Lesson Objectives

1. Explain why first aid is needed when someone suddenly becomes ill.
2. List the general care steps for any sudden illness.
3. Describe the signs and symptoms of, and the first aid for, each of the sudden illnesses described.
Sudden Illness

- Many different illnesses may occur suddenly.
- Many become medical emergencies.
- Knowledge of a victim’s specific illness is not needed to give first aid.
Chapter 16 • Sudden Illness

General Signs and Symptoms of Sudden Illness

• Person feels ill, dizzy, confused or weak
• Skin color changes:
  • Flushed, pale or ashen
• Sweating
• Breathing changes
• Nausea, vomiting
General Care for Sudden Illness

- Call 9-1-1 for unexplained sudden illness.
- Help victim rest and avoid getting chilled or overheated.
- Reassure victim.
- Do not give victim anything to eat or drink.
- Watch for changes:
  - Be prepared to give BLS.
Heart Attack

- Sudden reduced blood flow to heart muscle
- Medical emergency that often leads to cardiac arrest.
- Can occur at any age.
- Usually results from atherosclerosis.
Facts About Heart Attack

- Over 735,000 heart attacks occur a year in the United States, resulting in over 120,000 deaths.
- Many could have been saved by first aid and medical treatment.
- More likely in those with family history
- 1/5 of victims do not have chest pain.
- Victims typically deny they are having a heart attack.
Prevention of Heart Attack

• Do not smoke.
• Eat a healthy diet.
• Control blood pressure.
• Maintain normal weight.
• Get exercise.
• Control stress.
Symptom Variability in Heart Attack

- Can vary from vague chest discomfort to crushing pain with or without other symptoms.
- May have no signs and symptoms before suddenly collapsing.
- May have milder symptoms that come and go before heart attack occurs.
Symptom Variability in Heart Attack *continued*

- In women, chest pain or discomfort most common symptom:
  - Also more likely to have shortness of breath, jaw or back pain, indigestion, nausea and vomiting
**Symptom Variability in Heart Attack continued**

- Consider possibility of heart attack with wide range of symptoms:
  - Don’t expect a clearly defined situation.
- Act quickly because deaths usually occur within 1-2 hours of symptoms.
Aspirin and Heart Attack

- Many patients at risk for cardiovascular disease are advised to take 1 low-dose aspirin daily unless allergic or experience side effects.
- For victims who do not need to avoid aspirin, chewing 1 adult aspirin or 2-4 low-dose baby aspirin is now recommended when experiencing heart attack symptoms.
Nitroglycerin for Heart Attack

- Increases blood flow by dilating arteries
- Often prescribed for angina
  - Type of chest pain caused by narrowed coronary arteries
- Comes in tablets, sprays and patches
Nitroglycerin for Heart Attack continued

• Can assist victim with prescribed nitroglycerine:
  • Follow victim’s instructions.
  • Do not attempt to give if victim unresponsive.
First Aid: Heart Attack

1. Call 9-1-1 immediately.
2. Help victim into comfortable position. Loosen any tight clothing.
3. Ask victim about medications.
4. Encourage the victim to chew 1 adult or 2-4 low-dose baby aspirin (unless allergic).
5. Stay with victim. Be reassuring.
6. Be prepared to give CPR care, if needed.
Angina

- Chest pain caused by heart disease
  - Usually after activity or exertion
- Pain usually lasts only few minutes.
- People usually know they have angina and carry medication.
Angina continued

- Ask if person has been diagnosed with angina; if so, ask if the pain is like angina pain experienced in past.
- If so, help person with angina take medication and rest.
- If pain persists > 10 minutes or stops and returns or person has other symptoms of heart attack give first aid as for heart attack.
Stroke

- Interruption of blood flow to part of brain:
  - Kills nerve cells and affects brain function
- Victims need medical help immediately:
  - To decrease chance of permanent damage
- More common in older adults
- About 795,000 people a year have a stroke, resulting in about 130,000 deaths year in United States.
Time Is Critical

- Take note of the time that symptoms began.
- Call 9-1-1 immediately:
  - Drugs can minimize effects of stroke but only if administered soon.
  - Tell dispatcher you believe victim has had a stroke and describe signs and symptoms.
FAST Stroke Assessment

F – Face drooping
A – Arm weakness
S – Speech difficulty
T – Time to call 9-1-1
FAST Stroke Assessment continued

• If the victim shows any symptoms, call 9-1-1 immediately.

