# Lesson 5 Emergencies in the Medical Office

# Step 1: Learning Objectives

When you have completed the instruction in this lesson, you will be trained to:

- Define the terms medical emergency and first-aid.
- Explain the purpose of triage in today's medical office.
- Describe how to properly wash and glove using the virtual lab.
- Explain the purpose of the universal emergency medical identification tag.
- Summarize how to perform a surgical wash and sterile gloving.
- Determine the provisions that a medical office should have in its emergency kit.
- Explain how to document an emergency procedure.
- Explain the importance of an office emergency policy manual.
- Explain how to distinguish the severity of a medical emergency.
- Describe the symptoms and course of action to treat the 10 most common emergencies in the medical office.

# Step 2: Lesson Preview

Tina is a medical assistant who works at her small town's community hospital. On her way to work one morning, she bumps into her neighbor, Mrs. Geary. Normally an energetic person, today Mrs. Geary seems confused and is sweating heavily. While Tina talks to Mrs. Geary, she tries to figure out if something is wrong. Without warning Mrs. Geary drops her bag of groceries and collapses to the ground. Quickly Tina checks her breathing—she is, and pulse—there is one—and then looks for a medical ID tag. There's one on Mrs. Geary's wrist, and it identifies her as a diabetic. Tina hastily looks through Mrs. Geary's groceries and finds a can of frozen punch. She places a small amount under Mrs. Geary's tongue, and she soon revives.



Thankfully Tina knew how to help when Mrs. Geary collapsed after coming home from the grocery store.

How did Tina know what to do when her neighbor collapsed? Could you have responded this speedily? Well, by the time you finish this lesson and take two certification courses—Basic Life Support (BLS) and First Aid by the Red Cross or the American Heart Association—you will have the knowledge and skills to react as promptly and effectively in an emergency situation as Tina did.

Individuals working in health care expect to encounter these types of emergencies. Like Tina, you may be witness to an incident in your community or in the medical office. Oftentimes, you will assist a walk-in patient experiencing a medical crisis, and almost certainly you will respond to phone calls concerning an injury or sudden illness. When anything happens within your family or immediate neighborhood, your relatives and neighbors will probably expect you to be the "resident authority" because you are a medical assistant. It is important for you to acquire first-aid skills and have a working knowledge of appropriate actions to take in common accident or illness situations. It is your responsibility to maintain current certification to provide *Basic Life Support* measures involving an obstructed airway, commonly known as *CPR*.

**Important Note:** In 2010, The American Heart Association made a change in the sequence of steps for CPR. Recertification is required every two years, so if you haven't learned this yet - you will!

When you are working in a physician's office, you must always be ready to react to an emergency situation. This can involve a patient already in the office or one who is brought in experiencing problems. A patient receiving a medication or injection may have a severe reaction and quickly present an emergency. Someone may be injured just outside the office and brought in for treatment. Patients may bring in very ill or injured family members. Knowing how to respond and how to assist the physician in treating the individual is very important. Swift and appropriate action can affect the outcome of the situation.

You've chosen an exciting career in the medical field and are well on your way to becoming a medical assistant. Let's keep learning!

# Step 3: First Things First

Before we dive into the subject of medical emergencies, let's go over your first clinical procedures—Proper Hand Washing and Proper Gloving. In this step, you will be able to experience your first Virtual Lab.

## **Proper Hand Washing**

**Hand washing** is considered the single most important means of preventing the spread of infection. There are many germs on your hands, and they can cause disease if infection controls are not in place. Proper hand washing is an easy and effective way to reduce the transmission of disease.



Proper hand washing helps prevent the spread of infection.

### Virtual Labs

Next, you'll begin to explore your Virtual Labs, which will walk you through some of the procedures you're studying in this course. Go to http://westonvideos.screencasthost.com and select Safety Lab. Locate *Safety - Hand Washing* to watch the video.

### Virtual Lab 5-1: Proper Hand Washing

- 1. Go to http://westonvideos.screencasthost.com and select Safety Lab.
- 2. Locate *Safety Hand Washing* to watch the video. This will bring up the instructional video on how to wash your hands for medical situations.
- 3. Practice this procedure and watch the virtual lab until you can perform the procedure without reading the steps or watching the lab.

### Virtual Lab 5-1: Proper Hand Washing

Procedure Objective: To wash hands in the medical setting

**Equipment Needed:** Sink, soap (preferably liquid), antibacterial lotion, disposable paper towels, nail brush

### **Proper Hand Washing**

- 1. Remove any jewelry other than a plain wedding band.
- 2. Prepare paper towel supply so it is readily available without touching any other surfaces.
- 3. Don't allow your clothing to touch the sink. Never touch the inside of the sink with your hands.
- 4. Turn on faucet with dry paper towel, adjust temperature, then discard towel. Lukewarm water is best for your skin.

- 5. Wet hands and apply soap using a circular motion and friction.
- 6. Interlace fingers to clean between them. Also scrub up to and including the wrists. Scrub for 2 minutes at beginning of day, then for 30 seconds following each patient contact throughout the day.
- 7. Use brush on your nails at the beginning of each day.
- 8. Hold hands pointed downward under the water to rinse them.
- 9. Repeat hand washing for the first hand washing of the day.
- 10. Blot hands and wrists dry with disposable paper towel; do not touch towel dispenser following hand washing.
- 11. Turn faucet off with clean paper towel.
- 12. Apply antibacterial lotion to prevent chapped skin.

The steps to hand washing are slightly different if you are preparing to assist with surgery. The following steps outline some additional related information that is not included in your Virtual Lab.

### Steps to Take 5-1: Proper Surgical Hand Washing

Procedure Objective: Proper surgical hand washing

**Equipment Needed:** Sink, soap (preferably liquid), disposable paper towels, watch or clock, nail brush, cuticle stick

Cuticle sticks are small, wooden sticks, slanted at both ends, used to clean under the fingernails when washing hands surgically.

### Steps to Take

- 1. Remove any jewelry other than a plain wedding band.
- 2. Prepare paper towel supply so it is readily available without touching any other surfaces.
- 3. Don't allow your clothing to touch the sink. Never touch the inside of the sink with your hands.
- 4. Turn on faucet with dry paper towel, adjust temperature, then discard towel. Lukewarm water is best for your skin.



5. Wet hands and apply soap using a circular motion and friction.



6. Interlace fingers to clean between them. Also scrub up to and including wrists and forearms to the elbow. Scrub for 5-6 minutes duration.



7. Scrub nails with brush AND clean under each nail with a cuticle stick. Note that in surgical hand washing, you rinse holding your hands down. You rinse with fingers up in regular hand washing.





- 8. Blot hands and wrists dry with disposable paper towel; do not touch towel dispenser following hand washing.
- 9. Turn faucet off with clean paper towel.



10. Do NOT apply lotion.

# **Proper Gloving**

Wearing gloves offers additional protection from germs for both you and the patient. Wear gloves whenever you expect to be in contact with any body fluids, a contaminated surface, open wounds or whenever performing any kind of procedure involving blood or any other body fluids. The latex glove is the norm in the healthcare field; however, you can also use vinyl gloves if you find that you are allergic to latex.

### Virtual Lab 5-2: Proper Gloving

- 1. Go to http://westonvideos.screencasthost.com and select First Aid Lab.
- 2. Select *First Aid Gloving*. This will bring up the instructional video on how to put on gloves in the medical situation.
- 3. Practice this procedure and watch the video until you can perform the procedure without reading the steps or watching the lab.

### Virtual Lab 5-2: Proper Gloving

Procedure Objective: To put gloves on in the medical setting

**Equipment Needed:** Sink; soap (preferably liquid); antibacterial lotion; disposable paper towels; nail brush; disposable, non-sterile latex or vinyl gloves

### **Proper Gloving**

- 1. Wash hands.
- 2. Grasp gloves by cuff and slip on without any special technique.

Practice this method several times until you can do it without reading the steps. The following steps outline some additional related information that is not included in your Virtual Lab.

### Steps to Take 5-2: Proper Sterile Gloving

Procedure Objective: To maintain sterilization while gloving

**Equipment Needed:** Sink, soap (preferably liquid), disposable paper towels, watch or clock, nail brush, cuticle stick, packaged pair of sterile gloves

### Steps to Take

- 1. Perform surgical handwash.
- 2. Inspect glove package for tears or stains.
- 3. Place glove package on a clean, dry surface above waist level.



4. Peel open the package, pulling it flat. Do not touch inner sterile surface. Be sure cuffs are toward you, palms up.



5. Grasp the inner cuff of one glove with index finger and thumb of the nondominant hand.

6. Pick the glove straight up without dragging it over any surface that is not sterile.



7. Slide dominant hand into glove, palm up and touching only the cuffed surface of the glove. Keep hands above the waist.



- 8. With the newly gloved hand pick up the other glove by slipping fingers under the outside of the cuff. Lift it up, keeping it away from the body.
- 9. Slip the second hand, palm up, into the glove.
- 10. Adjust gloves as needed without touching the wrist area. Keep hands above the waist and away from the body.

