

# Public Health Emergency Preparedness

## BRAZORIA COUNTY HEALTH DEPARTMENT

# PUBLIC HEALTH MATTERS

April 2010



### MISSION STATEMENT

BRAZORIA COUNTY WILL BE PREPARED FOR AND READY TO RESPOND TO A HEALTH AND MEDICAL EVENT DUE TO EITHER A MAN-MADE OR NATURAL DISASTER

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## National Public Health Week – April 5-11



PHEP offered free H1N1 Vaccine to first responders and the public from our Mobile

### H1N1 STILL AROUND

Even though H1N1 (a.k.a. “Swine Flu”) is no longer front-page news, PHEP is continuing vaccination efforts. PHEP along with all our community partners have provided vaccination opportunities for the entire county from Freeport to Sweeny to Pearland administering almost 8,000 vaccinations.. We are now in the process of offering on-site, free H1N1 vaccination opportunities to mid-to large-sized businesses. If your company is interested, give us a call.

### HISTORY OF INFECTIOUS DISEASES IN BRAZORIA COUNTY

*THE REPUBLICAN Brazoria, March 14, 1835 Brazoria County Historical Museum*

“We have been informed by a Medical gentleman of this place that a Mr. Dor arrived to-day from Matagorda, having in his possession Vaccine matter, which he refuses to furnish our Physicians with unless they pay 150 dollars for a single scab; and also that he charges five dollars for vaccination. We are not personal in our remark but we think such imposition at the present crisis ought to be held up to public notice.”

### COMMUNITY IMMUNITY—DO YOUR PART



It was a family affair for the H1N1 Vaccine.

### H1N1 Possibly on the RISE in Houston

HOUSTON -- Doctors at Texas Children's Hospital say they've seen another rise in the number of swine flu cases they've had to handle, and they're warning the public that the H1N1 virus has not gone away. They've had one swine-flu-related death this month, and a 3-month-old child is currently being treated in the intensive-care unit because of the virus. Ron Trevino / 11 News

1918 SIXTY DIE OF INFLUENZA AT STATE INSANE ASYLUM  
Austin, Tex., Nov. 4.—The influenza epidemic which raged in the State Insane Asylum in this city, after taking a toll of sixty lives, has abated and conditions are back to normal, according to Dr. John Preston, 'superintendent of the institution. Fifteen hundred of the inmates of the institution were stricken with the disease. Reports here are that there are 700 cases of influenza in the insane asylum at Terrell.  
[The Bartlett Tribune and News (Bartlett, Tex.), Vol. 33, No. 22, Ed. 1, Friday, November 8, 1918 - Submitted by Janice Rice]

# Chemical Agents: Facts About Sheltering in Place

## What “sheltering in place” means

Some kinds of chemical accidents or attacks may make going outdoors dangerous. Leaving the area might take too long or put you in harm’s way. In such a case it may be safer for you to stay indoors than to go outside.

“Shelter in place” means to make a shelter out of the place you are in. It is a way for you to make the building as safe as possible to protect yourself until help arrives. You should not try to shelter in a vehicle unless you have no other choice. Vehicles are not airtight enough to give you adequate protection from chemicals.

Every emergency is different and during any emergency people may have to evacuate or to shelter in place depending on where they live.

## How to prepare to shelter in place

Choose a room in your house or apartment for the shelter. The best room to use for the shelter is a room with as few windows and doors as possible. A large room with a water supply is best—something like a master bedroom that is connected to a bathroom. For most chemical events, this room should be as high in the structure as possible to avoid vapors (gases) that sink. This guideline is different from the sheltering-in-place technique used in tornadoes and other severe weather and for nuclear or radiological events, when the shelter should be low in the home.

