Basic First Aid for Medical Emergencies

Welcome

Notes:

Welcome to BLR® training.

Section 1: Basic First Aid for Medical Emergencies

Help! Emergency!

Notes:

There are medical emergencies in workplaces across the country every day. Just imagine:

- A coworker gets hurt in an accident, and blood is gushing from the wound.
- One coworker chokes on a piece of food and can't breathe.
- Someone goes into cardiac arrest right at their workstation.

Situations like these call for first aid, and care must be administered fast. A few critical minutes could make the difference between life and death. Would you be ready to act with speed and competence in a workplace medical emergency?

The best way to prepare for a medical emergency is to become certified in first aid and cardiopulmonary resuscitation, or CPR. Ask your supervisor for information about getting certified.

If you're not certified, make sure you know who is at your workplace. If this employee isn't available during a workplace emergency, it's important for you to know the basics of first aid. Also, make sure you know where the emergency contact list is located.

Four Basic Rules

Notes:

Every situation is different, but there are four first-aid steps to follow if a medical

emergency occurs at your workplace. Before administering first aid yourself, call out for help, specifically for your workplace's first-aid-certified employee. While waiting for that employee, or if that employee isn't available, follow these first-aid steps. Select each tab to learn more.

- First, check the scene for safety, including the potential for toxic vapors or gases in the air, and other risks, such as electrical or fire hazards. Don't go into a situation where you could end up a victim yourself. If approaching the victim will endanger your life, call 911 immediately.
- Second, if the person appears unresponsive, check for responsiveness, breathing, life-threatening bleeding, or other life-threatening conditions. Check for no more than 10 seconds.
- Third, determine the level of responsiveness. If the person doesn't respond, responds but isn't fully awake, isn't breathing or is only gasping, or has heavy bleeding or another obvious life-threatening condition, call 911 or tell someone to do so. If you make the call, explain the injury and where the victim is located. Also, ask someone to get the first-aid kit and other emergency equipment, such as an automated external defibrillator, or AED. Then give first-aid care based on the condition of the person until emergency medical services, or EMS, arrive.

If the person is responsive, is fully awake, and doesn't appear to have a life-threatening condition:

  - Ask the person questions about their symptoms, allergies, medical conditions, and medications.
  - Do a body check based on what the person told you and how the person is acting.
  - Don't ask the person to move, and don't move the person unless necessary to avoid further injury.
- And fourth, after conducting a check on a responsive person, call 911 if necessary and you have not already done so. Also, ask someone to get the first-aid kit and other emergency equipment. Then give care based on the condition of the person until EMS arrives.
- Cooperate with EMS personnel, and answer any questions they have. Notify your supervisor of the incident if they're not already aware of it.

CPR

Notes:

CPR is an emergency lifesaving technique that is used when someone's blood flow or breathing stops. Irreversible brain damage in these situations can occur in as little as 3 minutes, so acting quickly is very important.

Some people become certified to perform CPR by taking a class. Make sure you know who these people are in your workplace and how to contact them. There are two types of CPR: traditional CPR with rescue breaths and hands-only CPR.

- Before performing either type of CPR, call 911. CPR can only buy time while you are waiting for medical attention; it is not a substitute for emergency medical services.
- Traditional CPR consists of chest compressions and rescue breaths. Perform traditional CPR only if you are trained and certified.
    - First, check to see if the victim is breathing or has a pulse. If you do not feel a breath or pulse within 10 seconds, begin CPR with chest compressions.
    - After performing 30 chest compressions, tilt the victim's head back and lift the chin forward to open the airway. Give two rescue breaths, then resume chest compressions.
    - You can remember the steps with the acronym CAB: compressions, airway, breathing.
- Sometimes, a CPR-certified person will not be available when an emergency happens. If you encounter someone who is not breathing and has no pulse, and you have not received CPR training, you can still help by performing hands-only CPR. Hands-only CPR uses chest compressions to keep blood flowing until help arrives. Use an AED if one is available.
- To perform hands-only CPR, use both hands to push hard and fast in the center of the chest at a rate of 100 to 120 beats per minute. To pace yourself, think of a familiar song at that tempo. The American Heart Association, or AHA, recommends timing your pushes to the beat of the song "Stayin' Alive." Don't worry about giving rescue breaths. Hands-only CPR should only be performed on teenagers and adults, not children or infants. Also, for victims of drowning, drug overdose, or collapse due to breathing problems, traditional CPR with rescue breaths is still recommended.