• Note the time when the symptoms first began.
First Aid: Stroke

1. Call 9-1-1.
2. Monitor victim and be prepared to give BLS.
3. Have victim lie on back with head and shoulders slightly raised.
4. Loosen constrictive clothing.
5. Turn victim's head if necessary for vomit or drool to drain.
Chapter 16 • Sudden Illness

Transient Ischemic Attack (TIA)

• Temporary interruption to blood flow in brain:
  • Mini-stroke

• Produces signs and symptoms similar to stroke:
  • But they disappear within a few minutes

• Always call 9-1-1 for stroke symptoms.
Respiratory Distress

- Difficulty breathing
- Caused by many different illnesses and injuries
Prevention of Respiratory Distress

- People with asthma:
  - Avoid triggers.
  - Carry medication.

- People with chronic respiratory problems:
  - Avoid situations that cause breathing difficulty.
Caring for Respiratory Distress

- Infants and children can rapidly progress to respiratory arrest:
  - Act quickly when there is a problem breathing.
  - If possible, treat underlying cause.
  - If cause not obvious, look for other signs and symptoms.
First Aid: Respiratory Distress

• When you see:
  • Victim gasping or unable to catch breath
  • Speaking in shortened sentences
  • Breathing that is faster/slower, deeper/shallower than normal
  • Breathing with wheezing or gurgling sounds
  • Victim feeling dizzy or lightheaded
  • Pale or ashen skin
First Aid: Respiratory Distress continued

1. Call 9-1-1.

2. Help victim into position of easiest breathing.

3. If victim is hyperventilating, ask him or her to breathe slowly.

4. Ask victim about medications.

5. Stay with victim and be prepared to give CPR if breathing stops.
Asthma

- Affects 1 in 20 adults
- Affects 1 in 10 school-age children
- Many victims carry medication for known condition.
- Untreated, severe attack can be fatal.
Helping with an Asthma Inhaler

- Relaxes muscles of airway
- **Used during asthma attack**
- Delivered by inhaler in premeasured dose
Helping with an Asthma Inhaler continued

- Help victim use inhaler if:
  - Victim confirms asthma attack occurring.
  - Victim identifies inhaler as his or her prescribed medication.
  - Victim cannot self-administer the medication.
Helping with an Asthma Inhaler continued

- Remove cap and shake inhaler.
- If spacer used, position it on inhaler.
- Have victim exhale fully through mouth.
- Have victim place lips around inhaler mouthpiece or spacer.
- Have victim inhale slowly and deeply while you press metal canister to release one dose.
- Have person hold his or her breath for up to 10 seconds and then exhale slowly.
- Follow directions of victim’s treatment plan.
First Aid: Asthma

1. Call 9-1-1 if first attack.

2. If victim identifies the breathing difficulty as asthma attack, help victim use prescribed inhaler as directed by health care provider.

3. Help victim into position of easiest breathing.
Chapter 16 • Sudden Illness

Chronic Obstructive Pulmonary Disease

• Includes emphysema and chronic bronchitis

• Over 12 million people in United States diagnosed with COPD, with 12 million more who may have COPD but have not been diagnosed.

• COPD causes more than 120,000 deaths a year in United States.

• May cause respiratory distress and breathing emergencies
Chronic Obstructive Pulmonary Disease  continued

• Tell dispatcher about disease when you call 9-1-1.
• Give first aid for respiratory distress as needed.
• Help victim with prescribed medication.
Hyperventilation

- Fast, deep breathing
- Usually caused by anxiety or stress
- Usually doesn’t last long
- Look for other signs and symptoms of illness.
- Help person calm down and relax and breathe slowly.
First Aid: Hyperventilation

1. Make sure there is no other cause of breathing difficulty that requires care.
2. Reassure victim. Ask victim to breathe slowly.
3. Call 9-1-1 if victim’s breathing doesn’t return to normal within a few minutes.
Fainting

• Caused by temporary reduced blood flow to brain:
  • Hot weather, fright, emotional shock, lack of food, suddenly standing

• Usually not sign of serious problem unless it occurs often or person does not recover quickly.
Fainting continued

• Signs and symptoms before fainting:
  • Dizziness
  • Sweating
  • Nausea
  • Blurring or dimming of vision
  • Generalized weakness
First Aid: Fainting

1. Monitor victim’s breathing and be ready to give CPR if needed.
2. Lay victim down and raise legs 6-12 inches. Loosen constricting clothing.
3. Check for possible injuries caused by falling.
4. Reassure victim.
Seizures

- Causes of seizures:
  - Epilepsy
  - High fever (infants, young children)
  - Head injuries
  - Low blood sugar
  - Poisoning
  - Electric shock
Facts About Epilepsy

- Epilepsy and seizures affect an estimated 2.2 million people of all ages in the United States.
- Approximately 150,000 new cases of seizures and epilepsy are diagnosed each year.
- 1 in 26 people will experience a seizure in their lifetime.
Males are slightly more likely to develop epilepsy than females.

