When a serious injury occurs, you have to think and act quickly. Medical assistance may be only minutes away, but sometimes seconds count. What you do in those first few seconds and minutes can make the difference between life and death. Quick, calm, and correct action can make all the difference.

“First aid” is emergency care given to the sick or injured before medical personnel arrive. That’s why a knowledge of first aid and CPR, or cardiopulmonary resuscitation, is so important. And that’s why you’re participating in this session today.

The purpose of this session is to provide you with a basic overview of first-aid techniques and priorities. It is not the same as a first-aid and CPR certification course. A certification course is much more detailed and offers you the opportunity to practice first-aid and CPR skills as well as to provide you with hours of classroom training.

We urge you to take a course and get certified. Taking a certification course will give you the full knowledge and confidence you need to use first-aid skills on the job, at home, and elsewhere in your community.

In the meantime, the information in this session can help you better handle medical emergencies when you are the first or only person on the scene.
The main purpose of this session is to familiarize you with basic first-aid procedures. By the time the session is over, you should be able to:

- Recognize the benefits of obtaining first-aid and CPR certification;
- Identify proper procedures for a variety of medical emergencies;
- Assist in administering first aid when a co-worker is injured; and
- Do no further harm.
Before we get started, let’s see how much you already know about first aid. Decide if each of the statements on the screen is true or false.

- After an accident, immediately move the victim to a comfortable position.
- If a person is bleeding, use a tourniquet.
- Signs of a heart attack include shortness of breath, anxiety, and perspiration.
- All burns can be treated with first aid alone; no emergency medical attention is necessary.

How did you do? Did you get all the answers right?

During the session, you’ll learn more about these first-aid issues and a lot more.
Just imagine:

• A co-worker is hurt in an accident and blood is gushing from the wound.
• One of your friends chokes on a piece of food and can’t breathe.
• Someone goes into cardiac arrest right at his workstation.

Any one of these things is possible, and it could happen any time. If it did, you’d have to act fast. A few critical minutes one way or the other could make the difference between life and death. Would you be ready to act with speed and competence in a workplace medical emergency?

There are medical emergencies in workplaces across the country every day. Situations calling for first aid range from burns to cuts and amputations, eye injuries, chemical overexposures, and much more.

Do you know how to report a workplace medical emergency? Besides calling 911, you also need to notify a supervisor or manager and provide as much information as you can about the accident.
Every medical emergency is different, of course, but there are four basic rules that apply to all medical emergencies.

• One, call for medical help immediately. An employee on the scene should call 911 while another certified in first aid and CPR tends to the victim. If you make the call, explain the kind of injury and where the victim is located.

• Two, bring help to the victim, don’t bring the victim to help. In other words, victims should not be moved unless they are in imminent danger where they are.

• Three, check the CABs. “C” stands for circulation. That means check to make sure the throat is clear, the victim is breathing, and the victim has a pulse. “A” stands for airway. And, “B” stands for breathing. A first-aid certified employee may be called upon to perform rescue breathing or CPR to keep the victim alive until EMS, or emergency medical services, personnel arrive.

• And four, do no further harm. Be careful not to cause additional injuries in your attempt to help a victim.
When it is clear that a victim’s condition is immediately life threatening, such as choking or not breathing, perform first aid immediately.

When the situation is not life threatening, there are multiple injuries, or when there are multiple victims, take a few moments to assess the scene to make sure it is safe for you and other helpers and to be certain you know what type of first aid is required:

• Evaluate the scene for number of injured and nature of the event.
• Assess the safety of the scene, including the potential for toxic vapors or gases in the air, and other risks such as electrical or fire hazards.
• Prioritize care when there are several injured.
• Check victims for medical alert tags.
• Perform a logical head-to-toe check for injuries.
• Move the victim only if absolutely necessary to prevent further injury from a hazard at the scene.

Do you know which of your co-workers is certified in first aid and CPR? You should call a trained person to the scene whenever there’s a situation you can’t handle yourself.
Now let’s look at some specific medical emergencies. We’ll begin with no breathing. When a person is unconscious and not breathing, irreversible brain damage occurs within 3 minutes. You have to act very quickly.

- Someone trained in cardiopulmonary resuscitation, or CPR, should lay the person on his or her back while someone else calls 911. Loosen the clothes around the neck, and make sure nothing is blocking the mouth or throat.

