Assisted Living First Aid and Choking Training

Participant Guide

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CBRF Training and Quality Assurance

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Training Overview

In Wisconsin, Community Based Residential Facilities, or CBRFs, are regulated by the Department of Health Services (DHS) Division of Quality Assurance (DQA). The rules for CBRFs are outlined in State Statute, Chapter 50 and more specifically defined in the Wisconsin Administrative Code, often called Administrative Rules.

Chapter DHS 83, Wisconsin Administrative Code, is the rule that defines the responsibilities and restrictions of CBRFs. DHS 83.20 requires all CBRF employees, within 90 days after starting employment, to successfully complete first aid training and procedures to alleviate choking.

Participants must successfully complete all four hours of this training to meet the CBRF training requirements of Ch. DHS 83.20 (2)(c) first aid and choking.

This standardized training material is one of the curriculums approved by the Wisconsin Department of Health Services to meet the requirement listed above. In addition, the training must be delivered by an instructor approved by the University of Wisconsin-Green Bay. To view the registry of approved instructors, go to www.uwgb.edu/cbrf-registry.

Participants who successfully complete this training will be added to the Wisconsin CBRF Training Registry located at www.uwgb.edu/cbrf-registry.

This course has been created from information that is based on best practices and industry standards from the Centers for Disease Control, National Health Institute, Occupational Safety and Health Administration, U.S. National Library of Medicine and Health Resources and Service Administration. The course meets the OSHA requirements for workplace first aid.

A Note to Participants

As part of this four-hour training, you will receive a copy of this participant guide. Use the guide to make notes, write questions, and underline or highlight important material. The participant guide is yours to keep and can serve as an important resource when you return to your job.

At the end of this training, you will complete a quiz. You will be allowed to use your participant guide to complete the quiz. Therefore, it's very important that you pay close attention to the materials, take notes as needed and ask questions if you do not understand.

Learning Points

- Know your role as an assisted living employee in an emergency
- Be able to provide basic first aid in emergencies until help arrives
- Understand how to and be able to alleviate choking
- Identify different types of emergencies and how to respond
- Learn basic prevention methods to avoid emergency situations

Chapter 1

Before Giving Care and Checking an Injured or Ill Person

What is Your Role in an Emergency?

As a member of a CBRF team you have various roles and responsibilities when it comes to emergency situations. It is important for you to take these roles and responsibilities seriously in order to save lives in the event of an emergency.

Your role is to provide immediate, lifesaving, medical care before the arrival of emergency medical assistance. First aid may also be used for minor incidents that do not require outside assistance. Incidents that require first aid include physical injury or illness. This program is designed to teach you what to do in many of the common emergency situations that may arise in a CBRF.

Before the Emergency - Know the Basics.

Know your CBRF's emergency plan and where it is posted.

Know where the first aid supplies are located and how to resupply when used.

Know your CBRF's communication and documentation system for emergencies.

During an Emergency

Remain

- Remain calm and evaluate the situation
- Know the situation and what happened
- Help everyone to remain calm
- Provide reassurance to the injured person

Protect

- Determine if the injured person is at risk of further injury
- Only move a person to safety if leaving them where they are located would put them at more risk

Prevent

- Use standard precautions to prevent the spread of infection
- Always wear disposable gloves
- Do not sneeze, cough, or breath over an open wound

Provide

- Use basic first aid treatment to stabilize the person until help arrives
- Stay with the person until help arrives

Communicate

- Call 911 if you believe there is a serious injury
- Contact the on call nurse (if you have access to one), supervisor, or physician for medical advice in less serious situations
- Arrange follow up with a doctor as needed
- Document the incident per the CBRF's policies
- Communicate the incident to the person's responsible party (if applicable)

Emergency Action Steps

Remember these three words when taking action steps in an emergency:

- Check
- Call
- Care

Check – Check the scene and evaluate the person

- Is it safe? Check the environment
- Is immediate danger involved? Check the surrounding area for fire, gas, traffic, collapsing building, etc.
- What happened? Look for clues
- How many people are involved
- Is there anyone else available to help? Have bystanders call 911, calm victims, reassure family, etc.
- What is wrong? Quick assessment - conscious/unconscious, breathing difficulties, etc.
- Checking the elderly: special needs such as noted on medical alert bracelets or in the medical record
- Identifying life-threatening conditions: unconscious, not breathing, severe bleeding, critical burns, etc.

Call - Call 911 for life threatening situations

If you are the only person at the scene, shout for help. If no one arrives you must decide whether to call first or care first.

