaled, pneumonic plague could be spread intentionally if the bacteria were put into aerosol form.

The symptoms of pneumonic plague begin one to four days after exposure to the bacteria. The symptoms include fever, headache, weakness and a bloody or watery cough due to infection of the lungs (pneumonia). The pneumonia rapidly becomes worse and — without early treatment — it can be fatal.

### **Preventive measures**

If you have symptoms, consult a health care provider as soon as possible. If you believe you have been intentionally exposed to pneumonic plague, you should contact law enforcement officials immediately.

There is no vaccine against pneumonic plague. Antibiotics are used to prevent illness in those who have been exposed to pneumonic plague.

### Treatment for pneumonic plague

Early treatment with appropriate antibiotics is essential because untreated plague especially the pneumonic form — is almost always fatal. You should use antibiotics to prevent or treat plague only under the direction of your health care provider or local health department.



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### **Smallpox**





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### What is smallpox?

- Smallpox is a severe viral infection caused by the variola virus. Smallpox infection was eliminated from the world in the late 1970s. The last human case occurred in 1978. However, because the security of the virus is uncertain, there is a remote risk that smallpox could be used as a weapon.
- Routine vaccination against smallpox in the United States ended in 1972, because the risk associated with the vaccine was greater than the risk of getting the disease. However, in 2003, some members of the military, public health and health care workforce were vaccinated against smallpox as part of bioterrorism preparedness.

### How is smallpox spread? What are the symptoms?

- Smallpox is extremely infectious and is spread from one person to another by infected saliva droplets. Exposure may come from face-to-face contact, airborne spread (coughing or sneezing), or through direct contact with contaminated materials. People with smallpox are most infectious during the first week of illness because that is when the largest amount of virus is present in saliva. However, some risk of transmission lasts until all scabs have fallen off.
- The incubation period for the disease ranges from about seven to 17 days following exposure. Initial symptoms include high fever, fatigue, headache, and backache. A characteristic rash, most prominent on the face, arms and legs, follows in two to three days. The rash starts with flat red lesions that evolve at the same rate. Lesions become pus-filled and begin to crust early in the second week. Scabs develop, and then separate and fall off after about three to four weeks. The majority of patients with smallpox recover, but death occurs in up to 30 percent of cases.

### **Preventive measures**

If you have symptoms, consult a health care provider as soon as possible. There is no evidence of increased risk of smallpox outbreak or bioterrorism attack using smallpox, but the United States does maintain an emergency supply of smallpox vaccine. The vaccine is not currently available to the public because it presents a significant risk of severe side effects.

### Treatment for smallpox

- There is no proven treatment for smallpox, but research to evaluate new antiviral agents is ongoing. Patients with smallpox can benefit from supportive therapy (intravenous fluids, medicine to control fever or pain, etc.), and antibiotics for any secondary bacterial infections.
- If the vaccine is given to a person within four days of exposure to smallpox, it may lessen the severity of or possibly prevent illness. Vaccine against smallpox contains a live virus called vaccinia; it does not contain the smallpox virus.
- The vaccine is stored and distributed by the Centers for Disease Control and Prevention through the Strategic National Stockpile of pharmaceutical supplies. In the event smallpox is used as a weapon, the distribution of vaccine would be coordinated by the Centers for Disease Control and Prevention and the state and local departments of health.

### Tularemia



### What is tularemia?

Tularemia is an infection caused by the bacteria *Francisella tularensis* that can affect animals and humans. About 200 cases of human tularemia are reported each year in the United States. Bites from infected ticks and the handling of infected rabbits are responsible for most tularemia cases in the United States. If tularemia were to be released intentionally, as in a bioterror event, the bacteria would most likely be released into the air to be breathed in.

### How is tularemia spread? What are the symptoms?

- You can get tularemia by handling infected animals, by eating or drinking contaminated food or water or by inhaling contaminated dusts or sprays. Tularemia is NOT spread from person to person.
- Depending on the type of exposure tularemia can occur in several forms:
  - *Infection of the lungs (pneumonic)* the most common form after inhaling the bacteria through contaminated dusts or aerosols.
  - Enlargement of lymph glands in the neck and inflammation of the throat occurs most commonly after ingesting contaminated food or water.
  - Swollen lymph glands with or without a skin ulcer - can occur after handling contaminated materials or being bitten by infected flies or ticks.
- All forms of the disease are accompanied by flu-like symptoms, such as fever, chills, headaches, body aches, and weakness that usually occur three to five days after exposure to the bacteria. A person with pneumonia can develop chest pain, difficulty breathing and respiratory failure.

#### **Preventive measures**

- If you have symptoms, please consult a healthcare provider as soon as possible.
   If you believe you have been intentionally exposed to tularemia, you should contact law enforcement officials immediately.
- In the event of exposure to tularemia, antibiotic treatment to prevent infection (prophylaxis) may be recommended. Currently there is no vaccine available for general use.

### **Treatment for tularemia**

Early treatment of tularemia with appropriate antibiotics is essential. Antibiotics should be used to prevent or treat tularemia only under the direction your health care provider or local health department.



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More information and educational resources concerning methamphetamine and meth labs can be found on the Washington State Department of Health's Clandestine Drug Lab Web site at www.doh.wa.gov/ehp/ts/ cdl.htm



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## **Methamphetamine Labs**

Methamphetamine, also known as "crank" or "speed," is an addictive and powerful illegal drug. The manufacture of methamphetamine in illegal "meth labs" is particularly dangerous.

