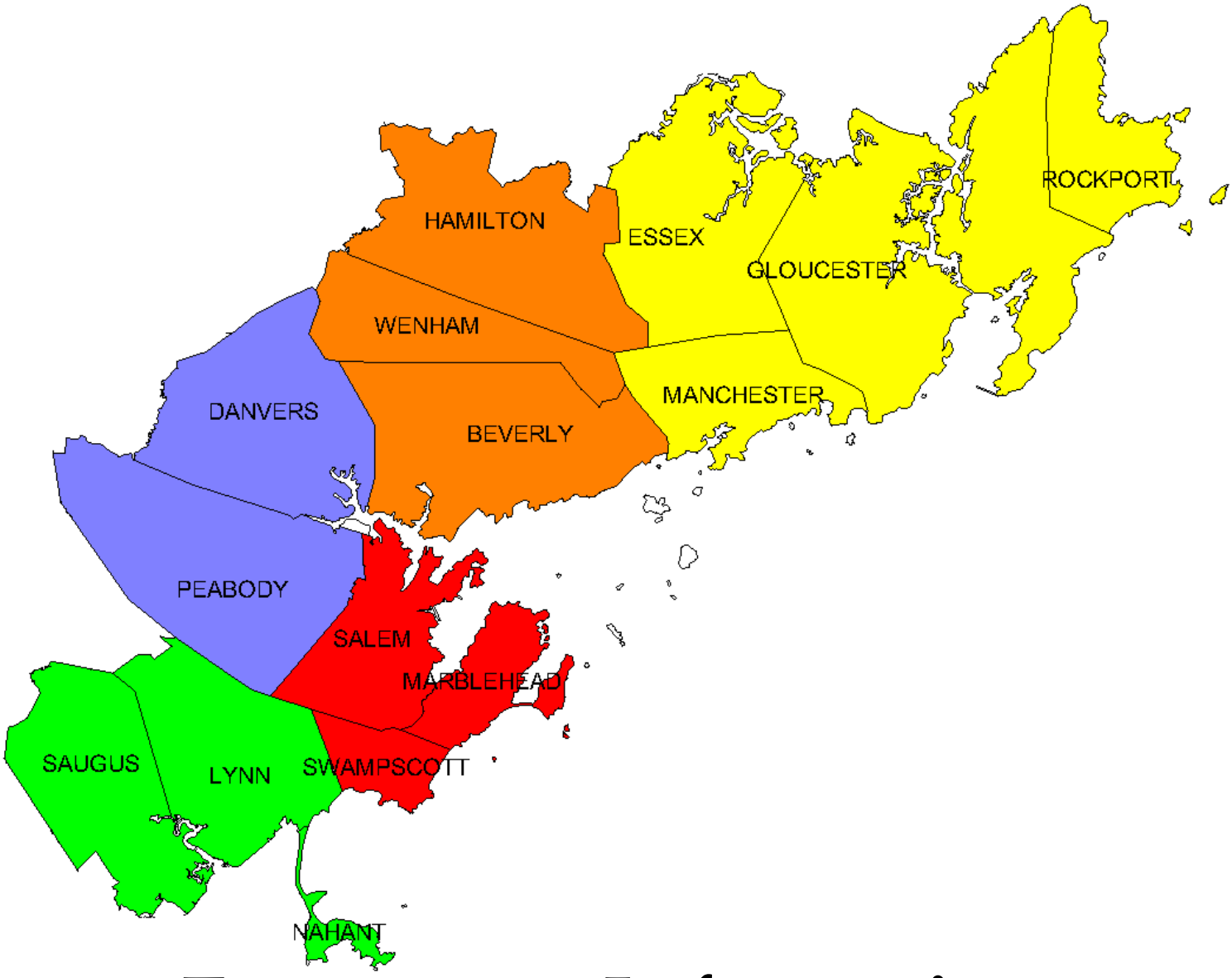
North Shore - Cape Ann Emergency Preparedness Coalition



Emergency Information, Planning and Response Guide

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

Updated: March, 2006

www.nscalert.org
Care of: Salem Board of Health, 120 Washington Street, 4th Floor, Salem, MA 01970 Tel. 978-741-1800

North Shore – Cape Ann Emergency Preparedness Coalition

Background Information

The North Shore - Cape Ann Emergency Preparedness Coalition was established in 2004, and is comprised of the Boards of Health and Health Departments from the following fifteen (15) communities*:

★ **Lynn**	★ **Peabody**	★ **Salem**	★ **Beverly**	★ **Gloucester**
★ **Saugus**	★ **Danvers**	★ **Marblehead**	★ **Hamilton**	★ **Rockport**
★ **Nahant**		★ **Swampscott**	★ **Wenham**	★ **Manchester-by-the-Sea**
				★ **Essex**

**** Each community is clustered into groups according to population size and is given a color based on this grouping.***

The purpose of the North Shore - Cape Ann Emergency Preparedness Coalition is to:

- **Enhance the communities' collective capacity to share resources**
- **Respond to public health threats and emergencies, which includes terrorism and outbreaks of infectious diseases**

The North Shore - Cape Ann Emergency Preparedness Coalition meets monthly to share information and discuss issues related responding to public health threats and emergencies, including terrorism and outbreaks of infectious diseases.

The North Shore - Cape Ann Emergency Preparedness Coalition is a sub-coalition within Region 3 of the Massachusetts Department of Public Health (MDPH) Regional Public Health Emergency Preparedness Coalitions. The North Shore - Cape Ann Emergency Preparedness Coalition receives funding from a grant provided by the Centers for Disease Control and Prevention (CDC), which is distributed through the Massachusetts Department of Public Health (MDPH).

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The information for the North Shore – Cape Ann Emergency Preparedness Coalition Emergency Information, Planning and Response Guide was obtained from the following sources:*

Department of Health and Human Services
Centers for Disease Control and Prevention

Washington State Department of Health
www.doh.wa.gov
a healthy dose of information

National Oceanic & Atmospheric Administration
U.S. Department of Commerce

Homeland Security

FEMA

U.S. Consumer Product Safety Commission

American Red Cross
Together, we can save a life

DFS Department of Fire Services

Homeland Security
United States Coast Guard
Semper Paratus

U.S. Nuclear Regulatory Commission

The North Shore - Cape Ann Emergency Preparedness Coalition Emergency Information, Planning and Response Guide was compiled by: N. Illingworth, MPH, EMT-B, Program Coordinator, North Shore-Cape Ann Emergency Preparedness Coalition

****For specific information on the sources that were used for each page of the North Shore-Cape Ann Emergency Preparedness Coalition Emergency Information, Planning and Response Guide, please go to pages 47-8 for links to the appropriate webpage(s).***

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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.

Preparing Your Household for Emergencies

After a disaster, you and your family should be prepared to be on your own for at least two weeks. 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.

Emergency Disaster Supplies Checklist

Government agencies will respond to community disasters,
but citizens may be on their own for hours, days, even weeks after disaster strikes.

You should be prepared to take care of yourself and your family for at least two weeks.

- Non-Perishable or canned food: Enough food for each person for at least 14 days
- Drinking water: At least 1gallon per person for at least 14 days
- Non-Electric Can opener
- Paper plates, plastic utensils, and plastic cups
- Napkins, Paper towels
- Heavy-duty aluminum foil
- Plastic Ziploc Bags (large and small)
- Household bleach with no additives
- Liquid Detergent
- Generator
- Barbecue, camp stove, chafing dish
- Fuel for car, generator, cooking , etc.
- Items that infants and elderly household members may require
- Prescription medications in their original bottle, plus copies of the prescriptions, etc.
- Non-Prescription Medications
- Medical equipment and devices, such as eyeglasses, dentures, crutches, prostheses, etc.
- First aid supplies and first aid book
- Alcohol-based Hand Sanitizer
- N-95 Respirator Masks (NIOSH Approved)
- Soap
- Shampoo and Conditioner
- Toothpaste and toothbrushes
- Feminine and infant supplies (formula, etc.)
- Toilet paper, Tissues, Wipes
- Change of clothing for at least 7 days
- Closed toe, Sturdy shoes
- Toys, books, puzzles, games for kids
- List of contact names and phone numbers
- Checkbook, cash and credit cards
- Document Holder
- Copies of important documents (birth certificates, licenses, insurance policies, etc.)
- Paper and Pens
- Map of the area
- Extra house keys and car keys
- Battery powered/Wind-up AM/FM radio
- Battery powered/Wind-up Flashlight
- Extra batteries
- Whistle
- Glow Sticks
- Sleeping bag, blankets, and pillows
- Tent
- Gloves for clearing debris
- Large plastic trash bags for trash, water protection
- Large trash cans
- Newspaper - to wrap garbage and waste
- Waterproof matches
- Ax, shovel, broom
- Crescent wrench for turning off gas
- Screwdriver, pliers, hammer
- Coil of one-half inch rope
- Plastic/Duct tape and sheeting
- Pocket Knife or razor blades
- Garden hose
- Chargers for cell phones, laptops
- Power cords
- Pet food and supplies

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, including those who are disabled and/or non-verbal, may not show a change in behavior and/or be able to express themselves during and/or after a disaster, but may still need your help.