Incidence is greater in African-American and socially disadvantaged populations.

In 70% of new cases, no cause is apparent.
Prevention of Seizures

- First-time seizures can seldom be prevented.
- Medications can prevent in diagnosed disorder.
- Prevent head injuries.
Common Types of Seizures

• Complex partial seizure:
  • Person seems dazed, may mumble or wander.

• Absence seizure:
  • Person seems to stare blankly into space, doesn’t respond to others.
Common Types of Seizures continued

- Generalized tonic seizure:
  - Convulsions or grand mal seizure
  - Person loses consciousness, falls, is stiff, then experiences jerking of muscles (clonic).

- Febrile seizures:
  - Caused by high fever in infants/young children
  - Convulsions similar to tonic clonic.
First Aid: Seizures

1. Prevent injury.
2. Loosen constricting clothing. Check for medical ID.
3. Turn person to one side if vomiting.
4. After seizure, keep airway open.
5. Be reassuring.
Seizures in Special Circumstances

- Do not remove a person from water:
  - Support person with head tilted to keep water out of mouth.

- For person in airplane, motor vehicle or other confined area:
  - Lie person on side across seats.
  - Cushion head.
Altered Mental Status

• Change from person’s normal responsiveness and awareness

• Not a condition itself, but it is a sign or symptom that results from injury or illness.
Altered Mental Status \textit{continued}

- Victim may be:
  - Confused
  - Disoriented
  - Combative
  - Drowsy
  - Partially or wholly unresponsive
Common Causes of Altered Mental Status

- Seizures
- Stroke
- Head injury
- Poisoning, drug use or overdose
- High fever
- Diabetic emergencies
- Any condition causing lowered blood oxygen
Care for Altered Mental Status

- Do not assume person is intoxicated or using drugs:
  - Diabetic emergencies can produce behavior similar to intoxication.
  - Altered mental status is often sign of deteriorating condition.
Care for Altered Mental Status continued

• Determine source of problem, if possible.
• Perform physical examination.
• Gather SAMPLE history.
• Give first aid for any problems found.
• If you cannot determine cause – call 9-1-1.
Diabetic Emergencies

- Blood sugar levels not well regulated by body
- Over 25 million people in United States have diabetes.
  - About 7 million haven’t been diagnosed.
- Chronic and incurable
Primary Types of Diabetes

- Type 1 (insulin-dependent or juvenile-onset) diabetes:
  - Body does not produce enough or any insulin.
  - Person must receive insulin.
- Type 2 (non-insulin-dependent or adult-onset) diabetes:
  - Body cells do not use insulin well.
- With either type, blood glucose levels may be too high.
Facts About Diabetes

- Kills almost 70,000 people each year
  - 7th leading cause of death
- Contributes to another 160,000 deaths annually from related causes:
  - Heart disease, stroke, blindness, kidney disease, nervous system damage
- Foot infections often lead to amputation.
• Increasing number of children and adolescents developing Type 2 diabetes:
  • Overweight
  • Lack of exercise
Prevention of Diabetes

- Diet
- Exercise
- Weight control
- Careful control of:
  - Glucose levels
  - Blood pressure
  - Cholesterol levels
- Preventive care for eyes, kidneys, feet
Prevention of Diabetic Emergencies

• Carefully monitor blood glucose levels.
• Control diet.
• Use medication as prescribed.
• Control level of activity.
First Aid for Diabetic Emergencies

Hypoglycemia:
- Person takes too much insulin.
- Person doesn’t eat enough or right foods.
- Uses blood sugar too fast:
  - Exercise
  - Emotional stress

Hyperglycemia:
- Person takes too little insulin.
- Person eats too much or wrong foods.
- Does not use blood sugar with activity.
First Aid for Diabetic Emergencies continued

- Hypoglycemia:
  - Sudden dizziness
  - Shakiness
  - Mood change
  - Headache
  - Confusion
  - Pale skin
  - Sweating
  - Hunger

- Hyperglycemia:
  - Frequent urination
  - Drowsiness
  - Dry mouth
  - Thirst
  - Shortness of breath
  - Deep, rapid breathing
  - Nausea/vomiting
  - Fruity-smelling breath
First Aid: Hypoglycemia (Low Blood Sugar)

1. Confirm victim has diabetes. Look for medical ID.

2. Give the victim sugar: preferably 3-5 glucose tablets. If unavailable, give another sugar, such as 8 ounces of orange juice, 5 sugar packets (but not artificial sugar or sweetener packets) or several pieces of candy (such as 15-20 jelly beans or 20-25 Skittles). Give more sugar after 15 minutes if victim still feels ill.