- First, give 30 chest compressions by placing both hands in the center of the victim’s chest with one hand on top of the other and pressing down with the heel of your hand 2 inches (in.). Press quickly at a rate of 100 compressions a minute.

- Next, open the airway by tilting the head slightly and lifting under the chin. Do not move the victim’s head back if you suspect a neck injury.

- Form a seal around the mouth and pinch the nose. Use a pocket mask if you are trained in its proper use. Breathe two slow breaths into the person’s mouth—enough to make the chest rise and fall. Then, continue chest compressions.

- Once you begin CPR, continue until EMS personnel arrive.
• Heavy bleeding is another serious medical emergency. If a co-worker is bleeding heavily, you have to stop the flow of blood while you wait for EMS personnel to arrive.

• Because of the risk of bloodborne diseases, you must wear gloves (from the first-aid kit, if possible) when administering first aid for bleeding.

• Next, cover the wound with a clean bandage from the first-aid kit.

• Then apply pressure with your hand directly over the wound.

• Do the same thing if a finger, hand, or other body part has been amputated. While you are applying pressure to the wound, have someone else place the amputated part in a plastic bag with ice. Make sure to wrap the severed part so that it doesn’t directly touch the ice. Give the package to EMS personnel or rush it to the hospital. In many cases, severed limbs can be reattached.

Do you know where the nearest first-aid kit is located in your work area? You should. You should also know what materials the kit contains.
In cases where a person has lost a lot of blood, a condition known as shock can develop. Shock is the body’s way of reacting to severe injury. A person in shock may appear stunned or confused. To treat shock:

- Lay the victim down,
- Cover the victim to keep him or her warm, and
- Raise the feet slightly above heart level.
Another type of shock is called anaphylactic shock. Anaphylactic shock is a severe allergic reaction to insect bites, medicines, or certain foods. Symptoms include hives, overall weakness, and swelling of the throat.

- Ask if the person has medication. If so, give it to him or her right away. People with severe allergies also usually wear a medic alert tag, so look for that, too, in order to help give EMS workers the best possible information.
- Anaphylactic shock can be deadly, so call for help fast, and
- Be prepared to start CPR.
Signs that someone is having a heart attack include shortness of breath or difficulty breathing; anxiety; pressure, squeezing, fullness, or pain in the center of the chest, radiating down either arm, or in the jaw; ashen color to skin, and perspiration, nausea, or vomiting.

- First aid for heart attacks begins with calling 911,
- Then make the victim comfortable, either lying down or sitting,
- Loosen tight clothing at the waist and neck,
- Ask the victim if he or she has heart medication,
- Don’t let the victim move around, and
- Finally, don’t give the person any stimulants like coffee or tea.

If the heart stops beating, begin CPR. However, if the heart is beating and the person is breathing, CPR is not necessary. Just keep him or her comfortable until EMS personnel arrive.
A person can choke to death in a couple of minutes.

- The fastest way to find out if someone is choking is to ask, “Are you chokeing?” If the person can cough or talk, he or she is not choking.
- But if the person can’t talk or cough, first deliver 5 back blows between the person’s shoulder blades with the heel of your hand.
- If the back blows don’t clear the object from the throat, perform abdominal thrusts:
  - Stand behind the victim and wrap your arms around the waist.
  - Make a fist with one hand. Place your fist, thumb-side in, against the victim’s stomach—above the navel but below the ribs. Grab your fist with your other hand.
  - Pull in and up sharply and repeat if necessary to dislodge whatever is stuck in the throat.
- Repeat the sequence of 5 back blows and 5 abdominal thrusts until the object is cleared.

Do you know how to perform abdominal thrusts? Everybody should. It’s simple, and it can save a life.
To clear the airway of an unconscious person:

- Lower the person on his or her back onto the floor.
- Clear the airway. If a blockage is visible at the back of the throat or high in the throat, reach a finger into the mouth and sweep out the cause of the blockage. Be careful not to push the food or object deeper into the airway.
- Begin cardiopulmonary resuscitation, or CPR, if the object remains lodged and the person doesn’t respond after you take the above measures. The chest compressions used in CPR may dislodge the object. Remember to recheck the mouth periodically.
The first rule of dealing with electrical shock is not to touch a person who is in contact with a live electrical current. If you do, the current can pass right through the person to you and cause the same injury.