### What is an illegal lab?

An illegal meth or crank lab is one that is set up to produce the illegal drug methamphetamine. Meth labs have been found in many locations including houses, apartments, garages, motel units and vehicles. A number of dangerous chemicals including solvents, metals, salts and corrosives are used to make methamphetamine. During the drug manufacturing process (cooking), additional dangerous compounds and by-products are produced. The fumes, vapors, residues and spillage associated with cooking can be toxic.

### Possible health effects

- The risk of injury from chemical exposure depends on the chemical itself, the concentration, the quantity, and the length and type of exposure. Chemicals may enter the body by being breathed, eaten, injected (by a contaminated needle or accidental skin prick), or absorbed by the skin.
- Exposure to the high levels of contaminants found in methamphetamine labs can cause shortness of breath, cough, chest pain, dizziness, lack of coordination, chemical irritation, burns to the skin, eyes, mouth and nose, and in severe cases, death.
- Even brief exposure can produce symptoms such as headache, nausea, dizziness, and fatigue or lethargy.
- Solvents. Exposure to solvents can irritate the skin, mucous membranes and respiratory tract, and harm the central nervous system. Solvents are also dangerous because they are flammable and can be explosive.
- Waste and residues. Chemical and methamphetamine residues can contaminate buildings, household furnishings and the environment. When unused portions of the chemicals and by-products are dumped on the ground

or washed down sinks and toilets and into streams, these toxic wastes can kill vegetation, ruin plumbing and septic tanks and contaminate groundwater. Methamphetamine production can leave residue on ceilings, walls, heating systems, household fixtures and personal items.

■ Entering a former meth lab. The site of a former meth lab is contaminated. Before you enter a contaminated site, you must contact the local health department for approval and take all necessary precautions.

### Reporting a suspected meth lab

If you observe suspicious activity indicating the presence of a meth lab, report it immediately to your local law enforcement or the Anonymous Meth Hotline at 1-888-609-6384. Signs that a meth lab may be in operation include:

- Windows that are always covered.
- Frequent visitors at all hours.
- Frequent visitors that stay for only 5-10 minutes.
- Chemical odors.
- Excessive garbage specific to making meth.



## **Household Fires**

Fires in homes are most often caused by cooking accidents, smoking and unsafe use of woodstoves or space heaters. Here are some things you can do to avoid a home fire or protect yourself during a fire.

### **Protecting against fires**

- Install smoke detectors in or near all sleeping areas and on every level of your home, including the basement. Check smoke detectors on a regular basis and replace the batteries twice yearly.
- Have A-B-C type fire extinguishers. Teach family members how to use them.
- Know the location of all exits including windows. If you live in an apartment, count the number of doorways between your apartment and the two nearest exits.
- Know two ways out of every room in case smoke or flames block your primary exit.
- Choose a meeting place outside the home, and be sure all family members are accounted for. If someone is missing, let the fire department know.
- Have an escape plan and practice it with your family. This will help ensure you can get out quickly when there is no time for mistakes.
- Keep folding or chain style ladders stored in each upstairs bedroom.
- Use alternative heat sources, such as woodstoves or space heaters, safely:
  - Never use gas ovens, gas ranges, barbecues, or most portable or propane heaters for indoor heating.
  - Have fire-fighting materials available: dry powder, fire extinguisher, heavy tarp or blanket, and water.
  - Before using an alternative heat source, read the manufacturer's instructions.
- Do not smoke in the bedroom, on the couch or anywhere you might fall asleep while smoking.
- Sleep with your bedroom door closed.
- Make sure your house number is clearly visible from the street and that fire trucks can reach your home.

### If fire strikes

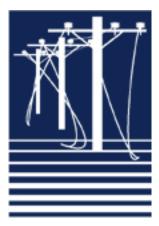
- If there is a fire evacuate. Do not go back inside. Call 9-1-1 from a neighbor's house.
- Never use water on an electrical fire.
- Smother oil and grease fires in the kitchen with baking soda or salt, or put a lid over the flame if it is burning in a pan.
- If caught in smoke drop to your hands and knees and crawl; breathe shallowly through your nose and use your blouse, shirt or jacket as a filter.
- If you must move through flames hold your breath, move quickly, cover your head and hair, keep your head down and close your eyes as much as possible.
- If your clothes catch fire, "stop, drop and roll" until the fire is out.
- If you are in a room and cannot escape, leave the door closed, stay low to the floor and hang a white or light-colored sheet outside the window.



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### **Power Outages**

Power outages can cause a number of safety concerns. Knowing the following information can help.

### Before a power outage

- Register life-sustaining and medical equipment with your utility company.
- Consider buying a generator. When installing a generator, follow the instructions carefully. Keep your generator outside and run a cord inside. Don't connect your generator to main service panels—it's dangerous!
- Make sure your disaster preparedness kit contains light sticks, flashlights, a batterypowered radio with extra batteries, and a wind-up clock.
- Have a corded telephone available — cordless phones will not work when the power is out.
- Have an alternative heat source and supply of fuel.
- If you own an electric garage door opener, know how to open the door without power.

