HOW TO HANDLE BASIC MEDICAL EMERGENCIES

INTRODUCTION

At some point in your career as a Certified Nursing Assistant (CNA) you may be the first person on the scene at a medical emergency. You may witness someone having a stroke, or having a heart attack, or suffering a seizure, and being able to recognize common medical emergencies and deliver the proper first aid in these situations – knowing what to do and what not to do – is something you need to know. The interventions that are outlined in this module are very basic, but it is information that many people don’t know and the techniques you will learn can be life saving.

Learning Break: When you are responding to a medical emergency you must act quickly, but never so fast that you make a mistake that may sacrifice your safety or the victim’s safety. Stay calm, take your time, and be organized. The first rule of responding to a medical emergency is don’t hurt the victim and don’t make yourself a victim.

OBJECTIVES

When the student has finished this module, he/she will be able to:

1. Identify the first rule of responding to a medical emergency.
2. Identify a basic treatment used for allergic reactions.
3. Identify the best treatment for a burn.
4. Identify the most important principle for responding to a cardiac arrest.
5. Identify the most important first aid measure for treating hypoglycemia.
6. Identify an important principle for treating back, head, or neck injuries.
7. Identify two important principles of treating lacerations.
8. Identify two important principles of treating poisoning emergencies.
9. Identify an easy way to check for the signs of a stroke.
10. Identify two important principles of treating a seizure.

ALLERGIC REACTIONS

Allergic reactions occur when someone comes in contact with something (an allergen) that stimulates a strong, abnormal response from the immune system. Allergic reactions can be caused by drugs, foods, personal care products, etc. and some can be life-threatening.

In a mild allergic reaction the victim will have hives (small, red bumps) a rash, and be very itchy. In a serious allergic reaction, the victim will have these signs and symptoms but will also feel weak and dizzy and have palpitations. The victim will also have difficulty breathing because the larynx is swelling and cutting off the air supply to the lungs.
Some mild allergic reactions are easily treated, but a severe allergic reaction can cause death very quickly. Call for help or call 911. *If the victim has an epinephrine auto-injector, help him/her use it.*

**Learning Break:** Rash, hives, itchiness, and difficulty breathing are the common signs and symptoms of an allergic reaction, but if you are not sure, remember that allergic reactions happen within minutes of exposure an allergen. Many people know what they are allergic to and can tell you if they have just been exposed.

**ASTHMA ATTACKS**

Asthma attacks happen for may reason – exercise, infection, stress – but the signs and symptoms are the same regardless of the cause. The air passages in the lungs get swollen and narrowed, the victim has difficulty breathing and you can hear him/her wheezing. Some asthma attacks will go away without treatment but a serious asthma attack can be very serious. Many people with asthma carry an inhaler and know how to use it. Help them use the inhaler and then call for help. If the asthma attack is not relieved, the victim may need to go to an emergency room.

**Learning Break:** An asthma attack and allergic reaction look similar because both cause wheezing, but an allergic reaction causes hives, itching, and rash.

**BURNS**

Burns are caused by heat (e.g., hot water, steam, electricity, hot metal objects, etc) or by chemicals (e.g., acids), and a serious burn can be life-threatening. **The best first aid for a burn is water.** Flush the area with lukewarm water for 15-30 minutes. **Do not use anything else.** After the area has been flushed, you can cover the area with sterile gauze **but do not apply anything to the burn.** Home remedies such as butter, etc. can be harmful. The burn should be evaluated by a nurse or a physician.

**Learning Break:** If someone’s eye has been exposed to a heat source or a chemical splash, it is very important to follow the first aid rules that were previously explained. Flush the eye(s) with lukewarm tap water for 15-20 minutes. **Do not use anything else to flush and do not put anything in/on the eye after the flushing has been completed.**

**CARDIAC-RELATED MEDICAL EMERGENCIES**

The heart is responsible for pumping blood and oxygen to the body and the most important organs in the body – the brain, the heart itself, and the kidney, etc. – will be permanently injured if their blood supply is drastically interrupted for more than a few minutes. The most common cardiac emergencies caused by damage to the heart are **cardiac arrest, angina, and myocardial infarction** (aka heart attack).
Learning Break: Most people know that the heart pumps blood and oxygen to the brain, the muscles, etc., but people often forget that the heart pumps blood and oxygen to itself, as well.