Call first situations:

In call first situations, you would call 911 before providing care. Call first situations are likely to be cardiac emergencies, such as sudden cardiac arrest; the time factor is critical, an unconscious adult, a sudden collapse of a person or a person showing symptoms of a stroke.

Care First Situations:

In care first situations, you would provide care first for about two minutes and then call 911. Care first situations are likely to be non-cardiac emergencies, such as breathing emergencies or severe bleeding. When alone in these types of situations, provide care, about two minutes and then call 911.

An example would be: a victim who is severely bleeding. Attempts are first made to slow or stop the bleeding for two minutes and then 911 is called.

Deciding to call or care first (if you are alone)

- **CALL first** for: anyone who is unconscious
- Give two minutes of care, then call 911
    - Care first often relates to breathing emergencies or severe bleeding

Making the call to 911:

- Give the dispatcher the necessary information
    - Exact location or address of the emergency: including nearest intersections, landmarks, building name, room or apartment location
    - Telephone number from which the call is being made
    - Caller's name
    - Known facts of the situation

Care - Care for the Person Based on the Needs Identified

- Introduce yourself; ask permission to help
- Care for life-threatening emergencies first and then those that are nonlife-threatening
- Watch for changes in the victim's breathing and level of consciousness
- Keep the victim from getting chilled or overheated

Do No Further Harm

One of the most dangerous threats to a seriously ill or injured person is unnecessary movement. Moving a person can cause additional pain or complicate his/her recovery. The general rule is to not move an ill/injured person while giving care.

When faced with immediate danger or when it is necessary to give proper care, you may have to move the person.

Once you decide to move an ill/injured person you must quickly decide how to move them. Base your decision on:

- Environmental dangers you are facing
- The size and condition of the victim
- Your physical strength to perform the move
- Availability of additional help

Steps to move a person:

- Keep the person comfortable
- Pay attention to the injured person and look for changes in condition
- Improve chances of successfully moving the person without injuring self:
    - Use legs, not back, when you bend
    - Avoid twisting your body
    - Bend at knees and hips
    - Walk forward and take small steps; look where you are going
    - Don't move a person who is too large to move safely and comfortably
    - Breathe
    - Know your limitations

Checking an Injured or Ill Person Who Appears to be Unresponsive

Each CBRF handles how it responds to the residents potential need for CPR differently. DHS 83 does not require employees to be trained in CPR and AED. Please refer to your CBRF's policy and procedure for guidance on how to respond. Your CBRF may arrange for additional training in CPR and AED which would be above the state required first aid and choking training.

Unconsciousness is when a person is unable to respond to people and activities. Doctors often call this a coma or being in a comatose state. During an incident, unresponsiveness can last only a few minutes or for a longer period of time. The cause of the incident often impacts how long the unresponsiveness will last. Some incidents that might cause unresponsiveness are: head injuries, heart attacks, diabetes, drug overdoses, strokes, or seizers.

Symptoms to look for in an unresponsive adult

An unresponsive adult may look like they are sleeping, but they will not be able to be awakened either verbally or by physical contact.

- **DO NOT** give an unconscious person any food or drink
- **DO NOT** leave the person alone
- **DO NOT** place a pillow under the head of an unconscious person
- **DO NOT** slap an unconscious person's face or splash water on them

Steps to assist an unresponsive adult

Video resource is about assisting an unconscious person 1:28 min:
https://www.youtube.com/watch?v=kWnFFotHCVM

Step 1 – Call or tell someone to call 911

Step 2 – Open the airway

- Place one hand on the person's forehead and gently tilt the head back. As you do this the mouth will fall open slightly
- Place the fingertips of your other hand on the point of the person's chin and lift the chin

Step 3 – Check for breathing

- Look, Listen and Feel for breathing (L.L.F.) Normal breathing includes chest movement, sounds, and breaths

Step 4 – Check for circulation, check for external bleeding

Step 5 – Put them in the recovery position if they are breathing

- If the person is breathing and lying on their back, and you do not think there is a spinal injury, carefully roll the person toward you onto their side. Bend the top leg so both hip and knee are at right angles. Gently tilt their head back to keep the airway open
- If a spinal injury is suspected, "log roll" the person instead. To do this, keep the person's head, neck, and back in line, and roll the body and head as a unit. Support their neck and back to keep the head and body in the same position while you roll

Step 6 – Follow the dispatcher's directions. Keep the person warm until medical help arrives

Checking a Responsive Person

Most first aid situations in assisted living communities will involve individuals who are responsive. If a person is responsive and does not appear to have immediate life threatening situations, the first step is to begin interviewing them. Remember to call 911 immediately for life threatening situations.