### During a power outage

- Turn off lights and electrical appliances except for the refrigerator and freezer. Even if it is dark, turn light switches and buttons on lamps or appliances to the "off" position.
- Unplug computers and other sensitive equipment to protect them from possible surges when the power is restored.
- Leave one lamp on so you will know when power is restored. Wait at least 15 minutes after power is restored before turning on other appliances.
- Conserve water, especially if you use well water.
- Never use gas ovens, gas ranges, barbecues or portable or propane heaters for indoor heating—they use oxygen and create carbon monoxide that can cause suffocation.

- Candles can cause a fire. It's far better to use battery-operated flashlights or glow sticks for lighting.
- Using a kerosene heater, gas lantern or stove inside the house can be dangerous. Maintain proper ventilation at all times to avoid a build up of toxic fumes.
- Stay away from downed power lines and sagging trees with broken limbs.

### Keep food safe

- Use and store food carefully to prevent food-borne illness when power outages make refrigeration unavailable.
- Use foods first that can spoil most rapidly.
- Keep doors to refrigerators and freezers closed. Your refrigerator's freezer will keep food frozen for up to a day. A separate fully-loaded freezer will keep food frozen for two days.
- Use an ice chest packed with ice or snow to keep food cold. Buy dry ice to save frozen food. Do not handle dry ice with your bare hands. Use blocks or bags of ice to save refrigerator foods.
- Use caution if storing food outside during winter to keep it cold. The outside temperature varies, especially in the sun. Frozen food may thaw and refrigerator food may become warm enough to grow bacteria. Food stored outside must be secured from contamination by animals.
- If in doubt, throw it out. Throw out meat, seafood, dairy products and cooked food that does not feel cold.
- Never taste suspect food. Even if food looks and smells fine, illness-causing bacteria may be present.



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## **Purifying Household Water**

The treatments described below work only in situations where the water is unsafe because of the presence of bacteria. If you suspect the water is unsafe because of chemicals, oils, poisonous substances, sewage, etc., do not use the water for drinking.

### Storing water safely

- Store one gallon of water per person per day.
- Store at least a three-day supply of water per person.
- Collect the water from a safe supply,
- Store water in thoroughly washed plastic, fiberglass or metal containers that are lined with enamel.
- Never reuse a container that contained toxic materials such as pesticides, solvents, chemicals, oil, antifreeze, etc.
- Plastic containers such as soft drink bottles are best. You can also purchase food-grade plastic buckets or drums.
- Seal water containers tightly, label with date, and store in a cool, dark place.
- Replace water every six months.

### Water purification

There are two primary ways of treating water: boiling and adding bleach. If the supply has been made unsafe because of untreated surface water (from floods, streams or lakes), boiling is the best method.

Cloudy water should be filtered before boiling or adding bleach.

Filter water using coffee filters, paper towels, cheese cloth, or a cotton plug in a funnel.

### Boiling

- Boiling is the safest method of purifying water.
- Bring the water to a rolling boil for 3-5 minutes.
- Let the water cool before drinking.

### Purifying by adding liquid chlorine bleach

- If boiling is not possible, water can be made safe for drinking by treating with liquid household chlorine bleach, such as Clorox, Purex, etc. Household bleach is typically between 5 percent and 6 percent chlorine. Avoid using bleaches that contain perfumes, dyes, and other additives. Be sure to read the label.
- Place the water (filtered, if necessary) in a clean container. Add the amount of bleach according to the table below. Mix thoroughly and allow to stand for at least 30 minutes before using (60 minutes if the water is cloudy or very cold).
- Purifying tablets or chemicals designed for use when camping or backpacking can also be an effective way to treat water. Always follow the directions on the package.



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#### **Volume of Water Treating Clear Water:** Treating Cloudy, Very Cold, to be Treated **Bleach Solution to Add** or Surface Water: **Bleach Solution to Add** 1 quart/1 liter 3 drops 5 drops 1/2 gallon/2 quarts/2 liters 5 drops 10 drops or 1/8 tsp 1 gallon 10 drops or 1/8 tsp 20 drops or 1/4 tsp 5 gallons 50 drops or 2.5 ml or 1/2 tsp 5 ml or 1 tsp 10 gallons 5 ml or 1 tsp 10 ml or 2 tsp

Treating Water with a 5-6 Percent Liquid Chlorine Bleach Solution

tsp = teaspoon; ml = milliliter

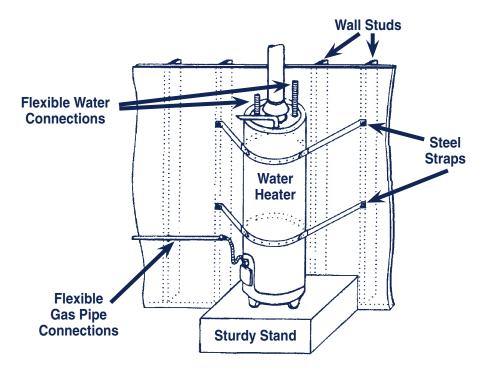


Secure your water heater to minimize damage during a disaster.

## **Securing Your Water Heater**

### Securing a water heater

- Mark your water heater at the front center, about one-third of the way down from the top and approximately one-third of the way up from the bottom.
- Be sure that the bottom mark is at least 4 inches above the water controls.
- Secure the water heater with two 16- to 20-gauge, pre-drilled steel straps at the points you've marked (see diagram).
- If you place the water heater on a pedestal, you must secure the pedestal to the wall or floor to keep it from moving out from under the water heater during an earthquake.
- For more information on securing your water heater, contact your local emergency management office or utility.