Practice this method several times until you can do it without reading the steps.

### Steps to Take 5-3: Remove Gloves

Procedure Objective: To remove contaminated gloves

Equipment Needed: Biohazard container

#### Steps to Take

- 1. Grasp the palm of a used glove with one hand to begin removing the first glove.
- 2. Keep hands away from the body and pointed downward.
- 3. Turn the used first glove inside out and hold it in the other gloved hand.

- 4. Holding the removed glove in the palm of the still gloved hand, insert two fingers of the ungloved hand inside the glove on the hand.
- 5. Peel the dirty glove downward, turning it inside out over the balled glove in the palm. Note that one glove is inside the other with all contaminated surfaces inside.
- 6. Dispose of the gloves in a biohazard container.
- 7. Wash hands thoroughly.

Practice this method several times until you can do it without reading the steps.

The more you practice your Virtual Lab and Steps to Take procedures, the sooner they will become second nature as you perform your duties as a medical assistant. Now, let's explore medical emergencies.

#### TIP

If you encounter an emergency, you may not have access to a sink, water or antibacterial soap. You may have to rely on a hand sanitizing lotion or some other method. Do the best you can using what you have to try to maintain a sterile environment for the victim. For this reason, the procedure steps in this lesson will not include hand washing and gloving. Remember to always wash your hands in the most appropriate manner for your situation, and wear gloves, whenever possible.

# Step 4: What Is a Medical Emergency?

An **emergency** is any instance in which someone becomes ill suddenly and requires immediate attention. When you encounter a situation like Tina's, you, the medical assistant, will be able to respond. In this lesson, you will learn how skilled medical personnel provide **emergency medical care**, which is the immediate care given to a sick or injured person. When properly applied, it can mean the difference between life and death, or a quick recovery instead of a long hospital stay. If an emergency occurs in your medical office, it will be the responsibility of your team of healthcare professionals to help the patient recover or to care for the patient until an ambulance or rescue squad arrives.

This is a lot of responsibility, but don't worry! When you have completed this course and your CPR certification, you will be ready to assist with a medical emergency. So let's get started on this exciting journey by taking a look at the steps emergency personnel follow to respond to an emergency.

# What Is the Emergency?

Before making any decisions about how to respond to an emergency, medical staff will assess the nature of the situation. Does it include respiratory or circulatory failure, severe bleeding, burns, poisoning or severe allergic reaction? For example, if you are dealing with a car accident with multiple injuries, your response will be quite different than if several family members enter the clinic with symptoms of food poisoning. In either situation, you will use the concept of *triage*.

### Step 5: Patient Triage

**Triage** is a decision-making system used by medical and emergency personnel to prioritize medical care when there are more injured people needing care than there are resources available. The goal of triage is to care for as many patients as possible, and this works by giving medical care to the most seriously injured patients first. First, you need to divide patients into three categories as follows:

- Patients with minor injuries who can wait for treatment
- Patients with such severe injuries that they require prompt treatment to survive
- Patients whose injuries are so severe that they probably will not survive

For example, if two patients arrive at the same time—one with a cut that needs stitches and the other for a cold, the patient who needs stitches will be seen and treated first.

Simple triage and rapid treatment (START)					
Deceased	Immediate	Delayed	Minor		
Advanced triage					
Blue/Expectant	Red/ immediate	Yellow/ Observation	Green/Wait	White/Dismiss	
Telephone triage and face-to-face					
Introduce yourself	Interview and assess	Use established protocol	Provide advice	Conclude call, plan follow-up	Document

Two common triage systems in use today are *simple triage* and *advanced triage*.

# Triage Systems

You may hear the acronym *START* when someone is talking about triage systems. **START** stands for **simple triage and rapid treatment**. Emergency personnel often use this triage system in emergencies before the patient is seen by medical staff members.

Simple triage separates the injured into four groups: **deceased**, victims who are beyond help; **immediate**, victims who are injured but can be helped by transportation; **delayed**, patients whose injuries won't be worsened by delayed transport and those with **minor** injuries—the walking wounded who need help less urgently.

If medical staff is applying START, this is how they'd approach patients:

- **Deceased**—They're left where they are found and covered if necessary. In the START system, a person is not triaged "DECEASED" unless she is not breathing and an effort to reposition her airway has been unsuccessful.
- Immediate—Patients are taken by ambulance for medical care immediately.
- Delayed—Patients are transported after the immediate patients have been transported.
- **Minor**—After the immediate and delayed patients are transported, the minor patients are transported for care. Usually patients with minor injuries don't need advanced medical care for at least several hours.

Like simple triage, advanced triage is used in emergencies but has different classifications. Advanced triage is a decision-making system that ranks patients into five categories rather than four. Advanced triage is commonly used by emergency medical personnel or by medical staff in emergency rooms during a disaster. Let's look at the five categories.

- **Blue/Expectant**—The patient is so severely injured that he will soon die of his injuries. Examples of injuries include large second or third degree burns, severe trauma, cardiac arrest or lethal poisoning.
- **Red/Immediate**—The patient requires immediate surgery or other life-saving intervention. This patient is given first priority for surgical teams or transport to advanced facilities. This patient is likely to survive with immediate treatment.
- Yellow/Observation—The patient's condition is stable for the moment, but requires medical staff to watch for any deterioration of his condition. The patient will need hospital care and would receive immediate priority care under normal circumstances.
- **Green/Wait**—The patient will require a doctor's care in several hours or days, but not immediately. Patients may wait for a number of hours or be told to go home and come back the next day if the facility is involved in a disaster with many higher priority patients. Examples of injuries include broken bones without compound fractures or soft tissue injuries.
- White/Dismiss—The patient has minor injuries. Usually first aid and home care are sufficient and a doctor's care is not required.

This triage system is complex, and only emergency personnel or a physician should determine which group a patient is in. No matter which type of triage system is used, it is a continuous process and categories should be checked regularly. Patients' conditions can, and do, change, which may alter their priority classification.

Triage techniques are used in emergency and non-emergency cases. In non-emergency cases, use triage techniques to determine if the patient needs to see a physician. In addition, you can use triage techniques to determine if a patient should be seen immediately, wait for the next available appointment or head to the emergency department.

If a patient has an emergency, remember to assess the patient's **CAB**, or chest compressions, airway, breathing. You'll learn about this later in the lesson, but for now just remember that if the patient is conscious, or you're speaking with the patient over the phone, ask him questions to determine his condition. If the patient is unresponsive, you'll have to check the patient's CAB yourself.

# **Telephone Triage**

Patients may call your office with an immediate medical problem. In this case, a medical professional will perform *telephone triage*. **Telephone triage** is an assessment of the severity of a patient's medical condition over the telephone. Keep in mind that you may not be able to telephone triage patients as a medical assistant. Nurses and physicians might be the only staff authorized to do this, but it's helpful to be aware of the steps involved.

The telephone triage has six basic steps:

1. Introduce yourself to the patient. This will open communication lines between the nurse and the patient. The trust gained during the initial communication encourages the caller to reveal information, thus allowing the nurse to make informed decisions about the patient's health.

2. Interview and assess the patient. The interview with the patient should gather the patient's demographic information and symptoms. The assessment relies on the nurse's ability to listen and interpret the caller. She will listen to what the caller is saying, what the caller is not saying and be alert for verbal cues such as pauses in sentences and breathing. She may have to ask the caller to bring the phone to the patient and listen carefully for signs and symptoms such as coughing, wheezing, congestion, a muffled voice, shortness of breath, pain, fear and other signs of a problem.

Take a look at the following sample questions.

How long have you had your symptoms? Does the patient have a fever? What happened? Is the patient breathing? Having difficulty breathing? What is the patient's temperature?

- 3. Make a triage decision using an established protocol or guideline. Once the nurse has assessed the caller, a decision is made based on a computer system, reference books or a manual. At that point, she advises the caller on what to do next. Although she's offering advice to the caller, the decision regarding care rests with the caller.
- **4. Give the advice to the patient or caller.** When the nurse advises the patient or caller, she will make sure he understands by having him repeat the information back to her.
- 5. Conclude the call and follow up as needed. The nurse will tell the patient or caller to call back if he needs further assistance. In addition, she will call the patient to follow up later.
- 6. Document the call. Your medical office will have forms to fill out in order to document telephone triage calls.<sup>14</sup> This form will be filed in the patient's medical record.

When you are talking to a patient on the telephone, remember to keep his information private and protect his identity. If possible, go to another room in the medical office where your conversation can't be overheard.

# Face-to-face Triage

The same steps used in telephone triage can provide guidance in face-to-face triage. However, assessing the patient face to face will be easier because you don't have to rely on cues over the phone.