3. Call 9-1-1 if victim becomes unresponsive or has significant symptoms.
First Aid: Hyperglycemia (High Blood Sugar)

1. If you suspect high blood sugar, call 9-1-1 and monitor person.

2. In the early stage, you may not be able to tell whether victim suffers from high or low blood sugar. In this case:
   • Give sugar as for hypoglycemia.
   • If the victim does not improve within 15 minutes, or victim’s signs and symptoms become worse, call 9-1-1.

3. In later stage, high blood sugar is a medical emergency:
   • Call 9-1-1 immediately.
   • Put unresponsive victim in recovery position and monitor breathing.
Severe Abdominal Pain in Adults

Seek urgent medical care if:

- Pain accompanied by dry mouth, dizziness on standing, decreased urination
- Pain accompanied by difficulty breathing
- Pain accompanied by vomiting blood or greenish-brown fluid
Severe Abdominal Pain in Adults \textit{continued}

Seek urgent medical care if:

- Sudden, severe, intolerable pain
- Pain that causes wakening from sleep
- Pain that begins in central abdomen and moves to lower right
- Pain in pregnancy or accompanying vaginal bleeding
Severe Abdominal Pain in Young Children

Seek urgent medical attention if:

- Pain that occurs suddenly, stops and then returns without warning
- Pain accompanied by red or purple, jelly-like stool; or with blood or mucus in stool
- Pain accompanied by greenish-brown vomit
- Pain with swollen, hard abdomen
- Pain with hard lump in lower abdomen or groin area
Vomiting or Diarrhea

- Many different causes
- Seek medical care for unexplained or persistent GI distress.
- Persistent diarrhea or vomiting in infant or small child or elderly or debilitated person can cause dehydration.
- Do not give victim anything to eat or drink:
  - Except for clear fluids for dehydration
Chapter – Opening Scenario

Returning to your office after lunch, you find a coworker leaning over her desk looking ill. Her breathing is labored and noisy. You ask her what is wrong, and she says she doesn’t know but she feels like she can’t breathe. She pauses, gasping, between words. Her skin is pale.

What do you do?
CHAPTER 16

Critical Thinking Challenge Questions

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Scenario 1

You enter your boss’s office to find her at her desk, looking ill. Her skin is pale and she is sweating. Her chest hurts, but she says “It must have been something I ate – it feels like really bad heartburn.” She is obviously short of breath.

What should you do?
Standing in the checkout line at the supermarket, you see the elderly woman in front of you suddenly stagger and fall over her grocery cart. You help her to sit on the floor. She seems confused and is trying to say something, but you cannot make out her words; one side of her mouth seems frozen. Then she leans back and becomes unresponsive.

What do you do?
Scenario 3

You encounter a coworker sitting at his desk looking ill. He is having trouble breathing and is gasping and trying to catch his breath. You ask what is wrong and he says he does not know but suddenly he feels dizzy.

What do you do?
Scenario 4 (optional)

You know that one of your coworkers has asthma, but it always seems under control. One day the two of you have been working outdoors on a smoggy day when suddenly he is wheezing and can barely speak. He is panicked and seems helpless.

What do you do?
Scenario 5 (optional)

In the cafeteria, an employee has fallen to the floor and is shaking in convulsions. Several people are standing around but no one is doing anything. As you come up, you hear someone say you are supposed to put a pencil between his teeth to keep him from grinding his jaw together. You see a medical ID bracelet on the victim’s arm.

What do you do?
Scenario 6 (optional)

A coworker whom you know is diabetic comes in your office and asks if you have anything with sugar in it. He feels dizzy and shaky and almost collapses into a chair. You search through your desk looking for anything sweet, then remember that the man in the next office often has candy. You say you’ll be right back and run to the next office, but the man isn’t there. You check with a few others and eventually obtain a candy bar, but by the time you return to your office, the man is slumped in the chair, unresponsive.

What should you do?
CHAPTER 16

Discussion and Questions