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.

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.
- Reassure the children that the disaster was not their fault.
- Go back to former routines as soon as possible. Maintain a regular schedule for the children.
- 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.
- 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.

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 fourteen 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 fourteen 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 fourteen 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 fourteen 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 fourteen days.
  - Copies of vital medical papers such as insurance cards, power of attorney, etc.

Communication and Planning Before a Disaster

- 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.
- Keep a list handy of people who can help and their phone numbers.
- Prepare emergency cards with your name, address and information about medications or allergies. Make sure that you can find your cards at all times.
- Ask your local fire or police department if they keep a list of people with special medical needs; ask to be included if they do maintain a list.
- Contact your local fire or police department for information on the ‘Are You OK’ program or if they have something similar in your community.

Disaster Tips for People with Visual Disabilities

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

Communication and Planning Before a Disaster

- Determine how you will communicate with emergency personnel. Store paper and pens for this purpose.
- Prepare emergency cards with your name, address and information about medications or allergies. Make sure that you can find your cards at all times.
- If helpful, mark emergency supplies with large print, fluorescent tape or Braille.

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 short lasting 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.

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.

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

- 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.

Disaster Tips for the Hearing Impaired

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

Communication and Planning Before a Disaster

- 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."
- Prepare emergency cards with your name, address and information about medications or allergies. Make sure that you can find your cards at all times.
- 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.

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.

Alarms

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

Advocacy

- Recruit interpreters to be 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.

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.

Communication and Planning Before a Disaster

- Ask your local fire or police department if they keep a list of people with special medical needs; ask to be included if they do maintain a list.
- Contact your local fire or police department for information on the 'Are You OK' program or if they have something similar in your community.
- Prepare emergency cards with your name, address and information about medications or allergies. Make sure that you can find your cards at all times.
- 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.

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 puncture-proof 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.

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.

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.

- Always 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 explosions

- 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.

Chemical Agents

- Chemical agents are poisonous gases, liquids or solids that have toxic effects on people, animals or plants. Most chemical agents cause serious injuries or death.
- Severity of injuries 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 citizens to either seek shelter where they are and seal the premises or evacuate immediately. Exposure to chemical agents can be fatal. Leaving the shelter to rescue or assist victims can be a deadly decision. There is no assistance that the untrained can offer that would likely be of any value to the victims of chemical agents.

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.

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 (ex. Sarin and VX): 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.
- Review the Shelter-In-Place Section
- If you have symptoms of exposure, call 9-1-1 immediately.

Radioactive Materials

One possible source of radiation exposure is a "dirty bomb." A dirty bomb is a small explosive device packaged with radioactive materials. During any event that releases radiation, your best protection is to follow the recommendations of authorities.

What is a dirty bomb?

- A dirty bomb is a mix of explosives, such as dynamite, with radioactive powder or pellets. When the dynamite or other explosives are set off, the blast carries radioactive material into the surrounding area.
- The main danger from a dirty bomb is from the explosion, which can cause serious injuries and property damage. The radioactive dust and smoke can also be dangerous to health if it is inhaled.

How do I know if I've been exposed to radiation or contaminated by radioactive materials?

- People cannot see, smell, feel, or taste radiation; so you may not know whether you have been exposed. Police or firefighters will quickly check for radiation by using special equipment to determine how much radiation is present and whether it poses any danger in your area.
- Radiation can affect the body in a number of ways and it depends on the amount of radiation absorbed by the body (the dose), the type of radiation, the route of exposure, and the length of time a person was exposed.
- Higher levels of radiation exposure may produce symptoms, such as nausea, vomiting, diarrhea, and swelling and redness of the skin. If you develop any of these symptoms, you should contact your doctor, hospital, or other sites recommended by authorities.

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. 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.

Listen to the radio

- When you learn that radioactive materials have been released in an area near you - tune your radio to the emergency broadcasting network for instructions. Government agencies will let you know how to protect yourself. Keep a Battery powered/Wind-up AM/FM radio handy in case electrical power goes out in your area.

What immediate actions should I take to protect myself and my family?

- Cover your nose and mouth with a cloth to reduce the risk of breathing in radioactive dust or smoke.
- Don't touch objects thrown off by an explosion - they might be radioactive.
- Quickly go into a building where the walls and windows have not been broken. This area will shield you from radiation that might be outside.
- Once you are inside, take off your outer layer of clothing and seal it in a plastic bag if available. Put the cloth you used to cover your mouth in the bag, too. Removing outer clothes may get rid of up to 90% of radioactive dust.
- Shower or wash with soap and water. Be sure to wash your hair. Washing will remove any remaining dust.
- If your children or family are with you, stay together. If your children or family are in another home or building, they should stay there until you are told it is safe to travel.
- Schools have emergency plans and shelters. If your children are at school, they should stay there until it is safe to travel. Do not go to the school until public officials say it is safe to travel.
- Do not consume water or food that was out in the open, since it may have radioactive dust on it. Food inside of cans and other sealed containers will be safe to eat. Wash the outside of the container before opening it. Authorities will monitor food and water quality for safety and keep the public informed.

Nuclear Accidents

Nuclear power plants use the heat generated from nuclear fission in a contained environment to convert water to steam, which powers generators to produce electricity. Nuclear power plants operate in most states, including Massachusetts.

Nuclear Power Plants

- Although the construction and operation of these facilities are closely monitored and regulated by the Nuclear Regulatory Commission (NRC), accidents are possible. An accident could result in dangerous levels of radiation that could affect the health and safety of the public living near the nuclear power plant.
- Local and state governments, federal agencies, and the electric utilities have emergency response plans in the event of a nuclear power plant incident. The plans define two “emergency planning zones.” One zone covers an area within a 10-mile radius of the plant, where it is possible that people could be harmed by direct radiation exposure. The second zone covers a broader area, usually up to a 50-mile radius from the plant, where radioactive materials could contaminate water supplies, food crops, and livestock.
- The potential danger from an accident at a nuclear power plant is exposure to radiation. This exposure could come from the release of radioactive material from the plant into the environment, usually characterized by a plume (cloud-like formation) of radioactive gases and particles deposited on the ground, inhalation of radioactive materials, and ingestion of radioactive materials.

What Happens When People Are Exposed to Radiation?

- Radiation can affect the body in a number of ways and it depends on the amount of radiation absorbed by the body (the dose), the type of radiation, the route of exposure, and the length of time a person was exposed.
- Exposure to very large doses of radiation may cause death within a few days or months.
- Exposure to lower doses of radiation may lead to an increased risk of developing cancer or other adverse health effects later in life.

Emergency Materials for the Public

- Residents within a radius of approximately 10 miles from a nuclear power plant receive emergency information materials annually. This information is commonly distributed via phone books, calendars, brochures, utility bills, and so forth. These materials contain educational information on radiation, instructions for evacuation and sheltering, special arrangements for the handicapped, and contacts for additional information.
- Become familiar with this information and store it where you can easily retrieve it if needed.

Emergency Information for the Public

- A prompt Alert and Notification System (ANS) is in place to notify the public within a 10 mile radius of a nuclear power plant.
- If you receive an alert, tune your radio or television to an Emergency Alert System (EAS) station identified in your emergency information materials. The EAS stations will provide information and emergency instructions for you to follow.
- Remember, it is essential that you follow directions in the event of an emergency!

Potassium Iodide

- Potassium iodide (KI), if taken properly, will help reduce the dose of radiation to the thyroid gland from radioactive iodine and reduce the risk of thyroid cancer. If necessary, potassium iodide is to be used to supplement evacuation or sheltering, not to take the place of these actions If radioactive iodine is taken into the body after consumption of potassium iodide, it will be rapidly excreted from the body.
- Local emergency management officials will tell people if they should take potassium iodide.
- People should listen to emergency management officials for recommendations on how much potassium iodide they should take (if any) after an incident.