You or another staff member will begin with an introduction to the patient and then move into some questions to help assess the patient's ailment. If the patient is conscious, ask for personal identification and the name of a close relative or friend. Try to obtain as much information as possible about the symptoms the patient is experiencing so you can identify the problem. If the patient is unconscious, a good place to start, after you've responded to obvious physical signs of distress, is by looking for a *medical identification tag*.

### The Universal Emergency Medical Identification Tag

A **universal medical identification tag** is a small tag worn on a bracelet, neck chain, or on the clothing. The tag has the *universal emergency medical identification symbol* printed on it to make it immediately recognizable and it identifies the wearer's medical condition. The purpose of the tag is to alert anyone of the person's medical condition even if the wearer is unconscious or is not old enough to explain. Some people prefer to carry a wallet card with the same information. In addition to mentioning the condition, the tag may have a telephone number that medical personnel can call for more information, such as the patient's physician.



Universal medical ID

When explaining an emergency to other medical staff, use the following terms so your description will be as accurate as possible.

Table 5-1: Levels of Emergency Severity			
Term	Definition	Examples	
Chronic	Long and drawn out, not acute. Some diseases have a slow chronic phase but can quickly change into an acute episode.	Chronic obstructive pulmonary disease (COPD), leukemia, arthritis	
Insidious	Hidden and not apparent, treacherous. Often disease conditions have a slow, hidden beginning, and then quickly develop symptoms.	Kidney failure, liver disease	
Urgent	A situation requiring intervention as soon as it can be arranged.	A ureter blocked by a kidney stone, a gallstone, an ulcer	
Sudden	Occurs quickly and without any warning.	Headache, allergy	
Severe	Very extensive and advanced. Requires immediate medical attention.	Head injury, burn, frostbite, broken bone	
Life threatening	Could cause death.	Head injury, shock, heart attack, stroke, internal bleeding	

Most injuries or illnesses are **manifested**, or show symptoms, in one of the above classifications. After determining the severity of the emergency, you can respond appropriately. Remember these terms apply only to an emergency in this discussion, but you won't respond only to emergencies. A child's scraped knee still requires some medical attention, but it is not considered an emergency.

# What Should I Do When an Emergency Occurs in the Office?

More than likely, you already know the drill for getting yourself and your family out of your house safely if it is on fire. You crawl through the house to avoid breathing the fumes, you know your alternate exits and you call 911 from a neighbor's house—not your own. You could probably think through the steps while the house is burning, but by then your house may be gone! The knowledge must be there already so you can react quickly and appropriately. You don't have time to think about the procedure, you just do it. The same is true for an emergency in the medical office. There's no time to debate who should assess the patient, when to perform CPR or who should call 911.

Every medical office has a procedure for handling the emergencies that occasionally arise. From the doctor to the receptionist, many staff members have a role in assisting the patient during such a crisis, and it is critical that each person knows what her job is. First you'll learn about the equipment used in an emergency and then you'll practice the steps you, as a medical assistant, will perform in an emergency!

### The Emergency Cart or Kit

Your doctor's office will have an **emergency kit** (ambu bag) or **emergency crash cart** with all the supplies and equipment necessary to handle any emergency that might come your way. The crash cart should be kept in a prominent location where all office employees can easily access it. All medical staff should be trained on the contents and their use.



An emergency kit is a large, sturdy box containing the equipment and supplies to treat emergency victims.



A crash cart is a sturdy, rolling cart containing the equipment and supplies to treat emergency victims.

Equipment, supplies and medications on the emergency crash cart include at least the following:<sup>1</sup>

### **General Supplies:**

- Adhesive and hypoallergenic tape
- Alcohol wipes
- Bandage material
- Gloves
- Hot and cold packs
- Intravenous extension tubing and T-connectors
- Needles, both intraosseous and intravenous
- Paper and pen
- Personal protective equipment (PPE)—mask, gloves, protective eyewear, long sleeved protective gown
- Resuscitation tape
- Sterile dressings
- Sterile water

#### **Equipment:**

- Ambu bag
- Bandage scissors
- Blood pressure cuff (three sizes: standard, pediatric and large)
- Bulb syringe



A bulb syringe is a rubber or plastic blunt-tipped device used to flush out openings, such as ears.

- Defibrillator
- Glucose meter
- Nasal airways
- Nasogastric tubes
- Nebulizer or metered dose inhaler spacer and facemasks

- Non-rebreather (three sizes)
- Obstetric delivery supplies—clamp, scissors
- Oxygen tank, flow meter, mask
- Penlight with extra batteries
- Pulse oximeter, both adult and pediatric
- Stethoscope
- Tourniquet

#### **Emergency Medications:**

- Acetaminophen (rectal suppositories)
- Activated charcoal



Activated charcoal is kept in emergency kits. Taken orally, it can bind with many poisons to prevent absorption.

- Albuterol
- Aspirin
- Atropine
- Ceftriaxone (Rocephin)
- Corticosteroids, parenteral
- Dextrose 25%
- Diazepam, parenteral (Valium)
- Diphenhydramine, oral and parenteral (Benadryl)
- Dopamine
- Epinephrine (1:1,000, 1:10,000)
- Flumazenil (Romazicon)
- Glucagon
- Insulin
- Lidocaine

- Lorazepam, sublingual (Ativan)
- Morphine (MS Contin)
- Naloxone (Narcan)
- Nitroglycerin tablets, patches and spray
- Phenobarbital
- Saline solution
- Verapamil
- Xylocaine and Marcaine

Don't worry if you're not familiar with most of the items on these lists. As you progress in the course, you'll learn all about the equipment, supplies and medications on these lists, and how to use them! By the time you graduate, you'll be a pro!

### The Office Emergency Policy Manual

The office **Emergency Policy Manual** is a useful reference when your office is experiencing an emergency. It will contain an emergency plan with assigned responsibilities for all employees. So when an emergency occurs, everyone will know immediately exactly what to do. You and all other staff members should know and be able to perform first-aid and CPR. Maintaining current certification is professional (probably required) and improves safety for every individual in the office. It is critical to providing the best chance of a good outcome.

Table 5-2: Roles of Medical Staff During an Office Emergency <sup>2</sup>			
Staff Member	Role		
Office Staff	Identify patients in need of emergency assistance as they arrive		
	Regularly observe waiting room for distressed patients		
	Advise waiting patients when a delay might occur		
	When necessary, dial 911 and give location and description of emergency		
	Keep the flow of patients moving out of the office		
Medical Assistant	Transfer ill patient to designated treatment room		
	Alert doctors and nurses of the emergency and the patient's location		
	Bring emergency crash cart to the designated treatment room		
	Measure patient's vital signs		
	Start oxygen by face mask if oxygen saturation is less than 93 percent		
	Assist with treatment as directed by doctors and nurses		
Nurse	Assist doctor with medications and treatment		
Doctors	Respond to emergency call		
	First physician acts as code team leader		
	Second physician controls airway		
	Third physician assists in resuscitation, treatment		

See Table 5-2 for an example of the assigned roles that will be outlined in your office's Emergency Policy Manual:

The emergency manual may also detail when to call emergency services and how to document an emergency procedure.

### When to Call Emergency Services

Most communities have a 911 system for telephone access to report emergencies. The communications operator at a local emergency medical services (EMS) provider will answer the call, take the information and alert the EMS, fire or police departments as needed. In localities without the 911 system, emergency calls are usually directed to the local ambulance, fire or police department. The information is then routed to the appropriate agency. You should know which emergency system your community uses. The telephone numbers should be prominently displayed by all telephones in the medical office.

Some communities have what is called an enhanced 911 system. This system automatically identifies the caller's telephone number and location. If the telephone is disconnected or the patient loses consciousness, the communications operator will still be able to send emergency personnel to the scene.

If you are responsible for making the 911 call, make sure you clearly and fully describe the emergency situation to the communications operator when you make the initial call. The operator will then know what level of emergency personnel and rescue equipment to send.

### How to Document an Emergency Procedure

After the emergency has been handled, you'll need to record detailed information regarding the emergency situation and its handling. The emergency manual will outline who is in charge of the documentation. This report is called either an **accident** or an **incident report**. This becomes part of a patient's record. All patient records can be used in court, so the form must be complete and accurate. This is just as important for an employee accident as it is for a patient.

The information necessary on an incident report is:

- Full name of injured or ill party
- Date and time of accident or emergency
- Address and phone number of injured party
- Notation as to whether the individual is a patient, visitor or office staff member
- Location of where incident occurred
- Name, address and signature of any witnesses to the accident
- Detailed description of the incident and conditions surrounding it
- Description of action taken, medications given, physician who examined the injured person and the statement of the patient
- Signature of person preparing report, with date and time using the 24-hour military format. **Military time** uses 4 numbers with noon expressed as 1200 (twelve hundred hours) and midnight as 2400 (twenty-four hundred hours). For instance, 2:15 is calculated by adding 2 hours and 15 minutes to 1200, recorded as 1415 (fourteen hundred fifteen).