You might not be at home if the need to shelter in place ever arises, but if you are at home, the following items, many of which you may already have, would be good to have in your shelter room:

- First aid kit
- Flashlight, battery-powered radio, and extra batteries for both
- A working telephone
- Food and bottled water. Store 1 gallon of water per person in plastic bottles as well as ready-to-eat foods that will keep without refrigeration in the shelter-in-place room. If you do not have bottled water, or if you run out, you can drink water from a toilet tank (not from a toilet bowl). Do not drink water from the tap.
- Duct tape and scissors
- Towels and plastic sheeting. You may wish to cut your plastic sheeting to fit your windows and doors before any emergency occurs.

## How to know if you need to shelter in place

Most likely you will only need to shelter for a few hours.

If there is a “code red” or “severe” terror alert, you should pay attention to radio and television broadcasts to know right away whether a shelter-in-place alert is announced for your area.

You will hear from the local police, emergency coordinators, or government on the radio and on television emergency broadcast system if you need to shelter in place.

## What to do

Act quickly and follow the instructions of your local emergency coordinators such as law enforcement personnel, fire departments, or local elected leaders. Every situation can be different, so local emergency coordinators might have special instructions for you to follow. In general, do the following:

Go inside as quickly as possible. Bring any outdoor pets indoors. If there is time, shut and lock all outside doors and windows. Locking them may pull the door or window tighter and make a better seal against the chemical. Turn off the air conditioner or heater. Turn off all fans, too. Close the fireplace damper and any other place that air can come in from outside.

Go in the shelter-in-place room and shut the door. Turn on the radio. Keep a telephone close at hand, but don’t use it unless there is a serious emergency.

Sink and toilet drain traps should have water in them (you can use the sink and toilet as you normally would). If it is necessary to drink water, drink stored water, not water from the tap.

Tape plastic over any windows in the room. Use duct tape around the windows and doors and make an unbroken seal. Use the tape over any vents into the room and seal any electrical outlets or other openings.

If you are away from your shelter-in-place location when a chemical event occurs, follow the instructions of emergency coordinators to find the nearest shelter. If your children are at school, they will be sheltered there. Unless you are instructed to do so, do not try to get to the school to bring your children home. Transporting them from the school will put them, and you, at increased risk.

Listen to the radio for an announcement indicating that it is safe to leave the shelter.

When you leave the shelter, follow instructions from local emergency coordinators to avoid any contaminants outside. After you come out of the shelter, emergency coordinators may have additional instructions on how to make the rest of the building safe again.

For more information about sheltering in place

State and local health departments

Centers for Disease Control and Prevention

Public Response Hotline (CDC) : [www.cdc.gov](http://www.cdc.gov)

800-CDC-INFO or 888-232-6348 (TTY)



# VOLUNTEER AND TRAINING OPPORTUNITIES



Pearland Area Citizens Corps recruiting volunteers and providing information at the First Responders Appreciation Day on Saturday, March 27th.



Citizen Corps is FEMA's grassroots strategy to bring together government and community leaders to involve citizens in all-hazards emergency preparedness and resilience.

Citizen Corps asks you to embrace the personal responsibility to be prepared; to get training in first aid and emergency skills; and to volunteer to support local emergency responders, disaster relief, and community safety.

There are currently **2,430** Councils which serve **227,420,866** people or **80%** of the total U.S. population.

Brazoria County has two Citizen Corps groups:



Volunteers make it happen! These volunteers operated the West of the Brazos H1N1 Vaccine Program.

## **Brazoria County has two Citizen Corps groups:**

**Pearland Area Citizen Corps**

<http://www.citizencorps.gov/cc/showEvent?id=19090> 281-997-9777

**Brazoria County Citizens Corps**

<http://homelandpreparedness.org/>  
281-844-3653



**For training opportunities,  
visit their websites or call.**



**Volunteers at work at the West of the Brazos H1N1 Vaccine Program.**

# terrorism: RICIN

Ricin is a poison found naturally in castor beans. If castor beans are chewed and swallowed, the released ricin can cause injury. Ricin can be made from the waste material left over from processing castor beans.