Shelter-in-Place

In certain instances, authorities would instruct citizens to either seek shelter where they are and seal the premises 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"

- Bring your family and pets inside.
- Stay inside.
- Lock doors, close windows, air vents and fireplace dampers.
- Turn off fans, air conditioning and forced air heating systems.
- Take your emergency supply kit unless you have reason to believe it has been contaminated.
- Go into an interior room with the fewest doors and windows.
- Seal all windows, doors and air vents with plastic sheeting and duct tape. Consider measuring and cutting the sheeting in advance to save time.
- Dampen towels and place over the crack under the door.
- Be prepared to improvise and use what you have on hand to seal gaps so that you create a barrier between yourself and any contamination.
- Local authorities may not immediately be able to provide information on what is happening and what you should do. However, you should listen to the radio, watch TV, or check the Internet often for official news and instructions as they become available.
- 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.
- 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.

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 Threat Checklist

Exact time of call: _____

Exact words of caller: _____

QUESTIONS TO ASK:

1. When is the bomb going to explode? _____
2. Where is the bomb? _____
3. What does it look like? _____
4. What kind of bomb is it? _____
5. What will cause it to explode? _____
6. Did you place the bomb? _____
7. Why? _____
8. Where are you calling from? _____
9. What is your address? _____
10. What is your name? _____

CALLER'S VOICE (circle all that apply)

Calm	Slow	Crying	Slurred
Stutter	Deep	Loud	Broken
Giggling	Accent	Angry	Rapid
Stressed	Nasal	Lisp	Excited
Disguised	Sincere	Squeaky	Normal

If voice is familiar, whom did it sound like?

Were there any background noises?

Remarks: _____

Person receiving call: _____

Telephone number call received on: _____

Date: _____

Preventing the Spread of Germs

Here are some simple tips that will help keep respiratory infections and many other contagious 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 alcohol-based 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.

Isolation and Quarantine

To contain the spread of a contagious illness, public health authorities rely on many strategies.

Two of these strategies are isolation and quarantine.

Both are common practices in public health, and both aim to control exposure to infected or potentially infected persons.

Both may be undertaken voluntarily or compelled by public health authorities.

ISOLATION: FOR PEOPLE WHO ARE ILL

- Isolation refers to the separation of persons who have a specific infectious illness from those who are healthy and the restriction of their movement to stop the spread of that illness. Isolation allows for the focused delivery of specialized health care to people who are ill, and it protects healthy people from getting sick. People in isolation may be cared for in their homes, in hospitals, or in designated healthcare facilities. Isolation is a standard procedure used in hospitals today for patients with tuberculosis (TB) and certain other infectious diseases. In most cases, isolation is voluntary; however, many levels of government (federal, state, and local) have basic authority to compel isolation of sick people to protect the public.

QUARANTINE: FOR PEOPLE WHO HAVE BEEN EXPOSED BUT ARE NOT ILL

- Quarantine refers to the separation and restriction of movement of persons who, while not yet ill, have been exposed to an infectious agent and therefore may become infectious. Quarantine of exposed persons is a public health strategy, like isolation, that is intended to stop the spread of infectious disease. Quarantine is medically very effective in protecting the public from disease.

Interplay between Federal and State/Local Laws

- The Health and Human Services Secretary has statutory responsibility for preventing the introduction, transmission, and spread of communicable diseases from foreign countries into the United States, e.g., at international ports of arrival, and from one state or possession into another. By statute, U.S. Customs and Coast Guard officers are required to aid in the enforcement of quarantine rules and regulations. Violation of federal quarantine rules and regulations constitutes a criminal misdemeanor, punishable by fine and/or imprisonment. Federal quarantine authority includes the authority to release persons from quarantine on the condition that they comply with medical monitoring and surveillance.

- A state's authority to compel isolation and quarantine within its borders is derived from its inherent "police power"- the authority of a state government to enact laws and promote regulations to safeguard the health, safety, and welfare of its citizens. As a result of this authority, the individual states are responsible for intrastate isolation and quarantine practices, and they conduct their activities in accordance with their respective statutes.

- State and local laws and regulations regarding the issues of compelled isolation and quarantine vary widely. Historically, some states have codified extensive procedural provisions related to the enforcement of these public health measures, whereas other states rely on older statutory provisions that can be very broad. In some jurisdictions, local health departments are governed by the provisions of state law; in other settings, local health authorities may be responsible for enforcing state or more stringent local measures. In many states, violation of a quarantine order constitutes a criminal misdemeanor.

- Because isolation and quarantine are "police power" functions, public health officials at the federal, state, and local levels may occasionally seek the assistance of their respective law enforcement counterparts to enforce a public health order.

Anthrax

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 immediately. 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

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 unintentionally 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.

Influenza (Flu)

What is Influenza (also called Flu)?

- The flu is a contagious respiratory illness caused by influenza viruses. It can cause mild to severe illness, and at times can lead to death. The best way to prevent this illness is by getting a flu vaccination each fall.
- Every year in the United States, on average:
  - 5% to 20% of the population gets the flu;
  - More than 200,000 people are hospitalized from flu complications, and;
  - About 36,000 people die from flu.
- Flu season can begin as early as October and last as late as May.

What are the Symptoms of the Flu?

- Fever (usually high)
- Headache
- Extreme tiredness
- Dry cough
- Sore throat
- Runny or stuffy nose
- Muscle aches
- Stomach symptoms, such as nausea, vomiting, and diarrhea, also can occur but are more common in children than adults.

How Flu Spreads

- Flu viruses spread in respiratory droplets caused by coughing and sneezing. They usually spread from person to person, though sometimes people become infected by touching something with flu viruses on it and then touching their mouth or nose.
- Most healthy adults may be able to infect others beginning 1 day before symptoms develop and up to 5 days after becoming sick. That means that you can pass on the flu to someone else before you know you are sick, as well as while you are sick.

Preventing the Flu: Get Vaccinated

The single best way to prevent the flu is to get a flu vaccination each fall. There are two types of vaccines:

- The "flu shot" – an inactivated vaccine (containing killed virus) that is given with a needle. The flu shot is approved for use in people older than 6 months, including healthy people and people with chronic medical conditions.
- The nasal-spray flu vaccine - a vaccine made with live, weakened flu viruses that do not cause the flu . This is approved for use in healthy people 5-49 years of age, who are not pregnant.

About two weeks after vaccination, antibodies develop that protect against influenza virus infection.

October or November is the best time to get vaccinated, but getting vaccinated in December or even later can still be beneficial.

Who Should Get Vaccinated?

In general, anyone who wants to reduce their chances of getting the flu can get vaccinated. However, certain people should get vaccinated each year:

- People at high risk for complications from the flu, which include those over the age of 65, those with chronic health conditions, children 6-23 months in age, etc.)
- People 50-64 years of age.
- People who can transmit flu to others at high risk for complications.

Who Should Not Be Vaccinated?

Some people that should not be vaccinated without first consulting a physician include:

- People who have a severe allergy to chicken eggs
- People who have had a severe reaction to an influenza vaccination in the past
- People who developed Guillain-Barré syndrome (GBS)
- Children less than 6 months of age.

Avian Influenza (Bird Flu)

What is Avian Influenza (Bird Flu)?

- Avian influenza is an infection caused by avian (bird) influenza (flu) viruses. These flu viruses occur naturally among birds. Wild birds worldwide carry the viruses in their intestines, but usually do not get sick from them. However, avian influenza is very contagious among birds and can make some domesticated birds, including chickens, ducks, and turkeys, very sick and kill them.
- Usually, “avian influenza virus” refers to influenza A viruses found chiefly in birds, but infections with these viruses can occur in humans.
- Influenza A (H5N1) virus – also called “H5N1 virus” – is an influenza A virus subtype that occurs mainly in birds, is highly contagious among birds, and can be deadly to them.

How does avian influenza spread among birds?

- Infected birds shed influenza virus in their saliva, nasal secretions, and feces.

Do avian influenza viruses infect humans?

- Bird flu viruses do not usually infect humans, but more than 100 confirmed cases of human infection with bird flu viruses have occurred since 1997.
- The World Health Organization (WHO) maintains situation updates and cumulative reports of human cases of avian influenza A (H5N1).

How do people become infected with avian influenza viruses?

- Most cases of avian influenza infection in humans have resulted from direct or close contact with infected poultry (e.g., domesticated chicken, ducks, and turkeys) or surfaces contaminated with secretions and excretions from infected birds.
- The spread of avian influenza viruses from an ill person to another person has also been reported.

What are the implications of avian influenza to human health?

- Two main risks for human health from avian influenza are 1) the risk of direct infection when the virus passes from the infected bird to humans, sometimes resulting in severe disease; and 2) the risk that the virus – if given enough opportunities – will change into a form that is highly infectious for humans and spreads easily from person to person.

What are the symptoms of avian influenza in humans?