#### Getting water from a water heater

- The water heater, if strapped properly, can be used as a backup source of drinking water in addition to the water you have already stored for emergencies.
- To get water out of your water heater when the water is turned off, you will need to turn off the gas or electric supply to the heater.
- Open a faucet located in the highest point of your home and then open the faucet at the bottom of the water heater. This allows the water to gravity-feed from the tank.
- The water that first comes from the tank may be full of rust and other deposits. This is normal for a water heater that has been in a home for a few years. Discard the discolored water. When the water becomes clear, it should be safe to drink.
- If there is any question as to water purity purify it.



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It is best to learn how to turn off household utilities before disaster strikes.

## **Turning Off the Utilities**

When disaster strikes, it often affects one or more of the utility systems in your home. Therefore, it is important to know where the main controls are located and when and how to turn them off.

### Electricity

Water

- Locate your main electrical switch or fuse panel, and learn how to turn off the electrical power system.
- If a generator is used as a backup power supply, remember to follow the manufacturer's instructions. Connect lights and appliances directly to the generator and not to the electrical system.

Turn off water at the main meter or at the

water main leading into the house. This

entering your water heater and plumbing.

This will require a special valve wrench,

available from a hardware store. Make

sure you have the tool readily available.

will prevent contaminated water from

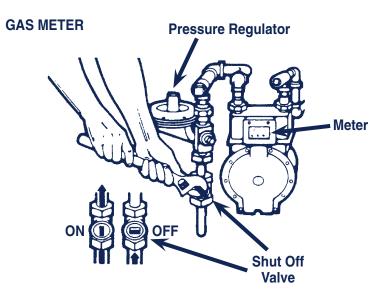
■ Turn off the valve — turn to the right.

### Sewer system

Make sure your sewer system is functioning properly before using it. This will prevent the contamination of your home and possibly the drinking water supply.

### Gas meter (illustration below)

- Locate your gas meter and valve.
- Have a wrench immediately available for turning off the gas supply.
- If you smell natural gas, evacuate immediately. Do not use matches, lighters, open flame appliances, or operate electrical switches. Sparks could ignite gas causing an explosion.
- Shut off gas ONLY if you smell gas or hear a hissing noise. Contact the gas company to turn the gas back on.





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When purchasing a generator make sure you get one listed with the Underwriter's Laboratory (UL) or Factory Mutual (FM).

This fact sheet was prepared using materials from the American Red Cross and the National Fire Protection Association.



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## Using a Generator During Power Outages

Read the labels on lighting, appliances, and equipment you plan to connect to the generator to determine the amount of power that will be needed to operate the equipment. For lighting, the power of the light bulb indicates the power needed. Appliances and equipment usually have labels indicating power requirements on them. Choose a generator that produces more power than will be drawn by the combination of lighting, appliances, and equipment you plan to connect to the generator, including the initial surge when it is turned on.

If your equipment draws more power than the generator can produce, you may blow a fuse on the generator or damage the connected equipment.

- Follow the directions supplied with your generator. Never use portable generators indoors, including inside a garage. Adequate ventilation is necessary when running the generator. Proper refueling measures, outlined in the owner's manual, must be carefully followed. Make sure you have properly working carbon monoxide (CO) alarms inside your home.
- Let your generator cool down before refueling. You must store extra generator fuel in an approved safety can. Store fuel for the generator out of doors in a locked shed or other protected area. Do not store fuel in a garage, basement, or anywhere inside a home, as vapors can be released that may cause illness and are a potential fire or explosion hazard.
- Connect the equipment you want to power directly to the outlets on the generator. Do not hook up a generator to your home's electrical service. Homeuse (non-industrial) generators do not supply enough amperage to supply sufficient power for today's homes (that is, to run a furnace, lighting, appliances, and other electronic equipment). Unless your home's power supply was installed with a disconnect to the main power feeding lines, power you put into your home from a generator could "backfeed"

into the main line and cause problems for the electrical utility company, your neighbors, or yourself. "Backfeeding" is supplying electrical power from a generator at the residence into the incoming utility lines. This occurs when the necessary equipment used to isolate the generator from the incoming power lines is not installed.

- The 1999 National Electrical Code (NEC), published by the National Fire Protection Association, is a nationally recognized standard for safe electrical installations. The NEC does permit an interface between the normal power source (generally the electric utility) and an alternate power source (such as a standby or portable generator) provided that the proper transfer equipment that prevents "backfeeding" is used. Simply connecting a cord from the generator to a point on the permanent wiring system and "backfeeding" power is an unsafe method to supply a building during a utility outage.
- Improper connection methods not only endanger the building occupants, but pose a serious hazard to electric utility workers as well. There are a number of products available that will provide either an automatic or manual transfer between two power sources in a manner prescribed by the NEC. When selecting a product for this function, it should be one that has been evaluated for safe performance by a nationally recognized testing organization such as Underwriters Laboratories. The product must be installed according to the NEC, all applicable state and local codes, and the manufacturer's instructions. Homeowners should only attempt to install such products if they have a thorough knowledge of safe electrical installation practices for this type of equipment. Otherwise a qualified electrician should be contacted.