- **Cardiac arrest:** Cardiac arrest occurs when the heart stops beating. This can be caused by an abnormal heart rhythm or a myocardial infarction. Someone who has had a cardiac arrest will be unconscious, will not have a heart beat, and will not be breathing. If you are by yourself and discover someone who has had a cardiac arrest, **call for help and/or call 911 before doing anything else.** A cardiac arrest victim cannot be saved by one person doing CPR. After help has been summoned, begin CPR and apply an automated external defibrillator (AED).

Learning Break: In certain cases of cardiac arrest, an AED that delivers a strong electrical current can “shock” a heart back to its normal rhythm. They are very easy to operate. You should know how to use one and know where they are at your place of employment.

- **Myocardial infarction:** A myocardial infarction (MI) happens when the blood supply to the heart is completely blocked and part of the heart muscle dies. People having an MI are pale, sweaty, short of breath, and have chest pain. The chest pain is often described as “pressure” or “crushing.” Someone having can MI can suffer serious complications and die if treatment is not provided quickly. Do **not** start CPR. Do **not** transport the victim to the hospital unless the circumstances are very unusual: **Call for help or call 911 and wait for an ambulance.** Then make the victim comfortable, and assist him/her in taking a nitroglycerin if it has been prescribed.

- **Angina:** Angina is chest pain that is caused by a partial blockage of the blood supply to the heart. The signs and symptoms of angina are similar to the signs and symptoms of an MI, but not as intense or dramatic. Many angina attacks go away by themselves or after using nitroglycerin, but some may progress to an MI. Do **not** start CPR. Do **not** transport the victim to the hospital unless the circumstances are very unusual: **Call for help or call 911 and wait for an ambulance.** Then make the victim comfortable, and assist him/her in taking a nitroglycerin if it has been prescribed.

Learning Break: You cannot and should not try and decide if someone’s chest pain is being caused by angina or an MI. If someone is having chest pain, call for help or call 911.

**DIABETIC EMERGENCIES**

People with diabetes need oral medication or injectable insulin to keep their blood sugar at a safe level. **Hypoglycemia** occurs when the blood sugar goes too low – below 50-60 mg/dL – and because the brain can only use blood sugar for energy, permanent brain damage can occur if hypoglycemia is not quickly corrected. The signs
and symptoms of hypoglycemia are confusion, disorientation, moist, sweaty skin, and weakness.

**Learning Break:** The signs and symptoms of hypoglycemia can be mild and can be confused with other medical emergencies such as stroke. However, you will *not* hurt someone by assuming he/she has hypoglycemia and safely giving that person some food or juice, even if the victim’s blood sugar is very high.

Call for help or call 911, and then give the victim sugar or a carbohydrate (e.g., bread, cookies, etc.) such as juice, water with table sugar, fruit, pretzels, etc. Many diabetics carry glucose tablets with them and these can also be used. Use common sense: do not try and feed someone who is not fully awake or can’t safely swallow food.

**Learning Break:** If the victim won’t accept food, don’t try and *force* him/her to eat. People who are hypoglycemic are often confused, they do not know what is happening, and they may become irritable or aggressive if you insist they take juice, food, etc. Remember the first rule of responding to medical emergencies: don’t hurt the victim and don’t hurt yourself.

### MUSCULOSKELETAL INJURIES AND LACERATIONS

Musculoskeletal injuries include breaks, dislocations, and sprains. Some of these are obvious but some can only be detected by a physician’s exam and an x-ray. There are too many different types of breaks, dislocations, and sprains to provide first aid information about them all. However, there are some basic first aid rules for treating these injuries that apply to them all.

- **Don’t move the victim:** This rule may be relaxed if with minor injuries, but with all other musculoskeletal injuries, keep the victim immobile until help arrives. Use common sense.

- **Don’t move the injured part:** This rule can also be relaxed in certain circumstances, but unless the injured part will obviously be damaged further by remaining where it is, don’t move it. *Never move someone who has an injury to the head, neck, or back.* There is one exception to this rule. If the victim has suffered a cardiac arrest and is lying face down, this person should be placed face up, but must be moved *very, very* carefully. *The head, neck, and back should be moved together and they should be moved while in proper alignment with one another: this is called logrolling.*

- **Don’t diagnose:** You cannot determine if an injury is a break, dislocation, or sprain, and it is not your responsibility to do so.