It is important to stay calm and be reassuring to the person. When interviewing the individual collect the following information:

- Incident details
- Location of pain and level of discomfort
- Allergies
  - Check medical record or medical alert bracelet
- Medical history and medications
  - Check medical record

Once you have completed the interview, check the individual from head to toe for injury.

- When checking a person do not move areas of the body that they indicated may hurt or be uncomfortable
- Identify all areas of potential injury and determine the most significant injuries
  - Check the head for bleeding and physical changes. Make sure to check the scalp, skin, nose, mouth, ears, and face
  - Check to see if vision is the same and if the person's eyes look normal
- Monitor the person for changes in consciousness
- The person should continue to breathe with ease and remain calm, quiet, and without discomfort
- Check the entire body for cuts, bruises, or deformities. Look for areas that may be indented or may be bulging
- A sign of potential illness or injury may be changes to a person's skin. Check to see if the skin is more damp, dry, cool, or hotter than usual. Red, pale or ashen (gray) colors to the skin can also be a sign of a medical problem

- Once the head to toe check is completed, ask the person to begin moving their body parts that do not hurt. Start by moving the head side to side, slowly move down the body while checking all the joints
    - Stop moving a body part if they complain of pain
- If you have determined the person does not have a major injury, you may assist the person to sit up

Shock

Shock can be life-threatening and it is caused when a person's body is not receiving enough blood flow. The proper amount of blood flow is needed for cells in the body to have enough oxygen and nutrients to function. Immediate treatment is needed for shock, as many people who suffer from shock die. Any condition that causes the reduction of blood flow can cause shock. Examples are:

- Heart problems
- Dehydration
- Infections or allergic reactions that change blood vessels
- Certain medicines that reduce heart function or blood pressure
- Heavy bleeding from external or internal injuries

Symptoms

One or more of the following symptoms may be signs of shock:

- Low blood pressure
- Anxiety, agitation, or restlessness
- Bluish lips and fingernails
- Chest pain
- Confusion
- Dizziness, lightheadedness, or faintness
- Clammy skin
- Sweating
- Rapid but weak pulse
- Shallow breathing
- Unconsciousness

First aid for potential shock:

- Call 911
- Check the person's airway, breathing, and circulation
- If the person is able to breathe on their own, check breathing at least every five minutes until arrival of medical personnel
- If the person is conscious, place them on their back and elevate the legs about 12 inches as long as it does not cause further injury. **DO NOT** elevate their head
- Treat any other injuries
- Loosen tight clothing and stay with the person

If the person vomits or drools:

- Turn the head to one side to prevent choking
- If a spinal injury is suspected, "log roll" the person to one side. To do this, keep the person's head, neck, and back in line, and roll the body and head as a unit

DO NOT - In case of shock:

- **DO NOT** give anything by mouth, including food or drink
- **DO NOT** move the person who may have a spinal injury
- **DO NOT** wait to call 911. Always call no matter how mild the shock symptoms are

Lowering the Risk of Infection

Use of appropriate infection control measures can greatly reduce the risk of infection. Standard precautions are the best way to accomplish this. Standard precautions are an approach to infection control where the responding person treats all human blood and certain body fluids as if they were known to be infectious for HIV, HBV, or other bloodborne pathogens. Wearing gloves and hand washing are important parts of standard precautions. The best way to prevent the spread of infection is proper hand hygiene.

Hand Hygiene (*Per CDC Standards)*

Hand hygiene procedures include the use of alcohol-based hand rubs (containing 60-95% alcohol) and hand washing with soap and water. Alcohol-based hand rub is the preferred method for decontaminating hands, except when hands are visibly soiled (e.g. dirt, blood, body fluids), or after caring for patients with known or suspected infectious diarrhea (e.g. *Clostridium difficile*, norovirus), in which case soap and water should be used. Hand hygiene stations should be strategically placed to ensure easy access.