### **Earthquakes**

Washington is earthquake country. When the ground starts to shake, "Drop, Cover and Hold."

### Drop, cover and hold

When you feel an earthquake, DROP and COVER under a desk or sturdy table. Stay away from windows and objects like bookcases that could fall. HOLD on to the desk or table. If it moves, move with it. Do not run—stay where you are. "Drop, Cover and Hold."

### Be prepared for an earthquake

- Anchor appliances and tall heavy furniture that might fall. Put latches on cabinet doors to keep contents from spilling out.
- Find out how you can improve your home to protect it against earthquake damage.
- Establish an "out-of-area" contact and keep the phone numbers handy. This is the person family members will call if you are separated.
- Have a place at home where emergency supplies are kept and tell others where it is.

### During an earthquake

### If you are indoors:

- Stay inside. Move next to an inside wall or get under a desk or sturdy table and hold on to it. If it moves, move with it. Stay away from windows, bookcases, refrigerators, heavy mirrors, hanging plants and other objects that could fall. Do not go outside until the shaking stops.
- If you are in a crowded store or public place, DO NOT rush for an exit. Move away from display shelves holding objects that could fall on you, and "drop, cover and hold."
- If you are in a theater or stadium, stay in your seat, protect your head with your arms or get under the seat. Do not leave until the shaking stops.

### If you are outdoors:

If you are outdoors, move to a clear area away from trees, signs, buildings, or downed electrical wires and poles.

#### If you are in a downtown area:

If you are on a sidewalk near a tall building, get into a building's doorway or lobby to protect yourself from falling bricks, glass and other debris.

### If you are driving:

If you are driving, slowly pull over to the side of the road and stop. Avoid overpasses, power lines and other hazards. Stay inside the vehicle until the shaking stops.

#### If you are in a wheelchair:

If you are in a wheelchair, stay in it. Move to safe cover if possible, lock your wheels and protect your head with your arms.

### After the earthquake:

- If you were evacuated, wait until you are told it is safe before returning home. Be careful entering buildings. Stay away from downed power lines
- Check yourself and those around you for injuries.
- Be prepared for aftershocks.
- Use the phone only to report a life-threatening emergency.
- Do not drive unnecessarily.
- If you smell gas or hear a hissing sound

   open a window and leave the building.
   Shut off the main gas valve outside.
- Check on neighbors, particularly elderly or disabled persons
- Try to contact your out-of-area phone contact. Listen to your radio.



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### Floods

Floods are the most common and widespread of all natural disasters. If you live in an area where floods occur, you should know the following:

### What to do before a flood

- Plan for evacuation. Know where you are going and how to get there.
- Prepare your home for a flood. Call your local building department or office of emergency management for information.
- Purchase flood insurance.
- Keep all insurance policies and a list of valuable items in a safe place.
- Take photos or a videotape of the valuables you keep in your home.
- Listen to your radio or television for reports of flood danger.
- Keep your car filled with gas.

### What to do during a flood

- Do NOT try to walk or drive through flooded areas. Water can be deeper than it appears and water levels rise quickly. Follow official emergency evacuation routes. If your car stalls in floodwater, get out quickly and move to higher ground.
- Stay away from moving water; moving water six inches deep can sweep you off your feet. Cars are easily swept away in just two feet of water.
- Stay away from disaster areas unless authorities ask for volunteers.
- Stay away from downed power lines.
- If your home is flooded, turn the utilities off until emergency officials tell you it is safe to turn them on. Do not pump the basement out until floodwater recedes. Avoid weakened floors, walls and rooftops.
- Wash your hands frequently with soap and clean water if you come in contact with floodwaters.

### What to do after a flood

- Wear gloves and boots when cleaning up.
- Open all doors and windows. Use fans if possible to air out the building.
- Wash all clothes and linens in hot water.
- Discard mattresses and stuffed furniture. They can't be adequately cleaned.
- Wash dirt and mud from walls, counters and hard surfaced floors with soap and water. Then disinfect by wiping surfaces with a solution of one cup bleach per gallon of water.
- Discard all food that has come into contact with floodwater. Canned food is alright, but thoroughly wash the can before opening.
- If your well is flooded, your tap water is probably unsafe. If you have public water, the health department will let you know—through radio and television—if your water is not safe to drink. Until your water is safe, use clean bottled water.
- Learn how to purify water. If you have a well, learn how to decontaminate it.
- Do not use your septic system when water is standing on the ground around it. The ground below will not absorb water from sinks or toilets. When the soil has dried, it is probably safe to again use your septic system. To be sure, contact your local health department.
- When floodwaters have receded watch out for weakened road surfaces.



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### **Hot Weather Precautions**

Severe heat may cause illness or even death. When temperatures rise to extreme highs, reduce risks by taking the following precautions.

### Hot weather precautions to reduce the risk of heat exhaustion and heat stroke

- Stay indoors and in an air-conditioned environment as much as possible unless you're sure your body has a high tolerance for heat.
- Drink plenty of fluids but avoid beverages that contain alcohol, caffeine or a lot of sugar.
- Eat more frequently but make sure meals are balanced and light.
- Never leave any person or pet in a closed, parked vehicle.
- Avoid dressing babies in heavy clothing or wrapping them in warm blankets.
- Check frequently on people who are elderly, ill or may need help. If you might need help, arrange to have family, friends or neighbors check in with you at least twice a day throughout warm weather periods.
- Make sure pets have plenty of water.
- Salt tablets should only be taken if specified by your doctor. If you are on a salt-restrictive diet, check with a doctor before increasing salt intake.
- If you take prescription diuretics, antihistamines, mood-altering or antispasmodic drugs, check with a doctor about the effects of sun and heat exposure.
- Cover windows that receive morning or afternoon sun. Awnings or louvers can reduce the heat entering a house by as much as 80 percent.