Lacerations are all treated in the same way. Put on protective gloves (if possible) and then apply direct pressure to the wound using a sterile dressing; the victim can apply direct pressure to the wound while you are donning gloves and getting the dressing. If a
sterile dressing is not at hand, use anything that is clean and that will not stick to the
wound.

Unless the wound is a simple scrape or scratch, do not make the decision as to
whether or not it should be sutured and what sort of treatment the laceration needs.
Some lacerations need to be sutured, some need to be cleaned by a physician, some need
to be treated by a plastic surgeon or a specialist, and some need antibiotics. Refer the
victim to an ER or his/her doctor. People who have bitten by an animal – especially a cat
– should have the wound evaluated by a physician.

POISONING EMERGENCIES

Poisoning emergencies can be accidental or deliberate. Most accidental poisoning
emergencies occur in small children who ingest prescription or over-the-counter
medications, household cleaners, etc. Deliberate overdoses occur in adults who have
ingested prescription and/or over-the-counter medications in an attempt to cause self-
harm.

There is an enormous number of drugs, chemicals, household and personal care
products, etc. that can cause poisoning. Some are relatively safe and some are very
dangerous, each one will cause specific signs and symptoms, and each one should be
treated in a specific way. However, there are some basic rules that you can use to handle
any poisoning emergency.

• **Call a poison control center:** Any poison control center in the United States can
be reached by calling 1-800-222-1222. This number will connect you to the
poison control center that is closest to your area. Poison control centers are staffed
24 hours a day, and they can provide all the information that is needed to treat a
poisoning emergency.

• **Be organized:** If you are the first person at the scene of a poisoning emergency,
find out what the victim was exposed to, how much, and when. If the victim will
be transported to an emergency room, make sure any medication containers or
product containers go along.

• **Do not induce vomiting:** Inducing vomiting by any means (e.g., syrup of ipecac,
a finger in the victim’s throat) should *never* be done. It will not help and it may
well harmful.

• **Keep the victim NPO until you are instructed otherwise:** Contrary to popular
belief, milk is not an antidote.

• **Deliberate overdoses:** Call for help or call 911. The victim *must* be transported to
an emergency room.

• **Eye exposures:** *Always* flush the eyes for 15-20 minutes with lukewarm water.
*Do not use anything else.*
• **Skin exposures:** Always flush the skin for 15-20 minutes with lukewarm tap water. *Do not use anything else.* Do not try and apply anything to “neutralize.”

• **Inhalation exposures:** Move the victim to fresh air. If that is not possible, open windows, use fans, etc., anything to remove the offending agent and give the victim fresh air.

**SEIZURES**

A seizure is a neurological emergency caused by abnormal brain waves. The most dramatic type of seizure is the **gran mal** seizure. Someone having a gran mal seizure will lose consciousness and motor control (the victim will not be able to stand or walk) he/she will have very dramatic, rhythmic muscle contractions (convulsions), and lose bladder control. A gran mal seizure is very frightening, but the risk of death is extremely low. However, injuries are common because the victim has no warning a gran mal seizure is going to happen, loses motor control, and can fall and suffer broken bones, dislocations, etc. **Call for help or call 911.** Place something under the victim’s head and loosen restrictive clothing from around the neck. Do *not* try and restrain the victim, and do *not* give anything by mouth. Most importantly, do *not* insert anything in the victim’s mouth; contrary to popular belief, *people having a gran mal seizure will not swallow their tongue.*

**STROKE AND TRANSIENT ISCHEMIC ATTACK**

**Stroke** and **transient ischemic attack** (TIA) are neurological emergencies caused by a lack of blood supply to the brain. They happen when a blood vessel in the brain ruptures or one of the major blood vessels in the brain is blocked by a blood clot.

Strokes are often severe and can cause permanent damage. Transient ischemic attacks are milder and people often recover completely. The signs and symptoms of stroke and TIA are very similar, and they happen very quickly and with little warning. The victim seems confused and cannot speak, or his/her speech is garbled. One side of the victim’s face sags or droops and he/she has serious weakness in the hands, arms, legs, etc.

**Learning Break:** One easy way to remember the signs and symptoms of stroke/TIA is **FAST:** Face (drooping, sagging), Arm (weakness in the arm), Speech (absent, garbled), and Time.

Time refers to prompt treatment. People who are having a stroke or a TIA must go immediately to an ER. **The longer treatment is delayed, the more brain damage can occur.** If you think someone is having a stroke or a TIA, **call for help or call 911 immediately.** There is no first aid that is useful at the scene.