A printed form should be available with the previous information, which both the physician and her liability insurance company have approved. After the incident report is completed, follow the guidelines in the Emergency Policy Manual to route it to the appropriate personnel.

Are you getting an idea of the amazing variety of situations you may be a part of as an MA? There will be some quiet days in the office helping patients during their visits, while other days may present emergency situations and the need to think on your toes. Some days will be a combination of both. You can be assured that no two days will be the same! Regardless of the type of day you encounter, as a successful medical assistant you will be prepared to respond effectively and with confidence.

Let's pause here to review what you've learned so far with the following Practice Exercise.

# Step 6: Practice Exercise 5-1

Select the best answer from the choices provided.

- 1. \_\_\_\_\_ is considered to be any instance in which someone becomes suddenly ill and requires immediate attention.
  - a. An emergency
  - b. Emergency medical care
  - c. An injury
  - d. A life-threatening incident
- 2. The goal of triage is to \_\_\_\_\_.
  - a. treat as many people as possible
  - b. treat only those patients who need immediate attention
  - c. move emergency patients to the hospital as quickly as possible
  - d. divide patients into three categories
- 3. When you hear a medical team member say "START" you know that means \_\_\_\_\_.
  - a. "turn on the computers"
  - b. "stat crash cart"
  - c. "simple triage and rapid treatment"
  - d. "stay there and restrain the patient"
- 4. One disadvantage of the advanced triage system is that \_\_\_\_\_.
  - a. it is so complex that physicians and EMTs must attend special trainings to learn how to use it
  - b. it is so complex that only physicians and EMTs can determine which group a patient is in
  - c. only physicians are allowed to use it
  - d. it doesn't tell you what to do when the patient has minor injuries

- 5. A(n) \_\_\_\_\_ is a small tag worn on a bracelet, neck chain or on the clothing bearing a message that the wearer has an important medical condition that might require immediate attention.
  - a. universal medical identification tag
  - b. medical tag
  - c. ID tag
  - d. bracelet
- 6. All of the supplies, equipment and medications your office needs for an emergency are kept on the \_\_\_\_\_.
  - a. front desk
  - b. counter in the designated treatment room
  - c. table in the waiting room
  - d. emergency crash cart

### 7. The office's Emergency Policy Manual may have all of the following in it EXCEPT \_\_\_\_\_.

- a. a list of all staff members and their roles in an emergency
- b. procedures to follow to document an emergency
- c. the steps to perform an emergency tracheotomy
- d. when to call emergency services
- 8. It's important to accurately and completely document emergencies because \_\_\_\_\_.
  - a. more than likely, your office will be sued by the patient
  - b. it becomes part of the patient's medical record
  - c. all incident reports are reviewed by the local board of physicians
  - d. the doctor will lose her liability insurance if the documentation is wrong
- 9. In communities without a 911 system, call \_\_\_\_\_ when you need emergency services.
  - a. the police department
  - b. your doctor's pager
  - c. the ambulance
  - d. either a or c

# 10. Every office must record the detailed information regarding an emergency situation and its handling. This report is called the \_\_\_\_\_.

- a. demographics
- b. incident report
- c. documentation
- d. emergency policy form

# Step 7: Review Practice Exercise 5-1

Check your answers with the Answer Key at the back of this book. Correct any mistakes you may have made.

# Step 8: Basic Life Support (BLS) Measures

**Basic Life Support (BLS)** measures help a person who is at risk for respiratory arrest, cardiac arrest or both. It includes methods such as *CPR*. **CPR**, which stands for cardiopulmonary resuscitation, is the primary method used to support blood flow to the heart and brain in cardiac arrest victims. BLS is used to keep a person alive until advanced medical assistance arrives. It is NOT a substitute for a doctor's care. The steps of BLS are abbreviated CAB. You may have heard of the ABC's of an emergency; however, in 2010, the American Heart Association updated their guidelines in the BLS sequence. The old method of the ABC's—Airway, Breathing, Chest compressions—focused on providing rescue breathing. The new method, CAB—Chest compressions, Airway, Breathing—focuses on giving the victim chest compressions first and foremost.

The CAB steps of an emergency are as follows:



The reason for the change from A-B-C to C-A-B is that chest compressions were delayed while the responder opened the victim's airway to administer mouth-to-mouth. The change to C-A-B allows chest compressions to be administered much sooner, with minor delay of ventilation. This immediate administration of chest compressions provides rapid blood flow to the heart and brain.

Let's look at the step-by-step process of how to perform CPR using the new C-A-B method:

- 1. Call 911 or ask another person to call.
- 2. Attempt to get the victim to respond. If he doesn't, roll the victim on his back.
- 3. Begin chest compressions. Place the heel of your hand in the center of the victim's chest. Place your other hand on top of the first one with your fingers interlaced.
- 4. Press down so you compress the chest at least two inches in adults and children and 1.5 inches in infants. The AHA states the most effective rate for chest compressions is 100 compressions per minute—the same rhythm as the beat of the Bee Gees' song, "Stayin' Alive."
- 5. After 30 compressions, if you've had CPR training, you can next open the airway by tilting the victim's head and lifting his chin.
- 6. Pinch the victim's nose closed. Take a normal breath. Next, cover the victim's mouth with yours to create an airtight seal, and then give two 1-second breaths as you watch for the chest to rise.
- 7. Continue with 30 compressions and two breaths until help arrives.

### **Training Programs**

There are many types of training programs available to teach you how to react in case of an emergency. However, the two main training programs that you need to take are first aid and CPR. Again, even if you've taken a CPR class in the past, you must retake this training every two years. Both are available at hospitals, the YMCA and community colleges. Most healthcare facilities require CPR certification and first-aid training as a condition for employment. Regardless of where you get your training, the courses must be approved by the American Red Cross (ARC).

Some CPR certification courses also include training on using *automated external defibrillators (AED)*. An **automated external defibrillator (AED)** is a portable device that delivers an electric shock through the chest to the heart. The shock may stop an irregular heart beat (arrhythmia) and allow a normal rhythm to resume following sudden cardiac arrest (SCA).

First-aid classes cover the principles of providing care to an injured or sick person until advanced medical help arrives. They also cover basic emergency care, or BLS, techniques such as rescue breathing and giving supportive medications. This is considered essential knowledge for anyone working in the healthcare environment.

### **Respiratory and Choking Emergencies**

In these situations, you may need to perform CPR, which we discussed earlier in the lesson. As you know, the American Heart Association updated the CPR sequence to C-A-B, which stands for Compressions, Airway, Breathing. In the past, CPR training has emphasized the ABCs of CPR, which instructed people to focus on the victim's airway and breathing before giving chest compressions. This approach caused significant delays in starting chest compressions, which are essential for keeping oxygen-rich blood circulating through the body. Changing the sequence from A-B-C to C-A-B for adults and children allows all rescuers to begin chest compressions right away.

The American Heart Association stresses the following guidelines:

- During CPR, rescuers should give chest compressions a little faster, at a rate of at least 100 times a minute.
- Rescuers should push deep on the chest, compressing at least two inches in adults and children and 1.5 inches in infants.
- Between each compression, rescuers should avoid leaning on the chest to allow it to return to its starting position.
- Rescuers should avoid stopping chest compressions and avoid excessive ventilation.
- All 911 centers should assertively provide instructions over the telephone to get chest compressions started when cardiac arrest is suspected.

In some emergencies, you may need to provide *artificial breathing*. As you know, **artificial breathing** is a technique where you blow air into the victim's mouth to breathe for the victim until she can breathe on her own again. Keep in mind that the American Heart Association encourages untrained bystanders to use the hands-only CPR, meaning CPR without giving breaths. If you do not yet have proper training, dial 911, and push hard and fast on the center of the victim's chest until professional help or an automated electronic defibrillator (AED) arrives.

While this does not substitute for CPR training, it is important to understand the process. Let's review all of the steps involved in the CPR process, including the recommended way to administer breaths to the victim.

### Steps to Take 5-4: CPR for Adults

Procedure Objective: To perform CPR on an adult

Equipment Needed: Gauze squares, sanitizing material

### Steps to Take

- 1. Make sure the victim is in a safe place.
- 2. Shake the victim's shoulders and shout to see if he responds.



- 3. If the victim does not respond, and the victim is not breathing or not breathing normally, yell for someone to call 911 and get an automated electronic defibrillator (AED), if available.
  - If you're alone, call 911 and get an AED if available. Follow the AED's voice prompts.
  - If no AED is available, immediately start CPR, beginning with compressions.

### **C**—**COMPRESSIONS**

4. Push hard and fast on the center of the chest 30 times, at a rate of at least 100 compressions a minute. Push down as hard and as fast as you can, at least two inches with each compression. If you haven't been trained in CPR, continue to give compressions until an AED arrives or trained help takes over.



### A—AIRWAY

5. If you have been trained in CPR, continue the procedure by opening the airway with a head tilt-chin lift.



#### **B—BREATHING**

6. Pinch the victim's nose closed. Take a normal breath. Cover the victim's mouth with your mouth, creating an airtight seal. Give two breaths (one second each). Watch for the chest to rise as you give each breath.