Bleeding

Notes:

Severe bleeding is a serious medical emergency caused by gashes, cuts, tears, and other injuries. A person with uncontrolled bleeding can die within 5 minutes. Immediately call 911 if a coworker is bleeding heavily. Then follow these first-aid steps.

- Put on disposable gloves from the first-aid kit to protect yourself against bloodborne pathogens.
- Remove any clothing or visible debris from the wound. Cover the wound with sterile gauze or a clean cloth. Press on it firmly with the palm of your hand until bleeding stops.
- If possible, place the person on a rug or blanket to prevent loss of body heat. Elevate the feet if you notice signs of shock, such as weakness, clammy skin, or a rapid pulse.
- If the blood seeps through the bandage, add more gauze or cloth on top of the existing bandage. Then keep pressing firmly on the area.
- If the bleeding doesn't stop, apply a tourniquet if it's available. Place the tourniquet about 2 to 3 inches above the bleeding site, but don't place it onto a joint. Tighten the tourniquet until the bleeding is controlled, and note the time the tourniquet was applied.
- Calmly reassure the person and keep them still.

If a body part has been amputated, have someone else place the 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.

After helping the injured person, wash your hands, even if it doesn't look like any blood got on your hands.

Make sure you know where the nearest first-aid kit is located in your work area and what supplies are in the kit.

Shock

Notes:

Shock is a critical condition brought on by the sudden drop in blood flow through the body.

Shock may result from trauma, heatstroke, allergic reaction, or blood loss. It also may result from severe infection, poisoning, or severe burns. Symptoms of shock include:

- Cool, clammy, and pale skin
- Rapid breathing
- Nausea or vomiting
- Enlarged pupils
- Weakness or fatigue
- Dizziness or fainting
- Anxiousness or agitation

If someone is in shock, immediately call 911. Then:

- Lay the victim down, and slightly elevate the legs and feet if it will cause no further injury. Begin CPR if the person is not breathing.
- Loosen tight clothing, and cover the victim with a blanket to keep them warm, if needed.
- If the person vomits or is bleeding from the mouth and no spinal injury is suspected, turn the person on their side to prevent choking.

Anaphylaxis

Notes:

Anaphylaxis is a life-threatening allergic reaction that can cause shock, a sudden drop in blood pressure, and trouble breathing. The allergic reaction can be from insect bites, medications, latex, or certain foods. Symptoms of anaphylaxis include:

- Skin reactions, such as hives, itching, or pale skin
- Wheezing or trouble with breathing
- Dizziness or fainting
- Facial swelling
- Nausea or vomiting
- Weak and fast pulse

If someone is experiencing anaphylaxis, immediately call 911. Then:

- Ask if the person has an epinephrine autoinjector, such as an EpiPen.
- If the person needs to use an autoinjector, ask if you should help inject the medication. This is usually done by pressing the autoinjector against the person's thigh.
- Try to keep the person calm.
- Have the person lie face up and be still.
- Loosen tight clothing, and cover the person with a blanket. Do not give the person anything to eat or drink.
- If there's vomiting or bleeding from the mouth, turn the person to the side to prevent choking.
- Start CPR if the person is not breathing.

Electrical Shock

Notes:

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 and a pulse. Begin CPR if the person is not breathing.

Heart Attack

Notes:

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 the 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.

Choking

Notes:

Choking happens when an object lodges in the throat or windpipe, blocking the flow of air. In adults, a piece of food is usually to blame. A person who is choking may show the following signs:

- One or both hands clutching the throat;
- A look of panic, shock, or confusion;
- Inability to talk;
- Strained breathing;
- Squeaky sounds when trying to breathe;
- Cough, which may be either weak or forceful;
- Skin, lips, and nails that change color, turning blue or gray; and
- Loss of consciousness.