### If you go outside

- Plan strenuous outdoor activities for early or late in the day when temperatures are cooler; then gradually build up tolerance for warmer conditions.
- Take frequent breaks when working outdoors.
- Wear a wide-brimmed hat, sun block and light-colored, loose-fitting clothes when outdoors.
- At first signs of heat illness (dizziness, nausea, headaches, muscle cramps), move to a cooler location, rest for a few minutes and slowly drink a cool beverage. Seek medical attention immediately if you do not feel better.
- Avoid sunburn: it slows the skin's ability to cool itself. Use a sunscreen lotion with a high SPF (sun protection factor) rating.
- Avoid extreme temperature changes. A cool shower immediately after coming in from hot temperatures can result in hypothermia, particularly for elderly or very young people.

### If the power goes out or air conditioning is not available

- If air conditioning is not available, stay on the lowest floor out of the sunshine.
- Ask your doctor about any prescription medicine you keep refrigerated. (If the power goes out, most medicine will be fine to leave in a closed refrigerator for at least 3 hours.)
- Keep a few bottles of water in your freezer; if the power goes out, move them to your refrigerator and keep the doors shut.



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### **Landslides and Mud Flows**

Landslides and mudflows usually strike without warning. The force of rocks, soil, or other debris moving down a slope can devastate anything in its path. Take the following steps to be ready.

### Before a landslide

- Get a ground assessment of your property.
- Your county geologist or county planning department may have specific information on areas vulnerable to land sliding. Consult a professional geotechnical expert for opinions and advice on landslide problems and on corrective measures you can take.

#### Insurance

Mudflow is covered by flood insurance policies from the National Flood Insurance Program. Flood insurance can be purchased through a local insurance agency.

#### Minimize home hazards

- Plant ground cover on slopes to stabilize the land, and build retaining walls.
- In mudflow areas, build channels or deflection walls to direct the flow around buildings.
- Remember: If you build walls to divert debris flow and the flow lands on a neighbor's property, you may be liable for damages.

### Make evacuation plans

- Plan at least two evacuation routes since roads may become blocked or closed.
- In case family members are separated from one another during a landslide or mudflow (that is a real possibility during the day when adults are at work and children are at school), have a plan for getting back together.
- Ask an out-of-state relative or friend to serve as the "out-of-area" contact. After a disaster it's often easier to call long distance than to make local calls. Make sure everyone knows the name, address and phone number of the contact person.

### Learn to recognize the landslide warning signs

- Doors or windows stick or jam for the first time.
- New cracks appear in plaster, tile, brick or foundations.
- Outside walls, walks, or stairs begin pulling away from the building.
- Slowly developing, widening cracks appear on the ground or on paved areas such as streets or driveways.
- Underground utility lines break.
- Bulging ground appears at the base of a slope.
- Water breaks through the ground surface in new locations.
- Fences, retaining walls, utility poles, or trees tilt or move.
- You hear a faint rumbling sound that increases in volume as the landslide nears. The ground slopes downward in one specific direction and may begin shifting in that direction under your feet.

### Sinkholes

A sinkhole occurs when groundwater dissolves a vulnerable land surface, such as limestone, causing the land surface to collapse from a lack of support.



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#### During a landslide:

#### If inside a building

- Stay inside.
- Take cover under a desk, table, or other piece of sturdy furniture.

#### If outdoors:

- Try to get out of the path of the landslide or mudflow.
- Run to the nearest high ground in a direction away from the path.
- If rocks and other debris are approaching, run for the nearest shelter such as a group of trees or a building.
- If escape is not possible, curl into a tight ball and protect your head.

#### After a landslide

- Remember that flooding may occur after a mudflow or a landslide.
- Stay away from the slide area. There may be danger of additional slides.
- Check for injured and trapped persons near the slide area. Give first aid if trained.
- Remember to help your neighbors who may require special assistance – infants, elderly people, and people with disabilities.

- Listen to a battery-operated radio or television for the latest emergency information.
- Check for damaged utility lines. Report any damage to the utility company.
- Check the building foundation, chimney, and surrounding land for damage.
- Replant damaged ground as soon as possible since erosion caused by loss of ground cover can lead to flash flooding.
- Seek the advice of geotechnical experts for evaluating landslide hazards or designing corrective techniques to reduce landslide risk.

#### **Prevention tips**

Investing in preventive steps now, such as planting ground cover (low growing plants) on slopes, or installing flexible pipe fitting to avoid gas or water leaks, will help reduce the impact of landslides and mudflows in the future. For more information on prevention, contact your local emergency management office.



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### Tsunamis

A tsunami is a series of destructive ocean waves affecting shorelines. Tsunamis are usually generated by earthquakes. Tsunamis may also be caused by underwater landslides, or underwater volcanic eruptions. Tsunami waves are destructive and could rise as high as 100 feet or more. Tsunamis are a threat to the coast of Washington.