So the first thing you should do is to turn off the power to the electrical equipment involved.

Then call 911. Electrical shocks can be life threatening. You want to get EMS personnel on the scene quickly in case the victim has stopped breathing.

If you have to remove a person from a live wire, be very careful so you don’t get a shock, too. Stand on something that’s an insulator, like a rubber mat; wear rubber gloves; and use a dry stick, wooden broom handle, or board to push the person away from the wire. Don’t use anything metal, wet, or damp.

Once the victim is safe, check for breathing. Begin CPR if the person is not breathing.
Now here’s a matching exercise to see how much you remember about the first-aid procedures we’ve just described. In Column 1 you see a list of medical emergencies. In Column 2 there is a list of first-aid procedures. See if you can match the problem with the correct first-aid procedure.

Here are the answers:

- Bleeding goes with direct pressure;
- Choking goes with abdominal thrusts;
- No breathing goes with CPR;
- Heart attack goes with keeping the victim still; and
- Shock goes with elevating feet.

How did you do? Did you make all the right matches?
Now it’s time to ask yourself if you understand all the first-aid information we’ve presented so far. Be sure you understand the first-aid procedure for:

- No breathing
- Bleeding
- Shock
- Heart attack
- Choking, and
- Electrical shock

It’s important to understand all this information because any one of these medical emergencies could occur in the workplace.

Let’s continue now to the next slide and talk about first aid for eye injuries.
Eye injuries are a common workplace medical emergency. Eye protection can prevent most injuries. But just in case, you should be familiar with first aid for different kinds of eye injuries.

- For chemical splashes, flush eyes for at least 15 minutes with water, and then close the eyes and cover them with a clean cloth. Get immediate medical attention.

- For solids (particles, dust, powders, etc.) in the eye, flush with water until particle comes out. Don’t let the victim rub the eye. Get medical attention.

- For a blow to the eye, apply cold compresses for 15 minutes to reduce pain and swelling. Get medical attention.

- For cuts near the eye, bandage loosely and get medical attention. Don’t let the victim rub the eye.

- For objects that penetrate the eye, don’t try to remove, move, or put any pressure on the object. Immobilize it by placing a paper cup or soft, bulky dressing around it, secured with tape. Bandage the other eye so that the victim will keep the injured eye still. Get immediate medical attention.
Burns are another common workplace hazard. You can be burned by hot surfaces, hot materials, or by the properties of certain materials. First aid for burns depends on the degree of the burn.

- First-degree burns are the least severe. They just involve the top layer of skin, which becomes reddened and painful.
- Second-degree burns are more serious and include blistering in addition to reddened skin and pain. First- and second-degree burns may be treated with cold, running water for relief of pain. Then cover the burned area with a moist, sterile dressing. Don’t break blisters on second-degree burns.
- Third-degree burns are the most serious and can even be life threatening. With third-degree burns the skin is destroyed, you see charring and deep tissue damage. You may even see exposed bones. For third-degree burns, call 911 immediately, and keep the victim comfortable until help arrives.

Always get immediate medical attention for all burns, especially those that are severe and those that cover large areas of the body.
Unprotected exposure to hazardous chemicals can sicken or even kill a person. These are the basic first-aid procedures for these exposures.

- For exposures to the eyes, flush with water for 15 minutes and get medical attention.
- For exposures to the skin, flush with water for 15 minutes and get medical attention for burns and other damage.
- For inhalation of vapors or gases, move the victim to fresh air immediately. Administer CPR, if necessary.
- For ingestion, have a co-worker call 911. Another employee can also call your local poison center for more first-aid information, if necessary. Then follow the first-aid instructions in the safety data sheet, or SDS.

The SDS is an excellent source of first-aid information. Be sure you know where SDSs are located and how to find the necessary first-aid information.
The rule for treating people who may have broken bones is never to move them unless it’s necessary for their safety. Neck and back injuries are especially risky. The wrong move could cause paralysis or death. If you suspect broken bones, call for emergency medical assistance, and instruct the victim not to move. Then:

- Look for swelling and deformity.
- Ask the victim to rate the pain, explain how the injury happened, and ask if he or she can move the injured limb.
- Treat for shock if the person shows symptoms.
- Call 911 if person shows signs of shock or if injury site is deformed.