Procedures for Performing Hand Hygiene

Using Alcohol-based Hand Rub (follow manufacturer's directions):

- Dispense the recommended volume of product
- Apply product to the palm of one hand
- Rub hands together, covering all surfaces of hands and fingers until they are dry (no rinsing is required)

Handwashing with Soap and Water:

Handwashing Video Resource 1:26 min: https://www.youtube.com/watch?v=3PmVJQUCm4E

Hand Washing Instructions

- Wet hands first with water (avoid using hot water)
- Apply soap to hands
- Rub hands vigorously for at least 15 seconds, covering all surfaces of hands and fingers
- Rinse hands with water and dry thoroughly with paper towel
- Use paper towel to turn off the water faucet

Indications for Hand Hygiene

Always perform hand hygiene in the following situations:

- Before touching a person, even if gloves will be worn
- Before exiting the care area, after touching the person or the immediate environment
- After contact with blood, body fluids or excretions, or wound dressings
- Prior to giving medications
- If hands will be moving from a contaminated-body site to a clean-body site during patient care
- After coughing or sneezing
- After using the restroom
- After glove removal

Proper Removal of Gloves

Always wear gloves when coming into contact with bodily fluids or blood. Many pathogens can be spread from person to person by blood or body fluids. Wearing gloves is one of the best ways to protect oneself. Other personal protective devices should be used as determined by the type of exposure that may occur while providing first aid.

Pinch and hold the outside of the glove near the wrist area.

Peel downwards, away from the wrist, turning the glove inside-out.

Pull the glove away until it is removed from the hand, holding the inside-out glove with the gloved hand.

With your un-gloved hand, slide your finger/s under the wrist of the remaining glove. **Do not touch** the outer surface of the glove.

Peel downwards, away from the wrist, turning the glove inside out.

Continue to pull the glove down and over the inside-out glove being held in your gloved hand.

Chapter 2

Cardiac Emergencies

There are many different signs and symptoms to indicate a person is having a heart attack. Some potential signs can be found below:

- Chest discomfort, including uncomfortable pressure, squeezing, tightening or crushing feeling:
    - Pain or discomfort may begin as mild and increase over time
    - Pain or discomfort may begin or radiate to other parts of the body, including one or both arms, the back, neck, jaw or stomach
- Shortness of breath, with or without pain (discomfort)

Some less common side effects are cold sweats, nausea, lightheaded feeling, experience numbness, aching or tingling of the arm. It is important to remember that symptoms will differ from person to person, especially between men and women. As with men, a woman's most common symptom is chest pain or discomfort. However, women are more likely to experience some of the other symptoms. These are most often shortness of breath, nausea, vomiting, and pain in their jaw, neck or back. For example, a female at your CBRF may complain of back and arm pain when they are experiencing a cardiac emergency.

If a person is suspected to be having a heart attack:

- 911 should be called **immediately**
- Have the person sit down and rest, try to keep the person calm
- Loosen tight clothing
- Monitor the person's breathing, pulse and consciousness

Scenario

It has been a quiet night on third shift and you are down to your last two hours. You are notified that Ethel, who rarely calls, is ringing for help. Upon arrival, you ask Ethel how you can assist her. She states, “I just don’t feel good and I seem to have this pressure and squeezing feeling in my chest, it seems to go down my arm. I feel lightheaded and sick to my stomach.” What first aid steps should you take? Use the lines below to outline the steps.

Advanced Directives

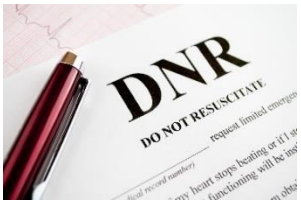
What are Advance Directives?

Advance Directives are legal documents that are completed by adults **in advance** of an illness or accident that would leave a person unable to express their wishes. In Wisconsin, three important advance medical directives are the Power of Attorney for Health Care, Do Not Resuscitate and the Declaration to Physicians (commonly referred to as a Living Will).

What is a Declaration to Physicians (Living Will)?

- A document which states care wishes about life-support machines or feeding tubes if a person becomes terminally ill or lapses into a persistent vegetative state (permanent coma)
- A Living Will does not allow for naming someone to make decisions in the person's place
- The form is available at: https://www.dhs.wisconsin.gov/forms/advdirectives/f00060.pdf

What is a DNR (Do Not Resuscitate)



A DNR is a paper signed by the person and their physician stating that if their heart stops beating they do not want attempts to restart the heart. The form is available at: https://www.dhs.wisconsin.gov/forms/f4/f44763.pdf

What is a Power of Attorney for Health Care?

- A document in which a person can appoint a family member or friend (who is a legal adult) that is trusted, to make health care decisions for them if their doctors determine they can no longer make their own medical decisions
- An alternate decision maker can be listed if the first decision maker is unwilling or unable to make decisions when needed
- The form is available at: https://www.dhs.wisconsin.gov/forms/advdirectives/f00085.pdf

Are both a Living Will and a Power of Attorney needed?