### The National Oceanic and Atmospheric Administration (NOAA)

NOAA has warning centers located in Hawaii and Alaska that can issue a tsunami warning within 15 minutes after an earthquake. This provides an effective warning for distant-source tsunamis.

### A tsunami watch

A watch reports on conditions that may generate a tsunami.

- Turn on your radio.
- Listen to your radio, NOAA Weather Radio, or TV for updates on the watch.
- Know well in advance what your safest evacuation route will be.

### A tsunami warning

A warning reports that a tsunami has been generated.

- Keep your radio on.
- Evacuate coastal areas immediately.
- Evacuate to higher ground or to upper levels of reinforced buildings.
- Continue to monitor your local radio or NOAA Weather Radio for further information and instructions.
- Wait for the "All Clear" before you return to the beach or to your home.

### **Coastal evacuation signs**

Tsunami evacuation routes were developed to assist coastal residents and visitors find safer locations in case of an earthquake and tsunami. Evacuation signs have been placed along coastal roadways to indicate the direction inland or to higher ground. In some places, there may be more than one direction available to reach safer areas. These routes may be marked with several signs showing additional options for evacuation. You will need to know the evacuation routes for your area.





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### Volcanoes

Volcanic dangers include not only an eruption of a mountain and associated lava flows, but also ashfall and debris flows. If you are near a mountain range, be familiar with the following.

### Before a volcanic eruption:

- Plan ahead. Have emergency supplies, food and water stored.
- Plan an evacuation route away from rivers or streams that may carry mud or debris flow.
- Keep a battery-operated radio available at all times.
- If there is an eruption predicted, monitor the radio or TV for evacuation information. Follow the advice given by authorities.

### After a volcanic eruption:

- Do not approach the eruption area.
- Be prepared to stay indoors and avoid downwind areas if ashfall is predicted.
- Evacuate if advised to do so by authorities.
- Be aware of stream and river channels when evacuating.
- Move toward higher ground if mudflows are approaching.
- Follow the evacuation signs posted along roads and highways.





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### If there is ashfall in your area:

- Protect your lungs. Infants and the elderly, and those who have respiratory conditions such as asthma, bronchitis, emphysema and other chronic lung and heart diseases should be particularly careful to avoid breathing ash. If ash is present:
  - Stay inside. Close doors, windows and dampers. Place damp towels at door thresholds and other draft sources.

- When outside, wear a single-use (disposable) facemask. Remember that these masks may not fit small children properly. (*Note:* Masks may make breathing more difficult for people with respiratory conditions.)
- Those most at risk should limit outdoor activities. Keep children and pets indoors.
- If you have asthma or another respiratory condition – or have a child with asthma – pay attention to symptoms such as wheezing and coughing, or more severe symptoms such as chest pain or tightness, shortness of breath and severe fatigue. Stay indoors and follow your asthma management plan. Contact your doctor if you have trouble breathing.
- Replace disposable furnace filters or clean permanent furnace filters frequently.
- If you wear contact lenses, protect your eyes by wearing glasses or protective goggles or by removing your contacts.
- If you find ash in your drinking water, use an alternate source of drinking water such as purchased bottled water.
- Put stoppers in the tops of your drainpipes.
- Protect dust-sensitive electronics.
- Keep roofs free of ash in excess of 4 inches.
- Remove outdoor clothing before entering a building.
- Wash vegetables from the garden before eating.
- Minimize travel ash may be harmful to your vehicle.
- Frequently change oil and air filters in your automobile.

## **West Nile Virus**



For more information on preventing West Nile Virus, including what employers and workers can do to reduce their risk, go to http: //www.doh.wa.gov/wnv



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### What is West Nile Virus?

West Nile virus can be a serious, even fatal, illness. It can affect people, horses, certain types of birds and other animals. West Nile virus first appeared in the United States in 1999. In 2002, the virus was found for the first time in birds and horses in Washington. However, the virus has not been detected in our state since then.

### How is it spread?

West Nile virus is almost always spread to people by the bite of an infected mosquito. Mosquitoes become infected after feeding on birds that carry the virus. There is no evidence that West Nile virus can be spread by direct contact with infected people or animals.

### Who is at risk?

The risk of getting West Nile virus is very low, but anyone can become infected. People over 50 years of age have the highest risk of serious illness.

### What are the symptoms?

Most people who are infected with West Nile virus will not get sick. About 1 in 5 people infected will have mild symptoms such as fever, headache and body aches. Even fewer, about 1 in 150 people infected, will have more severe symptoms. Severe symptoms may include headache, high fever, neck stiffness, stupor, disorientation, tremors, convulsions, muscle weakness, paralysis and coma. If you have any of these symptoms, contact your health care provider.

### How can I protect myself?

There is no human vaccine for West Nile virus. The best way to protect yourself and your family is to avoid mosquito bites and reduce the places mosquitoes live and breed around your home. Take these steps:

### Avoid mosquito bites

- Make sure windows and doors are "bug tight." Repair or replace screens.
- Stay indoors at dawn and dusk when mosquitoes are the most active.
- Wear a long sleeve shirt, long pants and a hat when going into mosquito-infested areas, such as wetlands or woods.
- Use mosquito repellant when necessary. Read the label and carefully follow instructions. Take special care when using repellent on children.
- Use an insect repellent that contains DEET. DEET is the most effective repellent available. Products containing DEET must be used properly. Carefully read and follow instructions on the label.