If it seems that the person might have a broken bone, apply ice wrapped in a towel or cloth to the area, and keep the victim comfortable until help arrives.
Working in a hot environment or on a hot day can be very stressful for your body, especially if you’re not used to the heat.

Heat exhaustion may start out as discomfort and fatigue but can quickly develop into something more serious. Symptoms of heat exhaustion include pale or flushed appearance, weakness, heavy sweating, headache, moist and clammy skin, dizziness, and sometimes, nausea or a slight fever.

First aid for heat exhaustion involves these steps:

- Move the victim to a cool place;
- Have the person lie down;
- Elevate feet 8 to 10 inches;
- Loosen clothing;
- Give the victim water and encourage him or her to drink slowly; and
- Apply cool compresses to the head and body.

Do not administer “salt tablets,” as these are a high blood pressure risk.
If a person suffering from heat exhaustion is not treated promptly, it can turn into heatstroke. Heatstroke is a life-threatening condition in which the body gets so hot that it can’t cool down. Signs of heatstroke include very hot and dry skin, extreme tiredness, and confusion.

• You have to act quickly in cases of heatstroke. Immediately call 911.
• While you’re waiting for help to arrive, cool the person down by wiping his or her body with cool water or by fanning the body.
• Monitor the victim to make sure the airway remains open, the person is breathing, and the person has a pulse.

If you work in a hot environment or if you exercise or work outdoors on hot days, you should recognize the symptoms of heatstroke and take precautions to prevent overheating.
Fainting occurs when the blood supply to your brain is momentarily inadequate, causing you to lose consciousness. This loss of consciousness is usually very brief.

Fainting can have no medical significance, or the cause can be a serious disorder. Therefore, treat loss of consciousness as a medical emergency until the signs and symptoms are relieved and the cause is known. If unsure, call 911.

If you feel faint:
• Lie down or sit down. To reduce the chance of fainting again, don’t get up too quickly.
• Place your head between your knees if you sit down.

If someone else faints:
• Position the person on his or her back. If the person is breathing, restore blood flow to the brain by raising the person’s legs above heart level—about 8–12 in.—if possible. Loosen belts, collars, or other constrictive clothing. If the person doesn’t regain consciousness within 1 minute, call 911.
• Check the person’s airway to be sure it’s clear. Watch for vomiting.
• Check for signs of circulation (breathing, coughing, or movement). If absent, begin CPR. Call 911. Continue CPR until help arrives or the person responds and begins to breathe.

If the person was injured in a fall associated with a faint, treat any bumps, bruises, or cuts appropriately. Control bleeding with direct pressure.
A person having an epileptic seizure may fall to the ground and have convulsions. If a person appears to be having a seizure:

- Remove victim from any dangerous objects or hazardous situations;
- Check for breathing;
- Don’t put anything in the victim’s mouth;
- Try to keep the person as comfortable as possible;
- Call 911 if the seizure lasts more than 5 minutes without signs of slowing down, if the person has trouble breathing afterwards, or if the person is in pain or other injury is present; and
- Call 911 if seizure stops and starts again.
Let’s review briefly now with a multiple choice exercise. Choose the best answer, a or b, to complete each statement on the screen.

- Third-degree burns are very serious and can even be life threatening. Call 911 immediately if you see signs of third-degree burns.

- For a particle in the eye, flush with water until the particle comes out. Never rub the eye. If the particle doesn’t come out, cover the eye and get medical attention.

- For inhalation of vapors or gases, get into fresh air right away.

- For heatstroke, call 911 immediately if you recognize symptoms of heatstroke. A person can die from heatstroke.
Now it’s time to ask if you understand all the information presented in the previous slides. For example, do you understand what we’ve said about first-aid procedures for:

- Eye injuries?
- Burns?
- Exposure to hazardous chemicals?
- Broken bones?
- Heat exhaustion and heatstroke?
- Fainting?
- Seizure disorders?

Knowing about all these procedures will come in handy should you ever have to assist in a medical emergency involving one of these health problems.

Let’s continue to the next slide now and conclude the session with some key points to remember.
Here are the main points to remember about basic first aid:

- Medical emergencies can happen anytime on the job.
- When a co-worker is injured, you have to act quickly, calmly, and correctly.
- The best way to prepare for workplace medical emergencies is to be certified in first aid and CPR.

This concludes the Basic First Aid for Medical Emergencies training session.