7. Keep giving sets of 30 compressions followed by two breaths until the AED arrives or trained help takes over.

Keep in mind that CPR is only intended for a person whose heart and breathing have stopped. If the victim moves or pushes you away, you should stop performing CPR. Remember to modify the techniques you'll learn in this lesson with the new recommendations, and if you haven't already, sign up for a CPR class. It may save a life.

### Steps to Take 5-5: CPR for Infants and Children

Procedure Objective: To perform CPR on an infant or child

Equipment Needed: Respirator and gloves if available, gauze

NOTE: For CPR for infants and children, be sure to stay up-to-date with the very latest guidelines from the American Heart Association. Remember recertification is required every two years - make it a goal to check for updates at the one-year mark. Recommendations change frequently.

#### **Steps to Take**

- 1. Gently shake and call to a child, or flick the bottom of an infant's foot to check for consciousness.
- 2. Tell another person to call 911. If you are alone, administer CPR for 2 minutes then call 911 yourself, before returning to the patient.
- 3. Place infant or child on back on firm surface.
- 4. Use appropriate method to open the airway.



- 5. Perform rescue breathing.
- 6. Remove clothing from chest so you can watch movement.
- 7. Check pulse.

For infant: Check pulse over brachial artery by putting your middle fingertips on inside of upper arm halfway between elbow and shoulder. At the same time keep airway open.

**For child:** Check carotid pulse on lower neck as for an adult. Check pulse in conjunction with assessment for signs of circulation, which includes evaluating victim for breathing, coughing or movement. This assessment should take no more than 10 seconds.



8. If pulse is present,

For infant: Continue rescue breathing until normal breathing occurs or help arrives.

For child: Continue rescue breathing until normal breathing occurs or help arrives.

9. If no pulse is present, start chest compressions.

### For infant:

- Use the index and middle fingers to compress just below the nipples in center of chest.
- Press the chest down 1/3 to 1/2 of the chest depth.
- Give 30 compressions at a rate of 100 per minute.
- Count as one, two, three, four, five.
- Give two rescue breaths after each set of 30 compressions.



### For child:

- Place the heel of only one hand between the child's nipples, at the tip of the breastbone.
- Press the chest down 1/3 to 1/2 of the chest depth.
- Give 30 compressions at a rate of 100 times per minute.
- Count as one and two and three and four and five.
- Give two rescue breaths after each set of 30 compressions.
- 10. Do 10 cycles of compressions and breaths, and then check for signs of circulation and pulse. **NOTE: Do not take more than five seconds for this check.**



11. Continue the cycle of 30 compressions and two breaths until the victim resumes breathing and pulse returns, or until help arrives.

### **Blocked Airway**

Another emergency you may encounter is a blocked airway—or choking. Common problems with the airway involve blockage by the tongue, vomit or a foreign object. First, carefully tilt the head back with one hand on the forehead while lifting the jaw with the other hand. Do not move his head if you are concerned that the victim may have a spinal, neck or head injury. Instead, use the **jaw-thrust maneuver**: Kneel near the top of the victim's head, grasping the posterior angles of the patient's lower jaw and lift with both hands, one on each side. This will displace the **mandible** (jawbone) forward while tilting the head backward. If the lips close, retract the lower lip with your thumb. If mouth-to-mouth breathing is necessary, close the nostrils by placing your cheek tightly against them.

Swipe inside the mouth to find the blockage. If the patient is still not breathing and you cannot see the blockage, you will clear the blocked airway by doing something similar to the following:

### Steps to Take 5-6: Blocked Airway

Procedure Objective: To clear a blocked airway of an unconscious victim

Equipment Needed: Gloves or gauze

### Steps to Take

- 1. Place the victim in a supine position.
- 2. Use the tilt-chin lift maneuver to move the tongue from back of throat. Listen for air exchange at mouth and nose, and feel for exhaled air on rescuer's cheek.



- 3. Check for mouth obstruction. NOTE: Visible foreign matter and vomitus should be removed quickly. Liquids should be wiped out with covered middle and index fingers; solid material is swept out with a hooked index finger.
- 4. Check for air exchange. If none, then sit astride the victim's thighs. With fingers pointed towards the head, place the heel of one hand flat on the victim's abdomen, slightly above the navel.
- 5. Place your other hand in a similar position over the first.
- 6. With your elbows straight, press inward and upward with quick thrusts to dislodge the block.

You will practice this procedure several times during your CPR and first aid training classes. **Do not attempt the procedure until you have completed your training.** 

### Choking

Another common cause of a blocked airway is *choking*. **Choking** is most often caused by food caught in an air pocket while eating. This occurs when someone sucks partially chewed food into the windpipe when talking, laughing or coughing while eating. Children, on the other hand, can get toys, toy parts, buttons or candy, and a variety of other objects caught in their throats that obstruct their airway. Pieces of food are also a problem for children—especially raw carrots and hot dogs. Other common causes of choking in children include filmy plastic bags and latex balloons.

Symptoms of choking:

- Clutching the throat
- Inability to speak, cough or breathe

The **Heimlich maneuver** is an abdominal thrust to relieve a blocked airway due to a foreign body in a conscious person. **Again, it is important that you learn the Heimlich maneuver in an approved BLS class before performing the procedure.** If done incorrectly, you could break a patient's rib or puncture a lung. The following will give you a good idea of how the Heimlich maneuver works.

If sweeping to clear the airway does not allow breathing to restart, the next action to take in adults and children who are choking is the *Heimlich maneuver*.

### Steps to Take 5-7: Heimlich Maneuver

Procedure Objective: To clear a blocked airway in a conscious person

Equipment Needed: None

### **Steps to Take**

- 1. While standing behind the victim, reach around the waist.
- 2. Clench one hand to make a fist and grasp your fist with the other hand.
- 3. Place the thumb side of the fist against the midline of the victim's abdomen between the waist and the rib cage.
- 4. Thrust fist inward and upward in quick, firm movements to move air out of the lungs with enough force to dislodge the block.
- 5. A choking victim who is by herself may use the abdominal thrust with the fist or may bend over a chair back or any hard object of appropriate height in order to simulate an abdominal thrust on herself.



The Heimlich maneuver is used to clear foreign objects from blocked airways.

If a patient is in an advanced stage of pregnancy or is very obese, abdominal thrusting will not be possible. Instead of the standard Heimlich maneuver, you must use a chest thrust to dislodge the material.

### Steps to Take 5-8: The Chest Thrust

Procedure Objective: To clear a blocked airway in a pregnant or obese person

Equipment Needed: None

### Steps to Take

- 1. Standing behind the victim, place arms around the victim directly under the underarms.
- 2. Using the abdominal clenched fist technique, place the thumb over the sternum, place your hand over the fist and give firm thrusts, pulling straight back toward yourself.

After training, review this procedure several times until you can describe it without reading the steps.

### Steps to Take 5-9: Rescue Breathing

Procedure Objective: To perform mouth-to-mouth resuscitation

Equipment Needed: Respirator if available, gauze squares, sanitizing material

Artificial breathing is a technique in which you blow air into the victim's mouth in order to breathe for the victim until she can breathe on her own again. You provide the victim with enough oxygen to maintain life until she resumes breathing or until help arrives. You can perform artificial breathing in several ways. In a medical facility, you will have a respirator or oxygen tank and mask. Elsewhere, you will probably rely on *mouth-to-mouth resuscitation*.

### Steps to Take

- 1. Determine if the victim is awake by loudly speaking or shouting to him. If the victim is not awake, ensure you or someone else calls 911. If the victim is awake, but is unable to speak, determine if he is choking. If so, perform the *Heimlich maneuver*.
- 2. Determine if the victim has a blocked airway. Carefully tilt the head back with one hand on the forehead while lifting the jaw with the other hand. Do not move his head if you are concerned that the victim may have a spinal, neck or head injury. Instead use the **jaw-thrust maneuver**, in which you kneel near the victim's head, grasp the angles of the victim's lower jaw and lift with both hands. Next, swipe inside the victim's mouth to find the blockage. If you do not see a blockage, continue to the next step.
- 3. Determine if your victim is breathing. If not, immediately begin CPR using the C-A-B method outlined earlier in this chapter.

Go over this method several times until you can explain it without reading the steps.

# Step 9: Practice Exercise 5-2

For the following items, provide the proper term.

- 1. The technique in which you blow air into the victim's mouth in order to breathe for the victim is termed \_\_\_\_\_.
- 2. In which technique would you kneel near the victim's head and grasp the angles of the victim's lower jaw and lift with both hands?
- 3. When an abdominal thrust is used to relieve a blocked airway due to a foreign body, it is called the \_\_\_\_\_.
- 4. Outline the steps to perform the Heimlich maneuver.

### Step 10: Review Practice Exercise 5-2

Check your answers with the Answer Key at the back of this book. Correct any mistakes you may have made.