It can be in the form of a powder, a mist, or a pellet, or it can be dissolved in water or weak acid. It is a stable substance under normal conditions, but can be inactivated by heat above 80 degrees Centigrade.

Castor beans are processed throughout the world to make castor oil. Ricin is part of the waste "mash" produced when castor oil is made. Ricin has been used experimentally in medicine to kill cancer cells.

It would take a deliberate act to make ricin and use it to poison people. Accidental exposure to ricin is highly unlikely, except through the ingestion of castor beans. If made into a partially purified material or refined into a terrorist or warfare agent, ricin could be used to expose people through the air, food, or water.

In 1978, Georgi Markov, a Bulgarian writer and journalist who was living in London, died after he was attacked by a man with an umbrella. The umbrella had been rigged to inject a poison ricin pellet under Markov's skin. In the 1940s the U.S. military experimented with using ricin as a possible warfare agent. In some reports ricin has possibly been used as a warfare agent in the 1980s in Iraq and more recently by terrorist organizations.

Ricin poisoning is not contagious. It cannot be spread from person to person through casual contact.

Ricin works by getting inside the cells of a person's body and preventing the cells from making the proteins they need. Without the proteins, cells die. Eventually this is harmful to the whole body, and death may occur. Effects of ricin poisoning depend on whether ricin was inhaled, ingested, or injected.

The major symptoms of ricin poisoning depend on the route of exposure and the dose received, though many organs may be affected in severe cases. Initial symptoms of ricin poisoning by inhalation may occur within 8 hours of exposure. Following ingestion of ricin, initial symptoms typically occur in less than 6 hours.

**Inhalation:** Within a few hours of inhaling significant amounts of ricin, the likely symptoms would be respiratory distress (difficulty breathing), fever, cough, nausea, and tightness in the chest. Heavy sweating may follow as well as fluid building up in the lungs (pulmonary edema). This would make breathing even more difficult, and the skin might turn blue. Excess fluid in the lungs would be diagnosed by x-ray or by listening to the chest with a stethoscope. Finally, low blood pressure and respiratory failure may occur, leading to death. In cases of known exposure to ricin, people having respiratory symptoms that started within 12 hours of inhaling ricin should seek medical care.

**Ingestion:** If someone swallows a significant amount of ricin, he or she would develop vomiting and diarrhea that may become bloody. Severe dehydration may be the result, followed by low

blood pressure. Other signs or symptoms may include hallucinations, seizures, and blood in the urine. Within several days, the person's liver, spleen, and kidneys might stop working, and the person could die.

Death from ricin poisoning could take place within 36 to 72 hours of exposure, depending on the route of exposure (inhalation, ingestion, or injection) and the dose received. If we suspect that people have inhaled ricin, a potential clue would be that a large number of people who had been close to each other suddenly developed fever, cough, and excess fluid in their lungs. These symptoms could be followed by severe breathing problems and possibly death.

In suspected situations where ricin may have been disseminated, preliminary environmental testing by public health or law enforcement authorities may detect ricin in powders or materials released into the immediate environment. Persons occupying such areas may initially be observed for signs of ricin poisoning. No widely available, reliable medical test exists to confirm that a person has been exposed to ricin.

Because no antidote exists for ricin, the most important factor is avoiding ricin exposure in the first place. If exposure cannot be avoided, the most important factor is then getting the ricin off or out of the body as quickly as possible.

Symptomatic ricin poisoning is treated by giving victims supportive medical care to minimize the effects of the poisoning. The types of supportive medical care would depend on several factors, such as the route by which victims were poisoned (that is, whether poisoning was by inhalation, ingestion, or skin or eye exposure). Care could include such measures as helping victims breathe, giving them intravenous fluids (fluids given through a needle inserted into a vein), giving them medications to treat conditions such as seizure and low blood pressure, flushing their stomachs with activated charcoal (if the ricin has been very recently ingested), or washing out their eyes with water if their eyes are irritated.