- Symptoms of avian influenza in humans have ranged from typical human influenza-like symptoms (fever, cough, sore throat, and muscle aches) to eye infections, pneumonia, severe respiratory diseases (such as acute respiratory distress syndrome), and other severe and life-threatening complications. The symptoms of avian influenza may depend on which specific virus subtype and strain caused the infection.
- H5N1 infection may follow an unusually aggressive clinical course, with rapid deterioration and high fatality. Primary viral pneumonia and multi-organ failure have been common among people who have become ill with H5N1 influenza.

How is avian influenza in humans treated?

- Studies done in laboratories suggest that the prescription medicines approved for human influenza viruses should work in treating avian influenza infection in humans.
- Most H5N1 viruses that have caused human illness and death appear to be resistant to two antiviral medications amantadine and rimantadine. Two other antiviral medications, oseltamivir and zanamavir, would probably work to treat influenza caused by H5N1 virus, but additional studies are needed to demonstrate their current and ongoing effectiveness.
- There currently is no commercially available vaccine to protect humans against the avian influenza; however, vaccine development efforts are taking place.

Pandemic Influenza

What is Pandemic Influenza?

- An influenza pandemic is a global outbreak of disease that occurs when a new influenza A virus appears or “emerges” in the human population, causes serious illness, and then spreads easily from person to person worldwide.
- Pandemics are different from seasonal outbreaks or “epidemics” of influenza. Seasonal outbreaks are caused by subtypes of influenza viruses that already circulate among people, whereas pandemic outbreaks are caused by new subtypes, by subtypes that have never circulated among people, or by subtypes that have not circulated among people for a long time.
- Past influenza pandemics have led to high levels of illness, death, social disruption, and economic loss.

Appearance (Emergence) of Pandemic Influenza Viruses

- There are many different subtypes of Influenza or “flu” viruses. The subtypes differ based upon certain proteins on the surface of the virus (the hemagglutinin or “HA” protein and the neuraminidase or the “NA” protein). There are 16 known HA subtypes and 9 known NA subtypes. Many different combinations of HA and NA proteins are possible.
- Pandemic viruses emerge as a result of a process called "antigenic shift,” which causes an abrupt or sudden, major change in influenza A viruses. These changes are caused by new combinations of the HA and/or NA proteins on the surface of the virus. Such changes result in a new influenza A virus subtype. The appearance of a new influenza A virus subtype is the first step toward a pandemic; however, to cause a pandemic, the new virus subtype also must have the capacity to spread easily from person to person.
- Once a new pandemic influenza virus emerges and spreads, it usually becomes established among people and moves around or “circulates” for many years as seasonal epidemics of influenza.

Vaccines to Protect Against Pandemic Influenza Viruses

- Currently, there is no vaccine to protect people from pandemic influenza.
- A vaccine probably would not be available in the early stages of a pandemic. Once a potential pandemic strain of influenza virus is identified, it takes several months before a vaccine will be widely available.

Antiviral Medications to Prevent and Treat Pandemic Influenza

- Four different influenza antiviral medications (amantadine, rimantadine, oseltamivir, and zanamivir) are approved by the U.S. Food and Drug Administration (FDA) for the treatment and/or prevention of influenza. However, the drugs may not always work, because influenza virus strains can become resistant to the medications (ex. The H5N1 viruses identified in humans in Asia have been resistant to amantadine and rimantadine.) Monitoring of avian viruses for resistance to influenza antiviral medications continues.

The Next Pandemic

- In the absence of any control measures (vaccination or drugs), it has been estimated that in the U.S., a “medium–level” pandemic could cause 89,000-207,000 deaths, 314,000-734,000 hospitalizations, 18-42 million outpatient visits, and another 20-47 million people being sick. Between 15-35% of the U.S. population could be affected by an influenza pandemic. The economic impact could range between $71.3-$166.5 billion.
- A pandemic will last much longer than most public health emergencies and may include “waves” of influenza activity separated by months.
- The numbers of health-care workers and first responders available to work can be expected to be reduced. They will be at high risk of illness through exposure in the community and some may have to miss work for a variety of reasons.
- Resources in many locations could be limited, depending on the severity and spread of an influenza pandemic.

Eastern Equine Encephalitis (EEE)

What is Eastern Equine Encephalitis (EEE)?

- Eastern Equine Encephalitis (EEE) is a mosquito-borne viral disease. As the name suggests, EEE occurs in the eastern half of the US. Because of the high case fatality rate, it is regarded as one of the more serious mosquito-borne diseases in the United States.

How is Eastern Equine Encephalitis (EEE) transmitted?

- EEE virus is transmitted to humans through the bite of an infected mosquito.
- The main EEE transmission cycle is between birds and mosquitoes.
- Several species of mosquitoes can become infected with EEE virus. The most important mosquito in maintaining the enzootic (animal-based, in this case bird-mosquito-bird) transmission cycle is *Culiseta melanura*.
- Horses can become infected with, and die from, EEE virus infection.

What are the signs of Eastern Equine Encephalitis (EEE)?

- It takes from 4-10 days after the bite of an infected mosquito for an individual to develop symptoms of EEE.
- These symptoms begin with a sudden onset of fever, general muscle pains, and a headache of increasing severity. Many individuals will progress to more severe symptoms such as seizures and coma. Approximately one-third of all people with clinical encephalitis caused by EEE will die from the disease and of those who recover, many will suffer permanent brain damage with many of those requiring permanent institutional care.
- The EEE case fatality rate (the % of persons who develop the disease who will die) is 35%, making it one of the most pathogenic mosquito-borne diseases in the US
- It is estimated that 35% of people who survive EEE will have mild to severe neurological deficits.

Who is at risk for developing Eastern Equine Encephalitis (EEE)?

- Residents of and visitors to endemic areas (areas with an established presence of the virus)
- People who engage in outdoor work and recreational activities
- Persons over age 50 and younger than age 15 seem to be at greatest risk for developing severe disease

How can people avoid infection with Eastern Equine Encephalitis (EEE) virus?

- People should avoid mosquito bites by employing personal and household protection measures.
- When you are outdoors, use insect repellent containing an EPA-registered active ingredient. Follow the directions on the package.
- Many mosquitoes are most active at dusk and dawn. Be sure to use insect repellent and wear long sleeves and pants at these times or consider staying indoors during these hours.
- Make sure you have good screens on your windows and doors to keep mosquitoes out.
- Get rid of mosquito breeding sites by emptying standing water from flower pots, buckets and barrels. Change the water in pet dishes and replace the water in bird baths weekly. Drill holes in tire swings so water drains out. Keep children's wading pools empty and on their sides when they aren't being used.

Is there any treatment for Eastern Equine Encephalitis (EEE)?

- There is no licensed vaccine for human use.
- There are no effective therapeutic drugs.
- In addition, control measures are expensive and there is limited financial support of surveillance and prevention.

Escherichia coli (E. coli) O157:H7

What is Escherichia coli (E.coli) O157:H7?

- *E. coli* O157:H7 is one of hundreds of strains of the bacterium Escherichia coli. Although most strains are harmless and live in the intestines of healthy humans and animals, this strain produces a powerful toxin and can cause severe illness.

How does E.coli O157:H7 spread?

- Meat can become contaminated during slaughter, and organisms can be thoroughly mixed into beef when it is ground. Bacteria present on the cow's udders or on equipment may get into raw milk.
- Eating meat, especially ground beef, that has not been cooked sufficiently to kill *E. coli* O157:H7 can cause infection. Contaminated meat looks and smells normal. Although the number of organisms required to cause disease is not known, it is suspected to be very small.
- Among other known sources of infection are consumption of sprouts, lettuce, salami, unpasteurized milk and juice, and swimming in or drinking sewage-contaminated water.
- Bacteria in diarrheal stools of infected persons can be passed from one person to another if hygiene or hand washing habits are inadequate.
This is particularly likely among toddlers who are not toilet trained.
- Young children typically shed the organism in their feces for a week or two after their illness resolves. Older children rarely carry the organism without symptoms.

What are the symptoms of E. Coli O157:H7?

- E*. coli* O157:H7 infection often causes severe bloody diarrhea and abdominal cramps; sometimes the infection causes non-bloody diarrhea or no symptoms. Usually little or no fever is present, and the illness resolves in 5-10 days.
- In some persons, particularly children under 5 years of age and the elderly, the infection can also cause a complication called hemolytic uremic syndrome, in which the red blood cells are destroyed and the kidneys fail. About 2%-7% of infections lead to this complication.

How is E.coli O157:H7 diagnosed?

- Infection with *E. coli* O157:H7 is diagnosed by detecting the bacterium in the stool. All persons who suddenly have diarrhea with blood should get their stool tested for *E. coli* O157:H7.