No. A person may have one or both documents. The POA-HC is a broader document which allows for naming a decision maker in the event a person can no longer make their own decisions. The Living Will is a place to answer three specific questions on end-of-life issues.

Why are these documents important?

- It is the best way to have control in making sure health care wishes are followed when someone is unable to speak for themselves
- It may decrease disagreements between family members
- It may help families avoid paying for guardianship
    - In Wisconsin, once patients are under medical guardianship, their guardians are not allowed to withdraw or withhold life sustaining procedures unless they are in a persistent vegetative state or made an advance directive or other clear instructions that they would not want life support used
    - In Wisconsin, patients that need to be transferred to a skilled nursing facility must be able to sign themselves in, have an activated power of attorney for health care, or a guardian

What happens if a person does have an advance medical directive?

- Some people choose not to have advance directives. When there is no advance directive, doctors often turn to adult family members to make decisions
- However, being a family member does not automatically make someone a health care agent
- Sometimes family members don't agree. When this happens, a guardian may need to be appointed. This is done by a judge which takes both time and money. The guardian may or may not be the person one would want to make decisions for them

How is an Advance Directive different than Guardianship?

- Guardianship is a legal process in which a person is appointed by a court to make medical decisions for a patient after they become unable to make their own decisions. Petitioning the court for guardianship can cost thousands of dollars
- An Advance Directive is a statement of a person's wishes that is completed in advance and used later if they become unable to communicate those wishes. There is no cost to completing an Advance Directive when completed through a hospital or clinic. The form can be downloaded and completed independently

What if someone changes their mind?

A person can revoke their document or complete a new form.

Chapter 3

Choking

Choking occurs when a foreign object becomes lodged in the throat or windpipe, partially or completely blocking the flow of air. In adults, eating causes the most choking cases. Because choking cuts off oxygen to the brain, it is important to administer first aid immediately. The type of first aid depends on the type of blockage that has occurred.

There are two types of blockages: partial and complete.

In **a partial blockage**, a person is able to cough and breath. This type of blockage can typically clear by a forceful cough. Stay close and be ready to take action if the person is unable to clear the blockage themselves.

A **complete blockage** occurs when a person cannot take in air to dislodge the piece of food or object that is blocking their airflow.

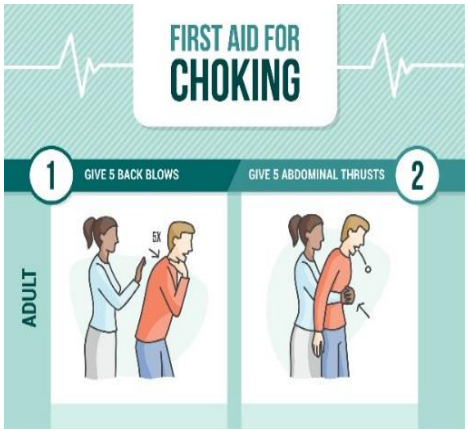
Choking video resource 4:44 min: https://www.youtube.com/watch?v=XOTbjDGZ7wg

Signs of a complete block:

- Inability to cough or speak
- Making efforts to breath, but are unable to get a breath
- Lips or skin turn blue
- Clutching their throat with their hands
- Loss of consciousness

First aid for a person with a complete blockage but is conscious:

- Call 911 or have someone call for you
- Position yourself behind the person. Instruct them to bend at the waist and administer five blows with the heel of your hand to the person's back, between their shoulder blades
- Provide five abdominal thrusts if they are still choking
    - Standing behind the person, wrap your arms around their waist
    - Locate the person's navel with one hand and make a fist with the other
    - Place the fist, thumb side up against the abdomen, above the navel but below the ribs
    - Grasp your fist with the other hand, quickly thrust inward and upward into the abdomen, as if trying to lift the person up. Each abdominal thrust should be a separate attempt to dislodge the object
- Alternate between five blows to the back and five abdominal thrusts until the blockage is cleared or the person becomes unconscious
- Once the object is dislodged, the person should still be checked by medical personnel



If the person is unconscious:

- Call 911
- Open the airway
    - Place one hand on the person's forehead and gently tilt the head back. As you do this, the mouth will fall open slightly
    - Look in their mouth to see if you can see the object. If the object is visible attempt to remove it by doing a finger sweep
- Check for breathing
    - Look, listen and feel for breathing. Normal breathing includes chest movement, sounds, and breaths
    - If the person is not breathing, a CPR trained person, if available, will start chest compressions
- Follow the dispatcher's directions, staying with the person until help arrives