If a person appears to be choking, first ask "Are you choking?" If the person can cough or talk, they are not choking.

But if the person can't talk or cough:

- First deliver five 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 five back blows and five abdominal thrusts until the object is cleared.

Choking (cont.)

Notes:

If abdominal thrusts don't work to clear the airway of an unconscious person, try the following method:

- Lower the person on their 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. Never finger sweep if you can't see the object.
- Begin 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.

Eye Injuries

Notes:

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.

Select the forward and backward arrows to learn more.

- 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 such as particles, dust, and powders in the eye, flush with water until they come 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

Notes:

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. The skin may be numb. 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.

Exposure to Hazardous Chemicals

Notes:

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 coworker 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, for the chemical. First-aid instructions are in Section 4 of the SDS.

Be sure you know where SDSs are located.

Fractures

Notes:

A fracture is a broken bone. Symptoms of a broken bone include:

- Intense pain in the injured area that gets worse when moved;
- Numbness in the injured area;
- Bluish color, swelling, or visible deformity in the injured area;
- Bone protruding through the skin; and
- Heavy bleeding at the injury site.

If someone at your workplace suffers a fracture, don't move the person except if necessary to avoid further injury. If a person has a broken bone, call for emergency medical assistance, and instruct the victim not to move. Then:

- Put on gloves from a first-aid kit, and stop any bleeding by applying pressure to the wound with a sterile bandage or a clean cloth.

- Keep the injured area from moving. If you've been trained in how to splint and professional help isn't readily available, apply a splint to the area above and below the fracture sites. Don't try to realign the bone or push a bone that's sticking out back in.
- Apply ice wrapped in a towel or cloth to the area, and keep the victim comfortable until help arrives.
- If the victim is in shock, call 911. Then lay the person down, with the head slightly lower than the trunk. If you can, raise the person's legs.

Heat Exhaustion

Notes:

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 them to drink slowly.
- Apply cool compresses to the head and body.

Do not administer "salt tablets," as these are a high blood pressure risk.

Heatstroke

Notes:

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 their 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. Precautions include drinking plenty of water throughout the day, wearing a hat, and taking frequent breaks in a cool, shady place.

Hypothermia

Notes:

Working in the cold or immersion in cold water exposes you to the risk of hypothermia. Hypothermia can be very serious if left untreated. Symptoms of hypothermia include:

- Shivering
- Slurred speech or mumbling
- Poor coordination
- Weak pulse
- Confusion
- Loss of consciousness

If you suspect someone has hypothermia, immediately call 911. Then:

- Move the person to a warm shelter, if possible.
- Remove wet and cold clothing.
- Wrap the person in dry, nonheated blankets.
- Warm the internal areas-neck, chest, abdomen, and groin-first. Arms and legs should be warmed last.

Never place the affected person in front of a fire or apply heated blankets or pads.

Fainting

Notes:

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.

Fainting (cont.)

Notes:

If someone else faints:

- Position the person on their back. If the person is breathing, restore blood flow to the brain by raising the person's legs above heart level-about 8 to12 inches-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, such as breathing, coughing, or movement. If absent, call 911. Then begin CPR. 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. Be sure to wear gloves.

Seizures Disorders

Notes:

A person having a seizure may fall to the ground and have convulsions. If a person appears to be having a seizure:

- Clear the area of hazards, or remove the victim from the area if the hazards can't be removed.
- 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 another injury is present, and call 911 if seizure stops and starts again.

Key Points to Remember

Notes:

Here are the main points to remember about basic first aid for medical emergencies:

- You can give first aid, including hands-on CPR, even if you aren't certified.
- Check the scene of a medical emergency for safety before giving first aid. Take appropriate precautions before approaching a victim, including calling 911 if entering the situation will endanger your life.
- To determine the appropriate first-aid procedure, check the responsiveness of the person, and assess their symptoms.
- Immediately call 911 if a person is not breathing, is bleeding heavily, or has another life-threatening condition.
- Only move a victim if it's necessary for their safety and causes them no further injury.