

SWEETWATER NOLAN COUNTY HEALTH DEPARTMENT

CBRNE-Chemical, Biological, Radiation, Nuclear, or Explosive Hazards

August 2017

CBRNE (pronounced “SEE-burn”) is an acronym for Chemical, Biological, Radiological, Nuclear, and Explosive materials. These materials are very dangerous, and can hurt many people. When they are used on purpose, CBRNE materials are weapons of mass destruction. However, CBRNE events can also happen accidentally.

Types of CBRNE weapons include:

Chemical: The main types of chemical weapons are nerve agents, which attack the central nervous system. Examples include types of pesticides called organophosphates; sarin; and VX. Blister agents, which cause burns and blisters both inside and outside of the body. Examples include the mustard gases. Blood agents, which make it possible for the blood to carry oxygen to the body. The most common blood agents are made with cyanide. Choking agents, which attack the lungs and make them fill with fluid. This makes breathing impossible. Examples include chlorine gas and phosgene. Incapacitating agents, which are designed to hurt a large number of people, and make it impossible for them to fight back, but without killing them. Examples include tear gas and pepper spray.

Biological: The goal of biological weapons is to get as many people sick with infectious diseases as possible. Types of biological weapons include: Bacteria, like bacteria that cause anthrax and plague. Viruses, like the ones that cause smallpox, Ebola, and the flu. Toxins (poisons made by living things), like ricin, botulism toxin, and aflatoxin.

Radiological: A radiological weapon is any kind of weapon that spreads radiation. Examples would be a dirty bomb (a regular bomb which spreads radioactive material) or poisoning food or water supplies with radioactive contamination.

Nuclear: A nuclear weapon releases a huge amount of energy in a nuclear explosion, Nuclear weapons can kill everyone in a city and make many other people who survive sick with radiation poisoning.

Although many countries have tested nuclear weapons, they have only been used as weapons of mass destruction twice, and that was during World War II. 60,000 to 80,000 people were killed and many more later died from radiation sickness and cancer caused by radiation. After these bombings, many countries agreed to get rid of their nuclear bombs, however, some countries still have nuclear bombs, and there is nuclear material around the world that is not guarded.

Explosives: Explosive weapons include things like regular bombs and improvised explosive devices (IEDs). Terrorist have often used IEDs to kill and injure soldiers in Iraq. In some other countries, like Israel, terrorists attach bombs to their bodies and make them explode in public places, killing many people as well as themselves.

Accidental CBRNE events:

Examples of **accidental CBRNE** events include:

Chemical: Accidental chemical spills (like an oil spill, or a dangerous chemical leaking out of a laboratory).

Biological: Outbreaks of infectious disease (like a flu epidemic).

Radiological: Accidental spills of radioactive chemicals in laboratories or hospitals (like a spill of uranium nitrate, which is used to look at viruses under an electron microscope); therapy.

Nuclear: Accidents at nuclear power plants like Chernobyl and Three Mile Island.



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Explosive: A person who is on oxygen for breathing problems lights a cigarette and accidentally blows up her entire apartment building.

Take 3 Actions to Fight the Flu

Flu Season is approaching. The CDC (Centers for Disease Control and Prevention, says "Take 3" Actions to Fight the Flu. Flu is a serious contagious disease that can lead to hospitalization and even death. CDC urges you to take the following actions to protect yourself and others from influenza (the flu).

Step One:

Take time to get a flu vaccine. CDC recommends a yearly flu vaccine as the first and most important step in protecting against flu viruses. While there are many different flu viruses, a vaccine protects against the viruses that research suggests will be the most common. Flu vaccine can reduce flu illnesses, doctors' missed work and school due to flu, as well as prevent flu-related hospitalizations. Everyone 6 months of age and older should get a flu vaccine by the end of October, if possible. Vaccination of high risk of serious flu complications include young children, pregnant women, people with certain chronic health conditions like asthma, diabetes or heart and lung disease and people 65 years and older. Vaccination also is important for health care workers, and other people who live with or care for high risk people to keep from spreading flu to them. Children younger than six months of age are at high risk of serious flu illness, but are too young to be vaccinated. People who care for infants should be vaccinated instead.