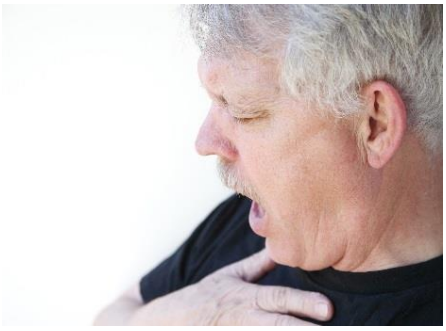
Scenario

It is lunch time and everyone is enjoying a nice meal in the dining room. Tom, Jim, and Steve are laughing at the great story that John is telling. Suddenly, Tom stops laughing and grabs his throat. He is no longer able to talk or cough. What first aid steps should you take? Outline the steps on the lines below.

Chapter 4

Breathing Emergencies

What is a Breathing Emergency?



A breathing emergency is any respiratory problem that can threaten someone's life. Rarely do people spend time thinking about breathing as our body controls this process. For someone who has a respiratory disease, they most likely deal with breathing problems daily.

Difficulties with breathing can cause the following:

- Shortness of breath
- Struggling to take deep breaths
- Gasping for air
- A feeling that they are not getting enough air

Some of the conditions resulting in breathing problems are anemia, asthma, chronic obstructive pulmonary disease (COPD), heart disease or heart failure, lung cancer, respiratory infections, and pleural effusion (this is when fluid is around the lungs, compressing the lungs.)

Basic Symptoms of a Breathing Emergency

- Rapid breath
- Unable to breathe lying down
- Feeling anxious or agitated
- Sleepy or confused

First Aid

- Call 911 (if a person is having difficulty breathing)
- Check the airway, breathing and pulse
- Loosen any tight clothing
- Check to see if the person has an inhaler, nebulizer, oxygen, or other prescribed medication

- Stay with the person and monitor their breathing until they are assessed by emergency medical personnel. Just because the breathing is improving and the abnormal breath sounds such as wheezing have stopped, this does not necessarily mean that the emergency is over
- If breathing issues are in conjunction with open wounds in the neck and chest they must be closed immediately. If air bubbles are coming from the wound, it is important to cover the wound with plastic wrap, aluminum, or a large bandage. Try to cover at least two inches beyond the edge of the wound, to form a barrier

- **DO NOT** feed the person or give them anything to drink
- **DO NOT m**ove the person, especially if there has been an injury
- **DO NOT** put a pillow under the person's head as this could restrict the airway
- **DO NOT** wait to call 911 – Get help right away

COPD

From the CDC

What is COPD?

Chronic Obstructive Pulmonary Disease (COPD) refers to a group of diseases that cause airflow blockage and breathing-related problems. It includes emphysema, chronic bronchitis, and in some cases asthma.

What causes COPD?

In the United States, tobacco smoke is a key factor in the development and progression of COPD,[1] although exposure to air pollutants in the home and workplace, genetic factors, and respiratory infections also play a role.

What are the complications or the effects of COPD?

Compared to adults without COPD, adults with COPD are more likely to:

- Have activity limitations such as difficulty walking or climbing stairs[3,5,6]
- Be unable to work[3,5]
- Need special equipment such as portable oxygen[3]
- Not engage in social activities such as eating out, going to places of worship, going to group events, or getting together with friends or neighbors[6]
- Have increased confusion or memory loss[5]
- Have more emergency room visits or overnight hospital stays[7]
- Have other chronic diseases such as arthritis, congestive heart failure, diabetes, coronary heart disease, stroke, or asthma[7,8]
- Have depression or other mental or emotional conditions[7,8]
- Report a fair or poor health status[9]

How is COPD treated?

Treatment of COPD requires a careful and thorough evaluation by a physician.[4,10] COPD treatment can alleviate symptoms, decrease the frequency and severity of exacerbations, and increase exercise tolerance. For those who smoke, the most important aspect of treatment is smoking cessation. Avoid tobacco smoke and remove other air pollutants from the resident's environment.

Asthma (*From the CDC)*

What Is Asthma?

Asthma is a disease that affects the lungs. Asthma causes wheezing, breathlessness, chest tightness, and coughing at night or early in the morning. If someone has asthma, they have it all the time, but they will have asthma attacks only when something bothers their lungs.

In most cases, we don't know what causes asthma, and we don't know how to cure it. We know that if there is a family history of asthma, then the person would be more likely to have it.

How can one tell if a person has asthma?

It can be hard to tell if someone has asthma. Having a doctor check how well their lungs work and check for allergies can help.

The doctor completes an exam and asks questions to determine if someone has asthma. They will also do a breathing test, called spirometry, to measure how well the lungs are working.