# Step 11: The Top Ten List

Before you begin your emergency training, let's review the top 10 emergencies you may encounter in the medical office. Drum roll, please! Listed alphabetically, the top 10 emergencies are:<sup>3</sup>

- 1. Anaphylaxis
- 2. Asthma Complications
- 3. Cardiac Arrest
- 4. Diabetic Emergencies
- 5. Drug Overdose
- 6. Impaired Consciousness
- 7. Poisoning
- 8. Psychiatric Disorder
- 9. Seizure
- 10. Shock

We'll cover all 10 of these emergencies—what they are, how to recognize them, and what you can do when they occur.

### 1. Anaphylaxis

**Anaphylaxis** is a rapid and severe immune reaction to an *allergen* that can quickly lead to death. An **allergen** is any substance that enters the body and causes a sensitive reaction by the immune system. The immune system considers the allergen to be a foreign body and reacts by attacking it. The attack is what causes the symptoms of an allergic reaction. An allergen can be a food, insect venom, medications or pollen. An allergen can enter the body in any manner—by ingestion, inhalation, injection or absorption through the skin or mucous membranes. A normal allergic response to many of these irritants is very common.

However, when the immune system overreacts to the allergen, anaphylaxis occurs, and the attack is especially severe. Anaphylaxis can lead to airway obstruction, *anaphylactic shock*, cardiovascular collapse and death. Immediate attention is important as soon as symptoms appear.

**Anaphylactic shock** is the most dangerous form of anaphylaxis. This is an acute generalized allergic reaction that occurs within minutes to hours after the body has been exposed to a foreign substance to which it is oversensitive.

Anaphylactic Shock			
Allergic reaction	Anaphylaxis		
Itching	Anxiety		
Rash	Choking		
Redness	Congestion		
Tightness in chest or throat	Coughing		
Unexplained warmth	Diaphoresis (profuse sweating commonly associated with shock and other medical emergency conditions)		
	Dizziness, fainting or loss of consciousness		
	Dry, pale or blue skin		
	Headache		
	Hives		
	Hypotension (low blood pressure)		
	Itchy, red or watery eyes		
	Low pulse rate		
	Nausea, vomiting or diarrhea		
	Shortness of breath		
	Swelling		
	Tachycardia (rapid heart beat)		

#### What to Do:

- 1. Call 911 immediately.
- 2. If a physician is present, she may treat the patient with epinephrine to facilitate breathing and circulation, an antihistamine to reduce swelling or a steroid to minimize the immune system's reaction.

# 2. Asthma Complications

**Asthma** is a chronic inflammation of the airways in the lungs. Asthma can become severe in reaction to allergens or other irritants, or when combined with other respiratory or gastrointestinal conditions. Complications can also occur in response to stresses like exercise, old age or pregnancy.

Asthma Complications		
Symptoms		
Coughing		
Shortness of breath		
Tightness in chest		
Wheezing		
Labored breathing		
Blue skin		
Peak flow meter reading of 50 percent or less of personal best		

#### What to do:

- 1. Ask the patient if she has an inhaler, and if she has not used it, to do so now.
- 2. A healthcare professional should take a peak flow reading—if peak flow is 50 percent or less, continue with emergency treatment.
- 3. If there is no doctor present, call 911.
- 4. A healthcare professional should administer oxygen.
- 5. Help to calm the patient.
- 6. A medical assistant will monitor vital signs.
- 7. If a doctor is present, she may wish to administer epinephrine, prednisone, leukotriene inhibitors or other medications.
- 8. A mechanical ventilator may be required to keep the patient alive.

### 3. Cardiac Arrest

**Cardiac arrest**, or **heart attack**, is a serious, sudden heart condition usually characterized by varying degrees of chest pain or discomfort, weakness, sweating, nausea, vomiting and **arrhythmia** (without rhythm), sometimes causing loss of consciousness. It occurs when the blood supply to a part of the heart is interrupted, causing scarring and death of the local heart tissue. Since the area affected may be large or small, the severity of heart attacks vary, but they are often a life-threatening medical emergency which demand both immediate attention and a call to EMS.

Cardiac Arrest		
Symptoms		
Tightness of the chest		
Pain radiating down one or both arms		
Pain radiating into the left shoulder and jaw		
Rapid and weak pulse		
Diaphoresis		
Agitation		

Time is critical, so prompt, appropriate treatment within the first hour of an attack can save the patient's life and reduce damage.

### What to Do:

### Steps to Take 5-10: Cardiac Arrest

Procedure Objective: To assist a physician in treating a patient experiencing a heart attack

Equipment Needed: Wheelchair or chair with rollers; oxygen; BP cuff; EKG machine, phone

### Steps to Take if physician is present

- 1. If the patient has medication such as nitroglycerine, it should be given immediately.
- 2. Depending upon severity of symptoms the physician may want to transfer the patient to an exam room. Never allow the patient to walk or carry objects such as a heavy purse or coat.
- 3. If you have a wheelchair, help the patient into the chair. In the absence of a wheelchair, use any chair with rollers to move the patient.
- 4. Perform an electrocardiogram and administer oxygen per physician order. Monitor vital signs. Loosen the clothing and elevate head of the exam table as high as possible.
- 5. Contact emergency medical services at physician's direction.
- 6. Treat for shock by maintaining body heat, covering with blanket.
- 7. If the patient stops breathing, lower head of exam table and start artificial respiration.
- 8. If there is no pulse, start CPR.

### Steps to Take if physician is NOT present

- 1. Call 911. You are NEVER wrong to call emergency services. Do not hesitate. Preferably, ask another staff member to call the physician.
- 2. If the patient has medication such as nitroglycerine, it should be given immediately, even in the reception room if necessary.
- 3. Administer oxygen while waiting for EMS. Provide reassurance.

- 4. Loosen patient's clothing, position him sitting up as high as possible. A cool cloth to the forehead or around the neck is soothing while you wait for assistance. Cover the patient with a blanket to treat shock.
- 5. Monitor vital signs until paramedics arrive. Write these down to report to the paramedics and for your own documentation.
- 6. Do not waste time transferring the patient to an exam room. Keep him still.

Review this process until you can teach it to someone else without reading through the process.

### 4. Diabetic Emergencies

**Diabetes** is a disease in which blood glucose levels are above normal. Most of the food we eat is turned into glucose, or sugar, for our bodies to use for energy. The pancreas, an organ that lies near the stomach, makes a hormone called insulin to help glucose get into the cells of our bodies. When you have diabetes, your body either doesn't make enough insulin or can't use its own insulin as well as it should. This causes sugar to build up in your blood.

Diabetes can cause serious health complications, including heart disease, blindness, kidney failure and lower-extremity necrosis, resulting in amputations. Diabetes is the sixth leading cause of death in the United States.

People who think they might have diabetes must visit a physician for diagnosis. They might have SOME or NONE of the following symptoms.

Diabetic Emergencies		
Symptoms		
Frequent urination		
Excessive thirst		
Unexplained weight loss		
Extreme hunger		
Sudden vision changes		
Tingling or numbness in hands or feet		
Frequent fatigue		
Very dry skin		
Sores that are slow to heal		
More infections than usual		

Nausea, vomiting or stomach pains may accompany some of these symptoms in the abrupt onset of insulindependent diabetes.

Diabetic patients may present emergency situations by becoming *hyperglycemic* or *hypoglycemic*. You will need to know how to respond to both situations. First, let's look at how to quickly distinguish the two, when possible.

### What to Do:

### Steps to Take 5-11: Determination of Hyperglycemia or Hypoglycemia

**Procedure Objective:** To discover if a patient is hyperglycemic or hypoglycemic **Equipment Needed:** Some form of sugar, telephone

#### **Steps to Take**

- 1. Ask the patient questions. Can he talk? He may know his condition.
- 2. Ask the patient if insulin or food has been taken, and when.
- 3. Is the breath fruity or sweet-smelling? Fruity, sweet-smelling breath indicates hyperglycemia.
- 4. Are respirations deep or shallow? Deep breathing indicates hyperglycemia; shallow breathing indicates hypoglycemia.

#### If you cannot determine the condition:

1. Give the patient a little sugar—hypoglycemia is much more common and can cause irreversible brain damage.

If the patient lapses into unconsciousness, he may die if not treated quickly. Follow the steps outlined in the Steps to Take for hyperglycemia, though there is no need for a second dose of sugar.

### Hyperglycemia

**Hyperglycemia** is caused by an increased amount of sugar in the blood. Eating too many carbohydrates, infection, fever, emotional stress or failing to take adequate insulin may trigger this response. If the condition remains untreated, the patient will fall into a **diabetic coma**. Before falling into a coma, the patient might experience the following symptoms:

Hyperglycemia		
Symptoms		
Confusion		
Excessive hunger or thirst		
Dizziness		
Frequent urination		
Weakness		
Nausea or vomiting		
Rapid pulse		
Deep, rapid breathing		
Dry, warm skin		
Very strong sweet, fruity breath odor		
Gradual onset of symptoms		

Practice these procedures several times until you can do them without reading the steps.