Treatment for E. Coli O157:H7

- Most persons recover without antibiotics or other specific treatment in 5-10 days. There is no evidence that antibiotics improve the course of disease, and it is thought that treatment with some antibiotics may precipitate kidney complications. Antidiarrheal agents, such as loperamide (Imodium), should also be avoided.
- Hemolytic uremic syndrome is a life-threatening condition usually treated in an intensive care unit. Blood transfusions and kidney dialysis are often required. With intensive care, the death rate for hemolytic uremic syndrome is 3%-5%.

Preventative Measures

- Cook all ground beef and hamburger thoroughly. Ground beef should be cooked until a thermometer inserted into several parts of the patty, including the thickest part, reads at least 160º F. Wash thermometer between tests.
- Keep raw meat separate from ready-to-eat foods. Wash hands, counters, and utensils with hot soapy water after they touch raw meat.
- Drink only pasteurized milk, juice, or cider.
- Wash fruits and vegetables thoroughly, especially those that will not be cooked.
- Drink municipal water that has been treated with chlorine or other effective disinfectants.
- Avoid swallowing lake or pool water while swimming.
- Make sure that persons with diarrhea, especially children, wash their hands carefully with soap after bowel movements to reduce the risk of spreading infection, and that persons wash hands after changing soiled diapers. Anyone with a diarrheal illness should avoid swimming in public pools or lakes, sharing baths with others, and preparing food for others.

Hepatitis A

What are Hepatitis A?

- Hepatitis A is a liver disease caused by the Hepatitis A virus. Hepatitis A can affect anyone. In the United States, Hepatitis A can occur in situations ranging from isolated cases of disease to widespread epidemics.

How is Hepatitis A virus transmitted?

- Hepatitis A virus is spread from person to person by putting something in the mouth that has been contaminated with the stool of a person with Hepatitis A. This type of transmission is called "fecal-oral." For this reason, the virus is more easily spread in areas where there are poor sanitary conditions or where good personal hygiene is not observed.
- Most infections result from close contact with a household member or sex partner who has Hepatitis A. Casual contact, as in the usual office, factory, or school setting, does not spread the virus.

What are the signs and symptoms of Hepatitis A?

- Persons with Hepatitis A virus infection may not have any signs or symptoms of the disease. Older persons are more likely to have symptoms than children. If symptoms are present, they usually occur abruptly and may include fever, tiredness, loss of appetite, nausea, abdominal discomfort, dark urine, and jaundice (yellowing of the skin and eyes). Symptoms usually last less than 2 months; a few persons are ill for as long as 6 months. The average incubation period for Hepatitis A is 28 days (range: 15–50 days).

How do you know if you have Hepatitis A?

- A blood test (IgM anti-HAV) is needed to diagnose Hepatitis A. Talk to your doctor or someone from your local health department if you suspect that you have been exposed to Hepatitis A or any type of viral Hepatitis.

How can you prevent Hepatitis A?

- Always wash your hands after using the bathroom, changing a diaper, or before preparing or eating food.
- Two products are used to prevent Hepatitis A virus infection: immune globulin and Hepatitis A vaccine.
  - Immune globulin is a preparation of antibodies that can be given before exposure for short-term protection against Hepatitis A and for persons who have already been exposed to Hepatitis A virus. Immune globulin must be given within 2 weeks after exposure to Hepatitis A virus for maximum protection.
  - Hepatitis A vaccine has been licensed in the United States for use in persons 12 months of age and older. The vaccine contains an inactivated form of the Hepatitis A virus. Protection against Hepatitis A begins four weeks after the first dose of Hepatitis A vaccine. The vaccine is recommended (before exposure to Hepatitis A virus) for persons who are more likely to get Hepatitis A virus infection or are more likely to get seriously ill if they do get Hepatitis A.

Who should get vaccinated against Hepatitis A?

- Persons traveling to or working in countries that have high or intermediate rates of Hepatitis A.
- Children in states, counties, and communities where rates of Hepatitis A were/are at least twice the national average during the baseline period of 1987-1997.
- Men who have sex with men
- Illegal-drug users.
- Persons who have occupational risk for infection.
- Persons who have chronic liver disease.
- Persons who have clotting-factor disorders.

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

Pneumonic plague is one of several forms of plague. Depending on circumstances, these forms may occur separately or in combination:

- **Bubonic plague** is the most common form of plague. This occurs when an infected flea bites a person or when materials contaminated with Y. pestis enter through a break in a person's skin. Patients develop swollen, tender lymph glands (called buboes) and fever, headache, chills, and weakness. Bubonic plague does not spread from person to person.

- **Septicemic plague** occurs when plague bacteria multiply in the blood. It can be a complication of pneumonic or bubonic plague or it can occur by itself. When it occurs alone, it is caused in the same ways as bubonic plague; however, buboes do not develop. Patients have fever, chills, prostration, abdominal pain, shock, and bleeding into skin and other organs. Septicemic plague does not spread from person to person.

- **Pneumonic plague** occurs when Y. pestis infects the lungs. This type of plague can spread from person to person through the air. Transmission can take place if someone breathes in aerosolized bacteria, which could happen in a bioterrorist attack. Pneumonic plague is also spread by breathing in Y. pestis suspended in respiratory droplets from a person (or animal) with pneumonic plague. Becoming infected in this way usually requires direct and close contact with the ill person or animal. Pneumonic plague may also occur if a person with bubonic or septicemic plague is untreated and the bacteria spread to the lungs.

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.

- With pneumonic plague, the first signs of illness are fever, headache, weakness, and rapidly developing pneumonia with shortness of breath, chest pain, cough, and sometimes bloody or watery sputum. The pneumonia progresses for 2 to 4 days and may cause respiratory failure and shock. Without early treatment, patients may die.

Treatment for pneumonic plague

- Early treatment of pneumonic plague is essential. To reduce the chance of death, antibiotics must be given within 24 hours of first symptoms. Streptomycin, gentamicin, the tetracyclines, and chloramphenicol are all effective against pneumonic plague.

- Antibiotic treatment for 7 days will protect people who have had direct, close contact with infected patients. Wearing a close-fitting surgical mask also protects against infection.

- A plague vaccine is not currently available for use in the United States.

Smallpox

What is smallpox?

- Smallpox is a serious, contagious, and sometimes fatal infectious disease. There is no specific treatment for smallpox disease, and the only prevention is vaccination.
- There are two clinical forms of smallpox. Variola major is the severe and most common form of smallpox, with a more extensive rash and higher fever. Variola minor is a less common presentation of smallpox, and a much less severe disease.

What is smallpox a concern?

- Smallpox outbreaks have occurred from time to time for thousands of years. The last case of smallpox in the United States was in 1949. The last naturally occurring case in the world was in Somalia in 1977.
- After the disease was eliminated from the world, routine vaccination against smallpox among the general public was stopped because it was no longer necessary for prevention.
- Because the security of the virus is uncertain, there is a risk that smallpox could be used as a weapon. A case of smallpox today would be the result of an intentional act. A single confirmed case of smallpox would be considered an emergency.

How is Smallpox Spread?

- Prolonged face-to-face contact with someone who has smallpox (usually someone who already has a smallpox rash).
- Direct contact with infected bodily fluids or an object such as bedding or clothing that has the virus on it.
- Exposure to an aerosol release of smallpox (the virus is put in the air). On rare occasions in the past, smallpox was spread by virus carried in the air in enclosed places such as buildings, buses, and trains. The smallpox virus is not strong and is killed by sunlight and heat.
- Smallpox is not known to be spread by insects or animals.

What are the Symptoms?

- The incubation period for the disease ranges from about 7-17 days following exposure. After 7-17 days the first symptoms occur. The initial symptoms include high fever, fatigue, headache, and backache. Next, a rash with small red spots appears, most prominently on the tongue, mouth, face, skin, arms, legs, hands and feet. It then spreads to the entire body within 24 hours. The rash becomes raised bumps, then raised pustules. These pustules begin to crust early in the second week after the rash appears. Scabs develop, and then separate and fall off after about three weeks.
- A person with smallpox is sometimes contagious when they get a fever, but the person becomes most contagious when they get a rash. The infected person is contagious until their last scab falls off.

Treatment for smallpox

- There is no proven treatment for smallpox. Patients with smallpox may be helped by intravenous fluids, medicine to control fever or pain, and antibiotics for any secondary bacterial infections that may occur.
- One of the best ways to prevent smallpox is through vaccination. If given to a person before exposure to smallpox, the vaccine can completely protect them. Vaccination within 3 days after exposure will prevent or greatly lessen the severity of smallpox in most people. Vaccination 4-7 days after exposure likely offers some protection from disease or may decrease the severity of disease. Vaccination will not protect smallpox patients who already have a rash.
- Currently, the smallpox vaccine is not widely available to the general public. 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 a potentially serious illness that occurs naturally in the United States. It is caused by the bacterium *Francisella tularensis* found in animals (especially rodents, rabbits, and hares).