### Don't give mosquitoes a home

- Empty or throw away anything that holds standing water—bottles, cans, old tires, buckets, plastic covers and toys.
- Change water in your birdbaths, fountains, wading pools and animal troughs at least twice each week.
- Make sure roof gutters drain properly; and clean clogged gutters in the spring and fall.
- Fix leaky outdoor faucets and sprinklers.

### Windstorms



Each fall and winter season, several low pressure systems impact the Pacific Northwest, producing strong winds to 60 mph. On Columbus Day, October 12, 1962, the strongest non-tropical windstorm ever to hit the lower 48 states struck the Pacific coast. It claimed 46 lives, injured hundreds more, and knocked power out for several million people. By taking action now, you can save lives and reduce the damage caused by windstorms and other weather-related hazards.

### What to do before a windstorm

- Contact your local emergency management office or the National Weather Service to find out what types of storms are most likely to occur in your community.
- Assemble a disaster supply kit.
- Contact vendors to know the proper use of home generators.
- Find out who in your area might need special assistance, specifically the elderly, disabled, and non-English speaking neighbors.
- Check with your veterinarian for animal care instructions in an emergency situation.
- If you live on a coastal or inland shoreline, be familiar with evacuation routes.
- Know what emergency plans are in place at your workplace, school and daycare center.
- Conduct a home safety evaluation, including the garage door, and nearby trees.
- If you have an electric garage door opener, locate the manual override.

### What to do during a windstorm

- Don't panic. Take quick action to protect yourself and help others.
- Turn off the stove if you're cooking when the power goes out, and turn off natural gas appliances.
- If you are indoors, move away from windows or objects that could fall. Go to lower floors in multi-story homes.

- If you are outdoors, move into a building. Avoid downed electric power lines, utility poles and trees.
- If you are driving, pull off the road and stop away from trees. If possible, walk into a safe building. Avoid overpasses, power lines and other hazards.
- Listen to your radio for emergency instructions.

### What to do after a windstorm

- Check yourself and those around you for injuries.
- Evacuate damaged buildings. Do not re-enter until declared safe by authorities.
- Call 9-1-1 only to report a life threatening emergency.
- If you smell gas or hear a hissing sound indoors — open windows and leave the building. Turn off the gas source and call your gas company. Do not use matches, candles, open flames or electric switches indoors.
- If the power goes out, keep refrigerator and freezer doors closed to keep food frozen for up to two days.
- Provide assistance to your neighbors, especially the elderly or disabled.
- Try to make contact with your out-ofarea phone contact, but avoid making local telephone calls.
- Monitor your portable or weather radio for instructions or an official "all clear" notice. Radio stations will broadcast what to do, the location of emergency shelters and medical aid stations, and the extent of damage.



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## **Winter Storms**



Winter storms can range from moderate snow over a few hours to blizzard conditions with blinding, wind-driven snow or freezing rain that lasts several days. The time to prepare is before the snow falls and ice forms.

### Preparing for winter storms

- Listen to your radio or television for winter storm forecasts and other information.
- Prepare your home for cold weather. Install storm windows. Insulate outside walls, attics and crawl spaces. Wrap pipes, especially those near cold outer walls or in attics or crawl spaces. Repair leaks in the roof, around the doors and in the windows.
- Have appropriate cold weather clothing available.
- If you have a kerosene heater, refuel your heater outside and remember to keep it at least three feet from flammable objects.
- Make sure your fireplace functions properly.
- Have rock salt and sand on hand for traction on ice.
- Fill your gas tank before the snow starts falling.

### During a winter storm

- Wear several layers of loose fitting, light weight, warm clothing rather than one layer of heavy clothing. Wear mittens rather than gloves. Wear a warm, woolen cap.
- Do not drive unnecessarily.

Reduce the temperature in your home to conserve fuel.

- Heat only the areas of your home you are using. Close doors and curtains or cover windows and doors with blankets.
- Use alternative heat methods safely. NEVER use a gas or charcoal grill, hibachi or portable propane heater to cook indoors or heat your home.

- Be careful when shoveling snow. Do not overexert yourself.
- Be sure to eat regularly. Food provides calories that maintain body heat.
- Watch for signs of frostbite and hypothermia — slurred speech, disorientation, uncontrollable shivering, stumbling, drowsiness and body temperature of 95 degrees Fahrenheit or less.
- If you become trapped outside, get out of the wind and stay dry. Build a lean-to or snow cave if nothing else is available. Do not eat snow; it will make you too cold.

### If in your vehicle

- Make sure someone knows where you are going. Stay on the main roads.
- If you must stop, remain inside the vehicle. Use a bright distress flag or your hazard lights to draw attention to your vehicle.
- If trapped in a blizzard, clear your tail pipe and run your engine and heater for 10 minutes every hour. Open your window slightly.
- During night hours, keep the dome light on in the car so rescue crews can see your vehicle.
- Keep an emergency kit in your vehicle. Include a three-day supply of water and non-perishable food that can be eaten without being cooked. Include a blanket or sleeping bag for each passenger, a flashlight, cell phone, shovel, sack of sand or kitty litter, booster cables, flare, coffee can with lid and toilet paper.



*Web site:* **www.emd.wa.gov** 253-512-7000; (800) 562-6108



PO Box 47890 Olympia, WA 98504-7890