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Step Two:

Take everyday preventive actions to stop the spread of germs. Try to avoid close contact with sick people. While sick, limit contact with others as much as possible to keep from infecting them. If you are sick with flu symptoms, CDC recommends that you stay home for at least 24 hours after your fever is gone except to get medical care or for other necessities. (Your fever should be gone for 24 hours without the use of a fever reducing medicine.)

Cover your nose and mouth with a tissue when you cough or sneeze. Throw the tissue in

the trash after you use it. Wash your hands often with soap and water. If soap is not available, use an alcohol-based hand rub. Avoid touching your eyes, nose and mouth. Germs spread this way. Clean and disinfect surfaces and objects that may be contaminated with germs like the flu.

Step 3

Take flu antiviral drugs if your doctor prescribes them. If you get the flu, antiviral drugs can be used to treat your illness. Antiviral drugs are different from antibiotics. They are prescription medicines (pills, liquid or an inhaled powder) and are not available over-the-counter. Antiviral drugs can make illness milder and shorten the time you are sick. They may also prevent serious flu complications. For people with high risk factors, treatment with an antiviral drug can mean the difference between having milder illness versus a very serious illness that could result in a hospital stay.

Studies show that flu antiviral drugs work best for treatment when they are started within 2 days of getting sick, but starting them later can still be helpful, especially if the sick person has a high risk factor or is very sick from the flu. Flu symptoms include fever, cough, sore throat, runny nose, body aches, headache, chills and fatigue. Some people also may have vomiting and diarrhea. People may be infected with the flu, and have respiratory symptoms without a fever.

Immunization Clinic Hours for SNCHD

The Sweetwater Nolan County Health Department offers an immunization clinic each Wednesday, from 8-11:30 am and 1:00-4:30 pm. Every second Wednesday of the month, the immunization clinic stays open until 6 pm. We take Medicaid and CHIPs for children and we also accept children who have no private insurance. **Children who do have private insurance will need to see their private physician.** If children are uninsured, there is a fee of \$10 per child for vaccines. We also offer vaccines to adults with no private insurance.



Back To School Safety Tips

As summer draws to a close and children start heading back to school, family life can get pretty hectic. It's important to remember and share with your children some keys that will help them stay safe and healthy throughout the school year.

Whether children walk, ride their bikes, or take the bus to school, it is vitally important that they and the motorists around them take proper safety precautions.

Walkers:

Walk on the sidewalk; if there is no sidewalk and you must walk in the street, walk facing traffic.

Before crossing the street, stop and look left, right and left again to see if cars are coming.

Never dart out in front of a parked car

Parents: Practice walking to school with your child, crossing streets at crosswalks when available

Never walk while texting or talking on the phone

Do not walk while using headphones



Bike Riders:

Always wear a helmet that is fitted and secured properly

Children need to know the rules of the road: Ride single file on the right side of the road, come to a complete stop before crossing that street and walk the bike across.

Watch for opening car doors and other hazards

Use hand signals when turning

Wear bright-colored clothing

Bus Riders:

Teach children the proper way to get on and off the bus

Line up 6 feet away from the curb as the bus approaches

If seat belts are available, buckle up!

Wait for the bus to stop completely before standing

Do not cross in front of the bus if possible, or walk at least 10 feet ahead until you can see the other drivers

Drivers, share the road

Don't block crosswalks

Yield to pedestrians in crosswalks, and take extra care in school zones

Never pass a vehicle

Never pass a bus

The area 10 feet
most dangerous for
back to allow them to



stopped for pedestrians

loading or unloading children

around a school bus is the
children; stop far enough
safely enter and exit the bus

Teen Drivers:

Teens crash most often because they are inexperienced. They struggle judging gaps in traffic, driving the right speed for conditions and turning safely, among other things. As your teen becomes a new driver, learn more about when you can do as a parent to keep them safe.

Here's to hoping everyone has a safe and productive school year!

This newsletter is brought to you by the **Sweetwater Nolan County Health Department**

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