- *Francisella tularensis* is very infectious. A small number (10-50 or so organisms) can cause disease. If tularemia were to be released intentionally, as in a bioterrorism 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.

- People can get tularemia by being bitten by an infected tick, deerfly or other insect, handling infected animal carcasses, eating or drinking contaminated food or water, or breathing in the bacteria, F. tularensis. Tularemia is not known to be spread from person to person.

- Symptoms of tularemia could include sudden fever, chills, headaches, diarrhea, muscle aches, joint pain, dry cough, and progressive weakness. People can also catch pneumonia and develop chest pain, bloody sputum and can have trouble breathing and even sometimes stop breathing. Other symptoms of tularemia depend on how a person was exposed to the tularemia bacteria. These symptoms can include ulcers on the skin or mouth, swollen and painful lymph glands, swollen and painful eyes, and a sore throat.

- Symptoms usually appear 3 to 5 days after exposure to the bacteria, but can take as long as 14 days.

Preventive measures

- If you suspect you were exposed to tularemia bacteria, see a doctor immediately. 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. The disease can be fatal if it is not treated with the right antibiotics.

- People who have tularemia do not need to be isolated.

- Treatment with antibiotics for a period of 10-14 days or more after exposure may be recommended. Antibiotics should be used to prevent or treat tularemia only under the direction your health care provider or local health department. If you are given antibiotics, it is important to take them according to the instructions you receive. All of the medication you are given must be taken.

- Local and state health departments should be notified immediately so an investigation and infection control activities can begin.

Severe Acute Respiratory Syndrome (SARS)

What is SARS?

- Severe acute respiratory syndrome (SARS) is a viral respiratory illness caused by a coronavirus, called SARS-associated coronavirus (SARS-CoV). SARS was first reported in Asia in February 2003. Over the next few months, the illness spread to more than two dozen countries in North America, South America, Europe, and Asia before the SARS global outbreak of 2003 was contained.

How does SARS spread?

- The main way that SARS seems to spread is by close person-to-person contact. The virus that causes SARS is thought to be transmitted most readily by respiratory droplets (droplet spread) produced when an infected person coughs or sneezes. Droplet spread can happen when droplets from the cough or sneeze of an infected person are propelled a short distance (generally up to 3 feet) through the air and deposited on the mucous membranes of the mouth, nose, or eyes of persons who are nearby. The virus also can spread when a person touches a surface or object contaminated with infectious droplets and then touches his or her mouth, nose, or eye(s). In addition, it is possible that the SARS virus might spread more broadly through the air (airborne spread) or by other ways that are not now known.

What are the symptoms?

- The illness usually begins with a high fever (measured temperature greater than 100.4°F [>38.0°C]). The fever is sometimes associated with chills or other symptoms, including headache, general feeling of discomfort, and body aches. Some people also experience mild respiratory symptoms at the outset. Diarrhea is seen in approximately 10 to 20 percent of patients. After 2 to 7 days, SARS patients may develop a dry, nonproductive cough that might be accompanied by or progress to a condition in which the oxygen levels in the blood are low (hypoxia). In 10 to 20 percent of cases, patients require mechanical ventilation. Most patients develop pneumonia.

What does “close contact” mean?

- In the context of SARS, close contact means having cared for or lived with someone with SARS or having direct contact with respiratory secretions or body fluids of a patient with SARS. Examples of close contact include kissing or hugging, sharing eating or drinking utensils, talking to someone within 3 feet, and touching someone directly. Close contact does not include activities like walking by a person or briefly sitting across a waiting room or office.

How long is a person with SARS infectious to others?

- Available information suggests that persons with SARS are most likely to be contagious only when they have symptoms, such as fever or cough. Patients are most contagious during the second week of illness. However, as a precaution against spreading the disease, CDC recommends that persons with SARS limit their interactions outside the home (for example, by not going to work or to school) until 10 days after their fever has gone away and their respiratory (breathing) symptoms have gotten better.

Treatment for patients with SARS

- CDC recommends that patients with SARS receive the same treatment that would be used for a patient with any serious community-acquired atypical pneumonia. SARS-CoV is being tested against various antiviral drugs to see if an effective treatment can be found.

If there is another outbreak of SARS, how can I protect myself?

- If transmission of SARS-CoV recurs, there are some common-sense precautions that you can take that apply to many infectious diseases. The most important is frequent hand washing with soap and water or use of an alcohol-based hand rub. You should also avoid touching your eyes, nose, and mouth with unclean hands and encourage people around you to cover their nose and mouth with a tissue when coughing or sneezing.

Viral Hemorrhagic Fevers (VHF)

What are viral hemorrhagic fevers?

- Viral hemorrhagic fevers (VHFs) refer to a group of illnesses that are caused by several distinct families of viruses.

- In general, the term "viral hemorrhagic fever" is used to describe a severe multisystem syndrome (multisystem in that multiple organ systems in the body are affected). Characteristically, the overall vascular system is damaged, and the body's ability to regulate itself is impaired. These symptoms are often accompanied by hemorrhage (bleeding); however, the bleeding is itself rarely life-threatening. While some types of hemorrhagic fever viruses can cause relatively mild illnesses, many of these viruses cause severe, life-threatening disease.

- Some types of Viral Hemorrhagic Fevers include: Marburg Hemorrhagic Fever, Ebola Hemorrhagic Fever, Lassa Fever, Dengue Hemorrhagic Fever and Yellow Fever.

How are hemorrhagic fever viruses transmitted?

- Viruses causing hemorrhagic fever are initially transmitted to humans when the activities of infected reservoir hosts or vectors and humans overlap. The viruses carried in rodent reservoirs are transmitted when humans have contact with urine, fecal matter, saliva, or other body excretions from infected rodents. The viruses associated with arthropod vectors are spread most often when the vector mosquito or tick bites a human, or when a human crushes a tick. However, some of these vectors may spread virus to animals or livestock. Humans then become infected when they care for or slaughter the animals.

- Some viruses that cause hemorrhagic fever can spread from one person to another, once an initial person has become infected. Ebola, Marburg, Lassa and Crimean-Congo hemorrhagic fever viruses are examples. This type of secondary transmission of the virus can occur directly, through close contact with infected people or their body fluids. It can also occur indirectly, through contact with objects contaminated with infected body fluids (syringes, needles, etc.).

What are the symptoms of viral hemorrhagic fever illnesses?

- Specific signs and symptoms vary by the type of VHF, but initial signs and symptoms often include marked fever, fatigue, dizziness, muscle aches, loss of strength, and exhaustion. Patients with severe cases of VHF often show signs of bleeding under the skin, in internal organs, or from body orifices like the mouth, eyes, or ears. However, although they may bleed from many sites around the body, patients rarely die because of blood loss. Severely ill patient cases may also show shock, nervous system malfunction, coma, delirium, and seizures. Some types of VHF are associated with renal (kidney) failure.

How are patients with viral hemorrhagic fever treated?

Patients receive supportive therapy, but generally speaking, there is no other treatment or established cure for VHFs. Ribavirin, an anti-viral drug, has been effective in treating some individuals with Lassa fever or HFRS. Treatment with convalescent-phase plasma has been used with success in some patients with Argentine hemorrhagic fever.

How can cases of viral hemorrhagic fever be prevented and controlled?

- Prevention efforts must concentrate on avoiding contact with host species. If prevention methods fail and a case of VHF does occur, efforts should focus on preventing further transmission from person to person, if the virus can be transmitted in this way.

- Disease prevention efforts include controlling rodent populations; discouraging rodents from entering or living in homes or workplaces; encouraging safe cleanup of rodent nests and droppings; using insect repellant, proper clothing, bednets, window screens, and other insect barriers to avoid being bitten.

- Avoid close physical contact with infected people and their body fluids is the most important way of controlling the spread of disease.

West Nile Virus (WNV)

What Is West Nile Virus?

- West Nile virus (WNV) is a potentially serious illness. Experts believe WNV is established as a seasonal epidemic in North America that flares up in the summer and continues into the fall. This fact sheet contains important information that can help you recognize and prevent West Nile virus.

How Does West Nile Virus Spread?

- Most often, WNV is spread by the bite of an infected mosquito. Mosquitoes become infected when they feed on infected birds. Infected mosquitoes can then spread WNV to humans and other animals when they bite.
- In a very small number of cases, WNV also has been spread through blood transfusions, organ transplants, breastfeeding and even during pregnancy from mother to baby.
- WNV is not spread through casual contact such as touching or kissing a person with the virus.

What Are the Symptoms of WNV?