How you can protect yourself, and what to do if you are exposed to ricin? First, get fresh air by leaving the area where the ricin was released. If the ricin release was outside, move away from the area where the ricin was released. If the ricin release was indoors, get out of the building.

If you are near a release of ricin, emergency coordinators may tell you to either evacuate the area or to "shelter in place" inside a building to avoid being exposed to the chemical.

If you think you may have been exposed to ricin, you should remove your clothing, rapidly wash your entire body with soap and water, and get medical care as quickly as possible. Quickly take off clothing that may have ricin on it. Any clothing that has to be pulled over the head should be cut off the body instead of pulled over the head. If you are helping other people remove their clothing, try to avoid touching any contaminated areas, and remove the clothing as quickly as possible.

Continued.....page 5

**Skin and eye exposure:** Ricin is unlikely to be absorbed through normal skin. Contact with ricin powders or products may cause redness and pain of the skin and the eyes.

As quickly as possible, wash any ricin from your skin with large amounts of soap and water. Washing with soap and water will help protect people from any chemicals on their bodies.

If your eyes are burning or your vision is blurred, rinse your eyes with plain water for 10 to 15 minutes. If you wear contacts, remove them and put them with the contaminated clothing. Do not put the contacts back in your eyes (even if they are not disposable contacts). If you wear eyeglasses, wash them with soap and water. You can put your eyeglasses back on after you wash them.

After you have washed yourself, place your clothing inside a plastic bag. Avoid touching contaminated areas of the clothing. If you can't avoid touching contaminated areas, or you aren't sure where the contaminated areas are, wear rubber gloves,

turn the bag inside out and use it to pick up the clothing, or put the clothing in the bag using tongs, tool handles, sticks, or similar objects. Anything that touches the contaminated clothing should also be placed in the bag. If you wear contacts, put them in the plastic bag, too.

Seal the bag, and then seal that bag inside another plastic bag. Disposing of your clothing in this way will help protect you and other people from any chemicals that might be on your clothes.

When the local or state health department or emergency personnel arrive, tell them what you did with your clothes. The health department or emergency personnel will arrange for further disposal. Do not handle the plastic bags yourself.

If someone has ingested ricin, do not induce vomiting or give fluids to drink. Seek medical attention right away. Dial 911 and explain what has happened. <http://www.bt.cdc.gov/agent/ricin/facts.asp>

**WANT MORE INFORMATION?**

There are two great resources available that provide information on toxic substances and radiation events. The first is WISER, and it is available as a download on Palms and PDAs, as well as via the web for those with Blackberries. The web address is: <http://webwiser.nlm.nih.gov>. This site allows one to choose a role and situation in order to view possible symptoms, exposure agents, and treatments. The second resource is Radiation Event Medical Management. The web address is: <http://www.remm.nlm.gov>. The site provides endless information to many different audiences, educating them on the appropriate intervention in the event of radiation exposure. In the coming months, we will be featuring more information about these two programs and their capabilities.

**ZOONOSIS:** (zo"o-no'sis) ——— A zoonosis is any infectious disease that can be transmitted from non-human animals, both wild and domestic, to humans or from humans to non-human animals. Many serious diseases fall under this category.

The West Nile virus appeared in the United States in 1999 in the New York City area and moved through the country in the summer of 2002, causing much distress. Bubonic plague is a zoonotic disease, as are Salmonella, Rocky Mountain Spotted Fever, and Lyme Disease.

Many modern diseases, even epidemic diseases, started out as zoonotic diseases. It is hard to be certain which diseases jumped from other animals to humans, but there is good evidence that measles, small pox, influenza, HIV and diphtheria came to us this way. The common cold and tuberculosis may also have started in other species.