#### What to Do:

### Steps to Take 5-12: Hyperglycemia

Procedure Objective: To assist a patient who is hyperglycemic

**Equipment Needed:** Telephone, some form of sugar, patient's treatment and monitoring equipment, if available, insulin

### Steps to Take

#### If the patient is conscious:

- 1. Have the patient check his insulin/glucose level.
- 2. If the patient is unable to confirm his insulin status, then give the patient a little sugar and see if his condition improves. Call 911 if the patient isn't able to accomplish these steps or the condition worsens.
- 3. The patient should self-administer insulin if his personal readings indicate that his blood sugar levels are too high.

#### If the patient is unconscious:

- 1. Call 911 immediately.
- 2. If a physician is present, she may administer insulin.
- 3. The patient should be transported to the nearest hospital.
- 4. The patient will be checked for positive diagnosis and reduction of blood sugar.

Practice these procedures several times until you can do them without reading the steps.

### Hypoglycemia

**Hypoglycemia** may occur from an excess amount of insulin in the body. This can happen if the patient has not eaten in regularly measured amounts, if he vomits after taking insulin, if he is engaging in excessive exercise or if he takes too much insulin. Left untreated, the patient will eventually experience **insulin shock**, which is characterized by fainting, seizure or coma.

Hypoglycemia		
Symptoms		
Muscle weakness		
Headache		
Anxiety		
Dizziness		
Mental confusion		
Pounding heartbeat		
Shallow, rapid breathing		
Excessive hunger		
Diaphoresis		
Cold, pale and moist skin		
Unconsciousness, with or without seizures		
Rapid onset of symptoms		

What to Do:

### Steps to Take 5-13: Hypoglycemia

**Procedure Objective:** To assist a patient who is hypoglycemic

Equipment Needed: Some form of sugar and fat, IV fluids or injectable glucose, telephone

### Steps to Take

#### If the patient is conscious:

- 1. Give the patient a sugar, such as candy, and a fat such as peanut butter, to stabilize glucose levels.
- 2. Watch patient carefully for signs of improvement; if not then call 911.

#### If the patient lapses into unconsciousness:

- 1. Call 911 if no doctor is present. Follow any instructions from the physician.
- 2. A heathcare professional should give the patient an intravenous form of glucose, either as an IV fluid or injectable.
- 3. Stay with the patient until he becomes conscious.

#### If the patient doesn't regain consciousness:

- 1. Call 911.
- 2. The patient must be transported at once to a hospital.

Practice these procedures several times until you can do them without reading the steps.

## 5. Drug Overdose

A drug overdose can be intentional or accidental. Taking too much of a prescribed medication or taking the wrong medication can cause a **drug overdose**. Overuse of recreational drugs or attempts of suicide are considered intentional overdose. No matter the cause, a drug overdose is potentially life-threatening, so your quick actions can make all the difference! Symptoms will vary according to the type of drug taken, but there are some general signs you can watch for:

Drug Overdose		
Symptoms		
Unusual or absent vital signs		
Chest or abdominal pain		
Diarrhea, nausea or vomiting		
Shortness of breath		
Confusion or sleepiness		
Coma		
Unusual skin condition—either too cold or too hot, moist or dry		

#### What to do:

- 1. Call 911.
- 2. If possible, find out what the patient took, how much and when. If the patient has the bottle, keep it and give to EMTs when they arrive.
- 3. Treatment varies according to type of drug ingested. Possible treatments include stomach pumping, administration of activated charcoal or if one is available, an **antidote**—another medication that can offset the effects of the overdosed drug. These treatments should be given by trained emergency professionals.
- 4. If you suspect that the patient may hurt himself or others, he may need to be physically restrained. Get help from other staff members.
- 5. If a physician is present, he may administer a sedative to calm the patient until help arrives.

### 6. Impaired Consciousness

**Consciousness**, or being aware of your surroundings, can be **impaired**, or harmed, by several different conditions. The three most common causes of impaired consciousness are fainting, diabetic coma and shock.

When you are assessing an unconscious patient, it's helpful to have some guidelines to go by. You can remember the acronym, **AVPU**, to help you remember how to assess the patient's level of consciousness:

A = Awake and alert

V = responds to voice

P = responds only to pain

U = unconscious; no response

You're probably familiar with unconsciousness in the form of *fainting*.

### Fainting

**Fainting**, or **syncope**, occurs when the patient loses consciousness, and there isn't enough blood supply to the brain. If a patient in the office or clinic "feels faint," she is probably feeling lightheaded and weak. Fainting in itself is not a dangerous condition, but it may indicate that there is something more serious going on.

Fainting		
Symptoms		
Pale, perspiring, cold or clammy skin		
Nausea		
Lack of balance		

#### What to Do:

### Steps to Take 5-14: Fainting

Procedure Objective: To assist a patient who has fainted

Equipment Needed: Cold compress, stethoscope, watch, thermometer, telephone

#### Steps to Take

- 1. Gradually lower patient to a flat surface. If possible, slide the patient down your own body to support the transition without falling or injuring either the patient or yourself.
- 2. Loosen any tight clothing.
- 3. Check breathing.
- 4. Check for symptoms of a life-threatening emergency.
- 5. Elevate the legs if there is no back or head injury.
- 6. If vomiting occurs, roll the patient onto her side.

- 7. Apply a cold compress to the forehead.
- 8. A healthcare professional should monitor vital signs to determine if she is stabilized before allowing her to leave.

Fainting itself is not serious, but 911 or EMS may need to be called if vital signs are abnormal the fainting could be a symptom of another medical condition.

Practice this procedure several times until you can do it without reading the steps.

You're already familiar with the symptoms and treatment for diabetic coma. We'll look at impaired consciousness as a result of shock in an upcoming Step, number 10.

### 7. Poisoning

**Poison** is a substance that causes injury, illness or death, especially by chemical means. It can be eaten, drunk, inhaled, injected or absorbed through the skin. The table below outlines the various causes and symptoms of poisoning.

Common Types of Poisoning			
Cause	Possible Substances	Symptoms	
Food poisoning	Spoiled food, such as meat, eggs, seafood, prepared dishes	Vomiting, diarrhea	
Carbon monoxide	Cigarette smoke, gas heaters, exhaust pipes from car	Headaches, dizziness, vomiting, chest pain, blurred vision, loss of consciousness	
Bee sting	Wasp, bee or yellow jacket bee sting	Difficulty breathing, swelling, high blood pressure	

#### What to Do:

#### Steps to Take 5-15: General First Aid for Poisoning

Procedure Objective: To assist the patient with general poisoning

Equipment Needed: Wet washcloth, water and phone

#### **Steps to Take**

- 1. Ask the patient what was taken, how much and when.
- 2. If the poison is an inhalant, take the patient to an area with fresh air. Call 911. The patient may require pulmonary resuscitation until help arrives and then will need 100% oxygen and immediate care in a hospital.
- 3. If the poison is affecting the skin, remove the clothing. Wash the skin thoroughly unless you suspect that a dry powder is the cause of the poisoning. In that case, call the poison control center and/or 911 as soon as possible. Some powders are safe to wash off with water, while others require different solvents for removal. Using the wrong liquid for rinsing can increase the damage.

- 4. If the poison is in the eye, flush the eye thoroughly for at least 15 minutes.
- 5. If the poisoning was ingested, call the poison control center (1-800-222-1222) for advice. While Syrup of Ipecac and induction of vomiting were standard practice for many decades, they are no longer the immediate treatment for ingested poisons. Ipecac is rarely used, and is not available to the public any longer. Vomiting can help in some cases, but only as directed by a physician or poison control center. More harm can be done than good in many cases.
- 6. Keep the patient as quiet as possible.

Practice this procedure several times until you can do it without reading the steps.

### 8. Psychiatric Disorder

A **psychiatric disorder** is a recurring thought process or behavior that causes harm to the individual and is not considered normal. Psychiatric disorders can include many different conditions, including depression, bipolar disorder and schizophrenia. Often these conditions don't develop until a person reaches his late teens to early twenties. Researchers don't know why these disorders develop, but they can be triggered by a **stressor**, a life-changing event such as losing your job, parents' divorce or even a positive change such as going to college. Alcohol and drugs can also trigger a mental disorder.<sup>4</sup>

Psychiatric conditions can develop over time or can occur suddenly, creating a *psychiatric emergency* in your office. A **psychiatric emergency** is any behavior by a patient or other visitor that has the potential to cause harm to himself or others. A patient who suddenly begins throwing equipment and instruments in the treatment room because you advised him to get a flu shot would be considered a psychiatric emergency. Another example might be a patient who begins mumbling incoherently and doesn't respond to your voice. It can be a scary situation for you, but there are signs you can watch for in patients to find out if a psychiatric emergency is happening in your office.