- *Serious Symptoms in a Few People.* About one in 150 people infected with WNV will develop severe illness. The severe symptoms can include high fever, headache, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, vision loss, numbness and paralysis. These symptoms may last several weeks, and neurological effects may be permanent.
- *Milder Symptoms in Some People.* Up to 20 percent of the people who become infected have symptoms such as fever, headache, and body aches, nausea, vomiting, and sometimes swollen lymph glands or a skin rash on the chest, stomach and back. Symptoms can last for as short as a few days, though even healthy people have become sick for several weeks.
- *No Symptoms in Most People.* Approximately 80 percent of people (about 4 out of 5) who are infected with WNV will not show any symptoms at all.

How Soon Do Infected People Get Sick?

- People typically develop symptoms between 3 and 14 days after they are bitten by the infected mosquito.

What Can I Do to Prevent WNV?

- The easiest and best way to avoid WNV is to prevent mosquito bites.
- When you are outdoors, use insect repellent containing an EPA-registered active ingredient. Follow the directions on the package.
- Many mosquitoes are most active at dusk and dawn. Be sure to use insect repellent and wear long sleeves and pants at these times or consider staying indoors during these hours.
- Make sure you have good screens on your windows and doors to keep mosquitoes out.
- Get rid of mosquito breeding sites by emptying standing water from flower pots, buckets and barrels. Change the water in pet dishes and replace the water in bird baths weekly. Drill holes in tire swings so water drains out. Keep children's wading pools empty and on their sides when they aren't being used.

How Is WNV Infection Treated?

- There is no specific treatment for WNV infection. In cases with milder symptoms, people experience symptoms such as fever and aches that pass on their own, although even healthy people have become sick for several weeks. In more severe cases, people usually need to go to the hospital where they can receive supportive treatment including intravenous fluids, help with breathing and nursing care.

Accidental Poisonings

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.
- Keep emergency numbers (including the Poison Control 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 Regional Center for Poison Control and Prevention Serving Massachusetts and Rhode Island 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.

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.

Carbon Monoxide (CO)

Each year, more than 500 Americans die from unintentional carbon monoxide poisoning.

What is Carbon Monoxide (CO)?

- Carbon monoxide, or CO, is an odorless, colorless gas that can cause sudden illness and death. Carbon monoxide is found in combustion fumes, such as those produced by cars and trucks, small gasoline engines, stoves, lanterns, burning charcoal and wood, and gas ranges and heating systems. Carbon monoxide from these sources can build up in enclosed or semi-enclosed spaces. People and animals in these spaces can be poisoned by breathing it.

What are the symptoms of Carbon Monoxide (CO) poisoning?

- The most common symptoms of carbon monoxide poisoning are headache, dizziness, weakness, nausea, vomiting, chest pain, and confusion. High levels of carbon monoxide ingestion can cause loss of consciousness and death.
- Unless suspected, carbon monoxide poisoning can be difficult to diagnose because the symptoms mimic other illnesses. People who are sleeping or intoxicated can die from carbon monoxide poisoning before ever experiencing symptoms.
- Certain groups - unborn babies, infants, and people with chronic heart disease, anemia, or respiratory problems - are more susceptible to its effects.

How should I install a CO detector/alarm?

- CO alarms should be installed according to the manufacturer's instructions. Make sure that any detector you purchase is approved and certified by a nationally recognized testing institute, such as Underwriters Laboratories (UL).
- Install a battery-operated carbon monoxide detector in your home in the hallway near every separate sleeping area of the home. CO alarms may be installed into a plug-in receptacle or high on the wall because CO from any source will be well-mixed with the air in the house. Make sure the detector cannot be covered up by furniture or draperies.

What to do if a CO detector/alarm sounds?

- Never ignore an alarming CO detector/alarm.
- If the detector/alarm sounds, call your emergency services (fire department or 911).
- Immediately move to fresh air - outdoors or by an open door/window.

Preventative Measures

- Seek prompt medical attention if you suspect carbon monoxide poisoning and are feeling dizzy, light-headed, or nauseous.
- Install a battery-operated carbon monoxide detector in your home. Check or replace the batteries on each carbon monoxide detector when you change the time on your clocks each spring and fall.
- Make sure all fuel-burning appliances are properly installed, maintained, and operated.
- Make sure furnaces, water heaters, and gas dryers are inspected annually by a qualified service technician. Make sure fireplace chimneys and flues are checked and cleaned every year.
- Make sure automobile exhaust systems are routinely inspected for defects. Make sure automobile tailpipes are routinely inspected for blockage by snow during the winter months.
- Never use a gas range or oven to heat a home. Never use a charcoal grill, hibachi, lantern, or portable camping stove inside a home, tent, or camper.
- Never run a generator, pressure washer, or any gasoline powered engine inside a basement, garage, or other enclosed structure, even if the doors and/or windows are open, unless the equipment is professionally installed and vented.
- Never run a motor vehicle, generator, pressure washer, or any gasoline powered engine outside of an open window or door where exhaust can vent into an enclosed area.
- Never leave a motor running in a vehicle parked in an enclosed or semi-enclosed space (ex. Garage).

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 battery powered/wind-up radio, 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.
- 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.

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.

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

Electricity

- 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.

Water

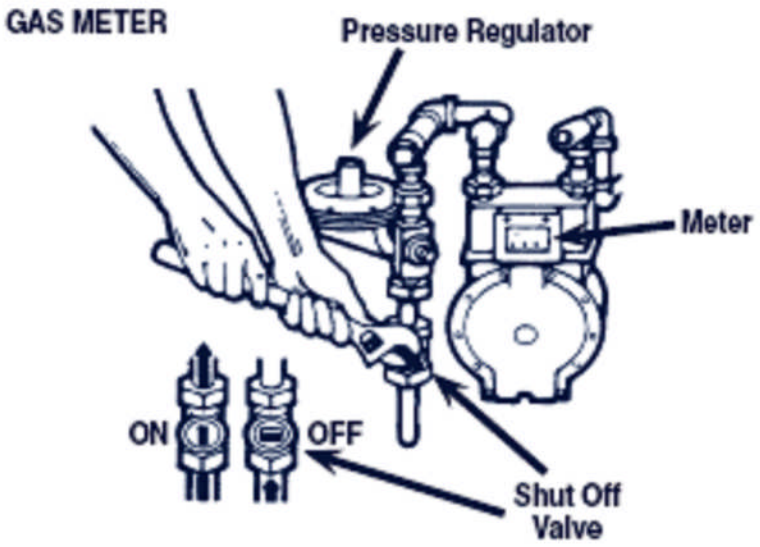
- Turn off water at the main meter or at the water main leading into the house. This will prevent contaminated water from entering your water heater and plumbing.
- Turn off the valve - turn to the right. This will require a special valve wrench, available from a hardware store. Make sure you have the tool readily available.

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.



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. Home-use (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).

- **Connect the equipment (cont.)** 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 (UL). 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.

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 fourteen 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

- You can use household bleach to kill microorganisms. Use only regular household bleach that contains 5.25 percent sodium hypochlorite.
- Do not use scented bleaches, color-safe bleaches or bleaches with added cleaners.
- Add 16 drops of bleach per gallon of water, stir and let stand 30 minutes. If the water does not have a slight bleach odor, repeat the dosage and let stand another 15 minutes.
- The only agent used to purify water should be household liquid bleach. Other chemicals, such as iodine or water treatment products sold in camping or surplus stores that do not contain 5.25 percent sodium hypochlorite as the only active ingredient, are not recommended and should not be used.

Earthquakes

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.
- Gather and Store Important Documents in a Fire-Proof Safe

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.

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 or use an Alcohol-based Hand Sanitizer 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 , newspaper, 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.

Hurricanes

The ingredients for a hurricane include a pre-existing weather disturbance, warm tropical oceans, moisture, and relatively light winds aloft. If the right conditions persist long enough, they can combine to produce the violent winds, incredible waves, torrential rains, and floods we associate with this phenomenon.

What is a Hurricane?

- A hurricane is a type of tropical cyclone, which is a generic term for a low pressure system that generally forms in the tropics. The cyclone is accompanied by thunderstorms and, in the Northern Hemisphere, a counterclockwise circulation of winds near the earth's surface. Tropical cyclones are classified as follows:

  - Tropical Depression is an organized system of clouds and thunderstorms with a defined surface circulation and maximum sustained winds* of 38 mph or less.
  - Tropical Storm is an organized system of strong thunderstorms with a defined surface circulation and maximum sustained winds of 39-73 mph.
  - Hurricane is an intense tropical weather system of strong thunderstorms with a well-defined surface circulation and maximum sustained winds of 74 mph or higher.