A partial list of agents that can carry infectious organisms that may be zoonotic includes:

Bats	Geese	Rabbits
Birds	Goats	Raccoons
Cats	Hamsters	Rats
Cattle	Horses	Rodents
Chimpanzees	Mice	Sloths
Dogs	Monkeys	Sheep
Fish	Mosquitoes	Snails
Fleas	Opposums	Ticks
Flies	Pigs	Wolves

**Partial list of zoonoses:**

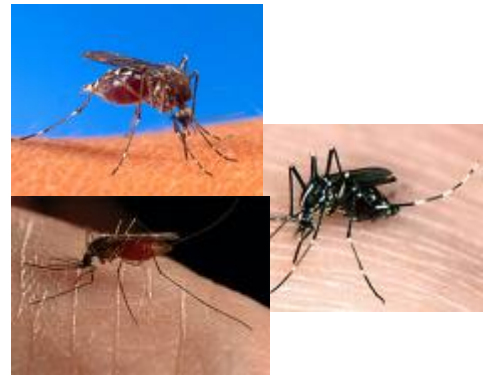
- Anthrax
- Babesiosis
- Bird Flu
- Brucellosis
- Campylobacter infections
- Cholera
- Dengue fever
- Equine encephalitis
- Foot and mouth disease
- Jail fever
- Lyme Disease
- Malaria
- Parrot fever
- Plague
- Rabies
- Salmonellosis
- SARS
- Tularemia
- West Nile fever
- Yellow fever

For a more detailed list go to

[www.veterinary-public-health.de/...e/.../liste\\_zoonosen\\_e.htm](http://www.veterinary-public-health.de/...e/.../liste_zoonosen_e.htm)

# The BUZZ . . . . .

A cooperative effort by the Brazoria County Mosquito Control and Brazoria County Public Health Emergency Preparedness



Mosquito is Spanish for "little fly".

## How Mosquitoes Work by [Craig Freudenrich, Ph.D.](#)

Mosquitoes are insects that have been around for more than 30 million years. And it seems that, during those millions of years, mosquitoes have been honing their skills so that they are now experts at finding people to bite. Mosquitoes have a battery of sensors designed to track their prey, including:

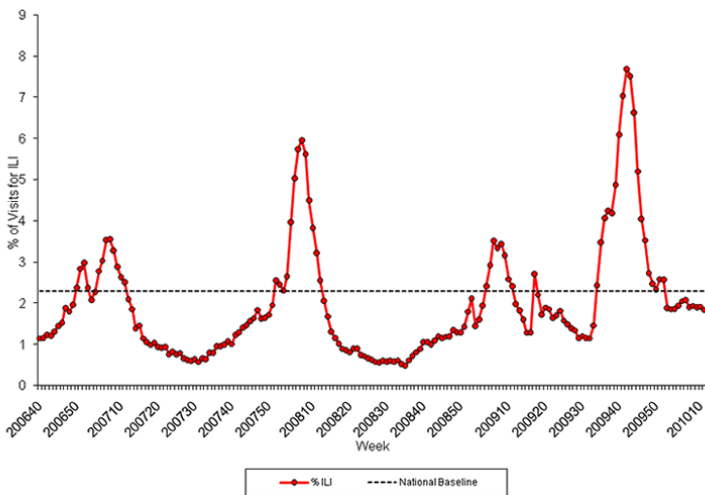
- **Chemical sensors** - mosquitoes can sense carbon dioxide and lactic acid up to 100 feet (36 meters) away. Mammals and birds give off these gases as part of their normal breathing. Certain chemicals in sweat also seem to attract mosquitoes (people who don't sweat much don't get nearly as many mosquito bites).
- **Visual sensors** - if you are wearing clothing that contrasts with the background, and especially if you move while wearing that clothing, mosquitoes can see you and zero in on you. It's a good bet that anything moving is "alive", and therefore full of blood, so this is a good strategy.
- **Heat sensors** - Mosquitoes can detect heat, so they can find warm-blooded mammals and birds very easily once they get close enough.