Psychiatric Disorder				
Symptoms				
Confusion				
Difficulty concentrating				
Sudden change in mood				
Violent behavior				
Inability to function				
Hallucinations				
Paranoia				
Unreasonable anger or sadness				
Recurrent thoughts of death or suicide				
Increase in risky behavior				
Hearing voices				

### What to Do:

- 1. Notify the physician and staff immediately.
- 2. Call 911 as directed.
- 3. Try to calm the patient and any family members present.
- 4. A healthcare professional should take the patient's vital signs if possible.
- 5. Document the patient's behavior.

### 9. Seizure

A **seizure** is an episode of **spasms** (involuntary muscle contractions), fainting and loss of motor control due to abnormal activity in the brain. Seizures may occur when the patient has high body temperature, head injuries, brain disease or a brain disorder, such as epilepsy. A **grand mal seizure** is a severe involuntary contraction of muscles that first causes the patient to become rigid and then to have uncontrollable movements. The patient becomes unconscious and may be injured during the seizure.

Seizure			
Symptoms			
Skin of the face and lips appears bluish due to lack of oxygen			
No breathing			
Loss of bladder and bowel control			
Tongue biting			

### When the seizure has stopped:

- Confusion
- Complaint of headache and exhaustion

A petit mal seizure is less dramatic but still a significant event.

Petit Mal Seizure				
Symptoms				
Inability to respond (but not loss of consciousness)				
Staring				
Tremors or somewhat less obvious rigidity and movements				

#### What to Do:

### Steps to Take 5-16: Seizure

Procedure Objective: To assist the patient during a seizure

Equipment Needed: Blanket

#### Steps to Take

#### During the Convulsive Phase:

- 1. Do not restrain movement.
- 2. Move objects out of the way that might cause injury.
- 3. Do not force any object between the patient's teeth or it could cause vomiting, aspiration or spasm of the larynx.

#### Following the Convulsion:

- 1. Turn the head to the side to prevent choking from profuse salivation.
- 2. Allow the patient to rest or sleep after the seizure is over.
- 3. Artificial respiration should be given if necessary. Call 911 if there is any question of patient's safety.
- 4. Provide emotional support as the patient regains composure.
- 5. Try to alleviate any feelings of embarrassment, and suggest the patient see a doctor.

Practice these procedures several times until you can do it without reading the steps.

### 10. Shock

A lack of oxygen to the individual cells of the body causes **shock**, which is an immediate response by the body tissues when they aren't receiving oxygen.

The body initially adjusts for shock by increasing the strength of contractions of the heart, increasing the heart rate and constricting the blood vessels. As shock progresses, the body has difficulty trying to adjust and eventually tissues and body organs will sustain such severe damage that the shock becomes irreversible.

### **Types of Shock**

Shock is one of the leading causes of death in a critically ill person. There are several types of shock, and it can be caused by various factors.

- The loss of blood or other body fluids causes **hypovolemic shock**. If hypovolemic shock occurs due to blood loss it can also be called **hemorrhagic shock**. Dehydration caused by diarrhea, vomiting or heavy sweating can also lead to hypovolemic shock.
- **Cardiogenic shock** is the most extreme form of heart failure, occurring when the function of the left ventricle is so compromised that the heart can no longer adequately pump blood to body tissues.

- **Neurogenic shock** is caused by a dysfunction of the nervous system. The diameter of the blood vessels in the body can no longer be controlled, which leads to dilation. Once the blood vessels are dilated, there is not enough blood in the circulation to supply the body with oxygen, thus causing shock.
- Anaphylactic shock is an acute generalized allergic reaction that occurs within minutes to hours after the body has been exposed to a foreign substance to which it is oversensitive.
- **Septic shock** is caused by a generalized infection of the bloodstream in which the patient appears seriously ill. It may be associated with an infection such as pneumonia or meningitis, or it may occur without an apparent source of infection, especially in infants and children. The patient may have become ill suddenly, or the illness may have developed over several days.

Shock				
Symptoms				
Sudden drop in blood pressure				
Pale or discolored, cold, clammy skin				
Weak or rapid pulse Irregular, shallow or rapid breathing				
				General weakness
Dilated pupils				
Anxiety or confusion				
Reduced urination				
Loss of consciousness				

#### What to Do:

Steps to Take 5-17: Management of the Patient in Shock

Procedure Objective: To assist the patient in shock

Equipment Needed: Telephone, emergency oxygen supply, blanket

#### Steps to Take

**Remember:** Shock can be the result of many types of medical emergencies. The following should serve as a general guideline for managing a patient in shock.

- 1. Call 911.
- 2. Check your CABs—make sure the patient is breathing and has a pulse.
- 3. Control any bleeding.
- 4. Administer oxygen.
- 5. Immobilize due to possible spinal injuries.

- 6. Splint any fractures.
- 7. Prevent loss of body heat by covering the victim with a blanket.
- 8. Transport to the nearest hospital as soon as possible.

Practice these procedures several times until you can do it without reading the steps.

Before we wrap up this lesson, let's review the material you've learned about the "Top Ten Emergencies" you'll encounter in the medical office with the following Practice Exercise.

# Step 12: Practice Exercise 5-3

Match the emergency on the left with its description on the right.

1.	Anaphylaxis	a.	Sudden arrhythmia caused by blockage of blood supply to the heart
2.	Asthma Complications	b.	Ingesting a substance that causes injury, illness or death
5. 4.	Drug Overdose	c.	A severe case of chronic inflammation of the airways in the lungs
	Diabetic Emergencies d	d.	A lack of oxygen to the body's cells
5.		e.	Having too much sugar or insulin in the blood
6.	Impaired Consciousness	f.	A rapid, severe immune reaction to an allergen that can quickly lead to death
7.	Poisoning	g.	An episode of spasms, syncope and loss of motor control due to abnormal activity in the brain
8.	Psychiatric Disorder	h.	Loss of awareness of your surroundings as
9.	Seizure		with syncope
10.	Shock	i.	A recurring thought process or behavior that causes harm to the individual and is not considered normal
		j.	Taking too much of a prescribed medication or recreational drug

Select the best answer from the choices provided.

#### 11. The body's immune system considers a(n) \_\_\_\_\_ to be a foreign body and reacts by attacking it.

- a. anaphylaxis
- b. allergen
- c. vaccine
- d. white blood cell

#### 12. Complications, such as exercise, old age or pregnancy, can lead to a(n) \_\_\_\_\_.

- a. occurrence of hypoglycemia
- b. episode of anaphylactic shock
- c. seizure
- d. asthma emergency

#### 13. Signs of drug overdose include all of the following, EXCEPT \_\_\_\_\_.

- a. unusual or absent vital signs
- b. diarrhea, nausea or vomiting
- c. seizures
- d. an unusual skin condition—either too cold or too hot, moist or dry

### 14. \_\_\_\_\_, if left untreated, can lead to diabetic coma.

- a. Hyperglycemia
- b. Hypoglycemia
- c. Insulin shock
- d. Diaphoresis

### 15. When there isn't enough blood supply to the brain \_\_\_\_\_ can occur.

- a. hyperglycemia
- b. insulin shock
- c. syncope
- d. cardiac arrest

For the following question, define the acronym AVPU, to help you remember how to assess a patient's level of consciousness:

16.



# Step 13: Review Practice Exercise 5-3

Review your answers with the Answer Key at the back of this instruction pack. Correct any mistakes you may have made.

# Step 14: Lesson Summary

Wow! We've covered a lot in this lesson—a first taste of the life-saving procedures you'll be a part of as a medical assistant. These basic techniques will provide a solid foundation for you to work from in upcoming lessons and in your career! From a fainting spell to a heart attack, you now have the knowledge to act with confidence, speed and accuracy until emergency help arrives.

In the next lesson, we will explore the many types of medical equipment and supplies you will use to care for your patients. Take a moment now to call your local Red Cross chapter or hospital to find out where to enroll in an American Heart Association first-aid and CPR program. This is the next step in your training to become a medical assistant! Remember, you must recertify every two years to keep your skills up to date and certification current.

When you've reviewed your lesson and you feel comfortable with the material, test your knowledge with the following Quiz.

# Step 15: Quiz 5

Once you've mastered the course content, locate this Quiz in your *Online Course* or *Assignment Pack*. Read and follow the Quiz instructions carefully.

### Endnotes

- <sup>1</sup> Toback, Seth L., MD. American Family Physician. Medical Emergency Preparedness in Office Practice. June, 2007. Print.
- <sup>2</sup> Toback, Seth L., MD. American Family Physician. Medical Emergency Preparedness in Office Practice. June, 2007. Print.
- <sup>3</sup> Toback, Seth L., MD. American Family Physician. Medical Emergency Preparedness in Office Practice. June, 2007. Print.
- <sup>4</sup> Kosmix. *RightHealth*. The Real World: Recognizing Mental Illness in Young Adults. Web. 8 Oct 2013.