What Is an asthma attack?

An asthma attack may include coughing, chest tightness, wheezing, and trouble breathing. The attack happens in the body's airways, which are the paths that carry air to the lungs. As the air moves through the lungs, the airways become smaller, like the branches of a tree are smaller than its trunk. During an asthma attack, the sides of the airways in the lungs swell and the airways shrink causing difficulty with breathing. Less air gets in and out of the lungs, and mucous that the body makes clogs up the airways even more.

What Causes an Asthma Attack?

An asthma attack can happen when exposed to “asthma triggers”. Each person’s triggers can vary depending on the individual. Some common triggers are tobacco smoke, dust mites, outdoor air pollution, cockroach allergen, pets, mold, and smoke from burning wood or grass.

Tobacco Smoke

Tobacco smoke is unhealthy for everyone, especially people with asthma. If someone has asthma and smokes, they should quit smoking.

“Secondhand smoke” is smoke created by a smoker and breathed in by a second person. Secondhand smoke can trigger an asthma attack. As a caregiver, it is important not to smoke around the people you care for. In some situations smoke residue on your clothing could trigger an asthma attack.

Dust Mites

Dust mites are tiny bugs that are in almost every home. In someone with asthma, dust mites can trigger an asthma attack.

Outdoor Air Pollution

Outdoor air pollution can trigger an asthma attack. This pollution can come from factories, cars, and other sources. Pay attention to the air quality forecasts on the radio, television, and Internet, when planning outdoor activities.

Pets

Furry pets can trigger an asthma attack. Be mindful of anyone in your CBRF who might have asthma when scheduling pet visits or allowing pets.

Mold

Breathing in mold can trigger an asthma attack. Getting rid of mold helps control the person's attacks. Humidity, the amount of moisture in the air, can make mold grow. An air conditioner or dehumidifier will help keep the humidity level low. Fix water leaks which can lead to mold growth behind walls and under floors.

Smoke from Burning Wood or Grass

Smoke from burning wood or other plants is a mixture of harmful gases and small particles. Breathing in too much of this smoke can cause an asthma attack.

Other Triggers

Infections linked to influenza (flu), colds, and respiratory syncytial virus (RSV) can trigger an asthma attack. Sinus infections, allergies, breathing in certain chemicals, and acid reflux can also trigger attacks.

Physical exercise; certain medicines; bad weather, such as thunderstorms or high humidity; breathing in cold, dry air; and certain foods, food additives, and fragrances can also trigger an asthma attack.

Strong emotions can lead to very fast breathing, called hyperventilation, that can also cause an asthma attack

How Is Asthma Treated?

Asthma is controlled by taking medicine exactly as the doctor prescribes and by staying away from things that can trigger an attack. Everyone with asthma does not take the same medicine. Some medicines can be breathed in and some can be taken as a pill. Asthma medicines come in two types—quick-relief and long-term control. Quick-relief medicines control the symptoms of an asthma attack. If the person needs to use their quick-relief medicines more and more, contact their doctor to see if they need a different medicine. Long-term control medicines help the person have fewer and milder attacks, but they don't help while someone is having an asthma attack.

Scenario:

It is a sunny afternoon and many of the residents are enjoying the day on the back porch. Caregiver Jill decides that she needs a cigarette. She does not feel like walking to the smoking area, as she is enjoying talking with the residents. Betty, who has COPD and asthma, begins to cough as Jill starts to smoke. Before long, Betty is wheezing and having difficulty catching her breath. You step out on the porch at this moment and observe what is happening. What are the first aid steps you take? Outline them in the lines below.

Anaphylaxis

Anaphylaxis is defined as a severe allergic reaction and often can be life threatening. Always treat anaphylaxis as an emergency that requires immediate assistance. Most of the time anaphylaxis is caused when a person is exposed to an allergen to which they are severely allergic. The most common allergens are food, insects or medication (not limited to these three.)