- Hurricanes are categorized according to the strength of their winds using the Saffir-Simpson Hurricane Scale. A Category 1 storm has the lowest wind speeds, while a Category 5 hurricane has the strongest. These are relative terms, because lower category storms can sometimes inflict greater damage than higher category storms, depending on where they strike and the particular hazards they bring.

What is a Hurricane Watch?

- A hurricane watch issued for your part of the coast indicates the possibility that you could experience hurricane conditions within 36 hours.
- This watch should trigger your family's disaster plan, and protective measures should be initiated, especially those actions that require extra time such as securing a boat, leaving a barrier island, etc.

What is a Hurricane Warning?

- A hurricane warning issued for your part of the coast indicates that sustained winds of at least 74 mph are expected within 24 hours or less. Once this warning has been issued, your family should be in the process of completing protective actions and deciding the safest location to be during the storm.

What to do in the event of a hurricane?

If you are asked to evacuate, you should do so without delay. That means that it is important for you and your family to have a plan that makes you as safe as possible in your home.

- Develop a family plan. You should keep a written plan and share your plan with other friends or family.
- Create a disaster supply kit. There are certain items you need to have regardless of where you ride out a hurricane. The disaster supply kit is a useful tool when you evacuate as well as making you as safe as possible in your home.
- Secure your home. There are things that you can do to make your home more secure and able to withstand stronger storms. A great time to start securing - or retrofitting - your house is when you are making other improvements or adding an addition. Remember: building codes reflect the lessons experts have learned from past catastrophes. Contact the local building code official to find out what requirements are necessary for your home improvement projects.

Windstorms

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 are 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-of-area 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.

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.

The National Oceanic and Atmospheric Administration (NOAA)

NOAA's primary mission and the ultimate goal of all its activities is to predict environmental changes on a wide range of time and space scales in order to protect life and property, and provide industry and government decision-makers with a reliable base of scientific information.

Before a Tsunami strikes

- Know the tsunami history and flooding elevation of your area.
- Learn the location of the nearest shelter/safe area and the safest route to shelter.
- Have emergency supplies for at least 7 days.
- Have family discussions about tsunamis and evacuation plans.

A tsunami watch

- A watch reports on conditions that may generate a tsunami.
- Listen to your radio, NOAA Weather Radio, or TV for updates on the watch.
- Locate family members and review evacuation plans.
- If you have special evacuation needs, consider early evacuation.
- Know well in advance what your safest evacuation route will be.
- Be prepared to evacuate.

A tsunami warning

- A warning reports that a tsunami has been generated.
- If on the beach or near the shoreline, evacuate to higher ground immediately.
- Closely monitor your local radio, NOAA Weather Radio, or TV for further information and instructions.
- Follow instructions issued by local officials.
- Evacuate coastal areas immediately if told to do so.
- Evacuate to higher ground or to upper levels of reinforced buildings.
- Never go down to the beach to watch for a tsunami.
- Wait for the “All Clear” before you return to the beach or to your home.
- All tsunamis, like hurricanes, are potentially dangerous even though they may not damage every coastline they strike.

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 are 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.
- 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.

Accidental Drowning

Each year, nationwide, about 300 children under 5 years old drown in swimming pools, usually a pool owned by their family. A third as many children under age 5 (an average of about 115 annually) drown from other hazards around the home as drown in pools.

Drowning

- Submersion incidents involving children usually happen in familiar surroundings.
- Child drowning is a silent death. There's no splashing to alert anyone that the child is in trouble. A young child can drown in just inches of water.
- Survival depends on rescuing the child quickly and restarting the breathing process, even while the child is still in the water. Seconds count in preventing death or brain damage.
- Pool submersions involving children happen quickly. A child can drown in the time it takes to answer a phone.
- About two-thirds of the drowning deaths in the home, not including pools, occur in bathtubs. Some of these bathtub drowning deaths happened when children were in bath seats or rings.
- Five (5) gallon buckets, often used for household chores, pose a serious threat to toddlers. Their tall, straight sides combined with their stability make it nearly impossible for top-heavy infants to free themselves when they topple in headfirst.
- Toilets are often overlooked as a drowning hazard in the home. The typical scenario involves a child under 3-years-old falling headfirst into the toilet.
- Spas and Hot Tubs pose another drowning hazard. A solar cover can allow babies to slip into the water while the cover appears to stay in place, hiding the child.
- Childhood drowning deaths also occur in other containers that may contain liquids, including coolers, sinks, fish tanks and landscape ponds.

Prevention

- Never leave a child unsupervised near a pool. Appoint a "designated watcher" to protect young children from pool accidents. Adults may take turns being the "watcher. " When adults become preoccupied, children are at risk.
- Do not consider young children to be drown proof because they have had swimming lessons. Do not use flotation devices as a substitute for supervision. Children must be watched closely while swimming.
- If a child is missing, check the pool first. Seconds count in preventing death or disability. Go to the edge of the pool and scan the entire pool, bottom and surface, as well as the pool area.
- Keep rescue equipment by the pool. Be sure a telephone is poolside with emergency numbers posted nearby.
- NEVER leave a baby or young children alone or with siblings in a bathtub even for a second, even if you are using a bath seat or ring. Always keep baby in arm's reach.
- Keep the toilet lid down, and keep young children out of the bathroom when unsupervised. Consider placing a latch on the bathroom door out of reach of young children.
- Be sure all containers that contain liquids are emptied immediately after use. Do not leave empty containers in yards or around the house where they may accumulate water and attract young children.
- Barriers and alarms are not childproof, but they provide layers of protection for a child who strays from supervision. Barriers include a fence or wall, door alarms for the house, and a power safety cover over the pool. Barriers also may be used to protect children from accessing hot tubs and spas.
- Never prop open the gate to a pool barrier.
- Learn CPR (cardiopulmonary resuscitation) - it can be a lifesaver.

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.
- All fuel-burning appliances are properly installed, maintained, and operated. Make sure your fireplace functions properly.
- Protect yourself from carbon monoxide (CO) poisoning by installing a battery-operated CO detector.
- Have appropriate cold weather clothing available.
- 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.
- 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 supply of water and non-perishable food that can be eaten without being cooked. Include a blanket or sleeping bag for each passenger, a batter powered/wind-up flashlight, batteries, cell phone, shovel, sack of sand, booster cables, flare, coffee can with lid and toilet paper.

Ice Safety

Ice, which may look safe on the surface for all to use, frequently is not. Every winter there are needless tragedies associated with unwise use of seemingly frozen bodies of water.

Ice

- Ice can be very dangerous, and people can be injured or killed. Ice on ponds, lakes and rivers can be affected by many things.
- Some ponds and rivers seldom experience the prolonged, sub-freezing temperature which are needed to form thick, solid ice.
- Factors which prevent the formation of thick ice include moving water (rivers and the outlets from lakes and ponds), the presence of unseen underwater springs (over which thick ice seldom forms), and in some areas, the addition of warmer water as a result of commercial activity.
- New ice is usually stronger than old ice. As ice ages, the bond between the crystals decays making it more dangerous and weaker even if melting has not occurred.
- Wind speeds influence ice formation. Light winds speed up the formation. Strong winds force water from beneath the ice and can decay the edges of the ice.
- Snow can insulate ice and keep it strong. It can also insulate it to keep it from freezing. When ice is covered by snow, great precautions need to be taken to determine ice thickness before starting any activity. Snow can also hide cracked, weak and open water areas.
- Slush is a danger sign. It indicates that ice is no longer freezing from the bottom and indicates weak or deteriorated ice.
- Ice can change with the surrounding climate conditions. Temperature, precipitation (such as snow, sleet, rain), wind speed, ice age, water depth and water quality are all factors that affect ice strength and thickness.
- ***The only "safe" ice is at a skating arena.***

Prevention

- The strength and thickness of the ice should be known before any activities take place on it. To determine what activities can safely take place, a rough rule of thumb is given in the chart:

Inches*	Activities
2	Walking
4	Fishing
5	Snowmobiles

*Inches of new, clear ice.

Note: River ice is usually 15% weaker than pond or lake ice

- People should never skate on a pond or in an area where skating is not designated. Snowmobiles should never be driven onto frozen rivers or ponds. Cross-country skiers should not venture out onto these surfaces either.
- In addition, never let your dog run onto the ice and never walk your dog near a frozen river, lake, or pond without having the dog on a leash.

What if someone falls through the ice?

- ***Act quickly and call 911 for help immediately.*** Make sure properly trained and equipped rescue personnel are alerted to respond.
- ***DO NOT go out onto the ice.*** Many times would-be rescuers become victims themselves.
- ***Reach, Throw or Row.*** Extend a branch, pole or ladder to the victim. Throw them a buoyant object such as a life ring or float tied to a rope. If a boat is nearby row out to the victim or push it toward them.

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