Something with this many sensors sounds more like a military aircraft than an insect. That's why mosquitoes are so good at finding and biting you. One of the only ways to stop mosquitoes from finding you is to confuse their chemical receptors with something like DEET. [www.howstuffworks.com](http://www.howstuffworks.com)

## Can you tell them apart?

There are more than 2,700 species of mosquitoes in the world and 80 are found in Brazoria County. Can you tell the difference?

- **Aedes** - These are sometimes called "floodwater" mosquitoes because flooding is important for their eggs to hatch. *Aedes* mosquitoes have abdomens with pointed tips. They include such species as the yellow-fever mosquito (*Aedes aegypti*) and the Asian tiger mosquito (*Aedes albopictus*). They are strong fliers, capable of travelling great distances (up to 75 miles/121 km) from their breeding sites. They persistently bite mammals (especially humans), mainly at dawn and in the early evening. Their bites are painful.
- **Anopheles** - These tend to breed in bodies of permanent fresh water. *Anopheles* mosquitoes also have abdomens with pointed tips. They include several species, such as the common malaria mosquito (*Anopheles quadrimaculatus*), that can spread malaria to humans.
- **Culex** - These tend to breed in quiet, standing water. *Culex* mosquitoes have abdomens with blunt tips. They include several species such as the northern house mosquito (*Culex pipiens*). They are weak fliers and tend to live for only a few weeks during the summer months. They persistently bite (preferring birds over humans) and attack at dawn or after dusk. Their bite is painful.





Presented By




**2010 Women's Health Conference**

May 19, 2010 • 8:00 am – 4:00 pm

Corporate Learning Center  
500 College Drive, Lake Jackson

**Keynote Speaker:**  
**Linda Armstrong Kelly**  
(Mother of Lance Armstrong)

A Day for Women, About Women  
• Seminars • Screenings • Networking

For more information please call 979.230.3636  
Registration begins March 1st.  
Go to [www.brazosport.edu/ce](http://www.brazosport.edu/ce) or call 979.230.3600.

## Brazoria County-Reportable Diseases

### DISEASES REPORTED TO BRAZORIA COUNTY HEALTH DEPARTMENT BY MONTH FOR 2010

Reportable Diseases	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Bacterial Meningitis													0
Campylobacteriosis	1	4	2										7
Chlamydia	19	10	7										36
Clostridium difficile		1											1
Cryptosporidiosis													0
Dengue													0
Gonorrhea	6	3	1										10
Guardiasis													0
Haemophilus Influenza		1	1										2
Hepatitis A, acute	2		2										4
Hepatitis B, acute	2	2											4
Hepatitis C, acute	11	4	1										16
HIV infection, Adult													0
Invasive Group A Strep			1										1
Invasive Group B Strep			2										2
Legionellosis													0
Lyme Disease													0
Malaria													0
Meningitis (Viral)	1												1
Pertussis													0
Salmonellosis	4	5	3										12
Shigellosis													0
Streptococcus pneumoniae, invasive	5	3	2										10
Syphilis	2												2
Tuberculosis	1	1											2
Varicella -Chicken Pox	11	1	1										13
West Nile Virus													0

*“No health department, state or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.”*

—Public Health Reports, 1946

Specified diseases and conditions are mandated by State laws and regulations to be reported to the local health department. Report by email (info@brazoria-county.com), fax (979-864-1501) or phone (979-864-1166).

#### **PHEP TEAM**

Leo D. O’Gorman , MD, MPH	Health Authority
Jo Mapel, RN, BSN, MPH	Team Leader
Jan Prejean, RN	Disease Surveillance
Barbara Perkins	Facilitator
	SNS Coordinator
Tamara Tisdale	Office Manager
Chasey Reed-Boston	H1N1 Project Manager
Stephanie Smith	H1N1 Facilitator

#### **CONTACT US**

**432 E. Mulberry      Angleton, Tx 77515**  
**979-864-1166      Fax: 979-864-3694**

**WE’RE ON THE WEB**

**[www.PublicHealthMatters.net](http://www.PublicHealthMatters.net)**