First Aid for Mild to Moderate Allergic Reactions

Mild to moderate symptoms are:

- Swelling of the face, lips, and eyes
- Hives on the skin
- Tingling mouth
- Stomach pain or vomiting

What to do

- Remove the stinger by scraping it with a credit card, if a bee was the source of the reaction
- Stay with the person and call 911 if symptoms do not improve or worsen
- Give the person medication if prescribed. Antihistamines are often prescribed to treat mild to moderate allergic reactions, but only use these if the person has a physician's order
- Use an adrenaline auto injector if prescribed and then call 911

First Aid for Anaphylaxis (Severe reaction)

Severe reaction symptoms are:

- Difficult breathing
- Swelling of the tongue
- Swelling or tightness in the throat
- Hoarse voice or a hard time talking
- Wheezing
- Dizziness or fainting

What to do

- Call 911
- Allow to sit or lay flat if breathing is labored
- Administer adrenaline auto-injector if available and the person has a prescription
- Another adrenaline dose may be given if there is not improvement after five minutes

How to use an adrenaline auto-injector – Epi-pen video resource 1:54 min
https://www.youtube.com/watch?v=tjILFYPE3Uw

Steps to Use an Adrenaline Auto-injector

- Open adrenaline auto-injector
- Remove the top cap
- Hold the leg in place, starting two inches away, press against the outer thigh until you hear a click
- Hold for 10 seconds and remove
- Rub the spot for 10 seconds while waiting for emergency assistance

Scenario

Susan is allergic to peanuts and tree nuts. She has an auto-injector pen that is kept in the medication cart. The chef at Sunnyside assisted living has been diligent in checking labels to make sure that the food is safe for Susan. Today, the chef did not realize that the factory changed the label on the bread used to make Susan toast. The bread is now being made on the same line as the nutty, multi-grain bread.

Susan calls you over to her table half way through breakfast and says that she is feeling itchy and her throat is feeling “tight”. Her breathing becomes difficult and her lips are swelling. What should you do? Use the lines below to outline the first aid steps you should take.

Chapter 5

Diabetic Emergencies

What is Diabetes?

According to the CDC, 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 a person has diabetes, their 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 their blood.

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

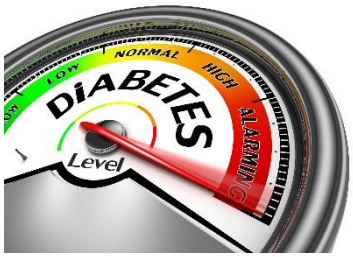
Diabetic Emergencies

Diabetic Emergency Video Resource 4:06 min:
https://www.youtube.com/watch?v=ASqdE2sqHgM&feature=youtu.be

A diabetic can have two types of emergencies **Hyperglycemia** or **Hypoglycemia**.

High Blood Glucose - Hyperglycemia

Hyperglycemia is when the body's blood sugar (glucose) is at a high level. Hyperglycemia may develop slowly over several days or weeks or it could happen quickly. Because it could happen slowly, it is important to watch the blood sugar test results of a diabetic person and report to the physician results outside of the normal parameters.



Some of the causes:

- Forgetting to take insulin
- Severe mental or physical stress
- Infection

Early signs and symptoms of hyperglycemia include:

- Increased thirst
- Headaches
- Trouble concentrating
- Blurred vision
- Frequent urinating
- Fatigue (weakness or tired feeling)
- Weight loss
- Blood sugar over 180 mg/dl

Actions to take:

- Immediately report a change of condition to the physician
- Monitor the person closely

Later signs and symptoms that can be caught before the coma occurs.

- Fruity breath odor
- Abdominal pain, nausea or vomiting
- Increased thirst and urination
- Weakness
- Progressing to a stupor, then coma if left untreated
- Loss of bladder and/or bowel control

Actions to take:

- Assess scene and victim – recognize signs and symptoms of a diabetic coma or hyperglycemia
- Call 911
- Treat
    - Monitor the level of consciousness
    - Monitor breathing
    - Place in recovery position if unconscious
    - Check blood sugar if a glucometer is available and the person has a physician's order

Low Blood Glucose (Hypoglycemia)

What is hypoglycemia?

Hypoglycemia, also called low blood glucose or low blood sugar, occurs when the level of glucose in the blood drops below normal. For many people with diabetes, that means a level of 70 milligrams per deciliter (mg/dl) or less. Each person's threshold may be different, in which it is important to follow the parameters set by the person's health care provider.

What are the symptoms of hypoglycemia?

Symptoms of hypoglycemia tend to come on quickly and can vary from person to person. They may have one or more mild-to-moderate symptoms listed in the table on the next page. Sometimes people don't feel any symptoms.

Severe hypoglycemia (insulin shock) is when the blood glucose level becomes so low that the person is unable to treat themselves and need help from another person. Severe hypoglycemia is dangerous and needs to be treated right away. This condition is more common in people with type 1 diabetes.

Hypoglycemia Symptoms		
Mild-to-Moderate		Severe
• Shaky or jittery • Sweaty • Hungry • Headache • Blurred vision • Sleepy or tired • Dizzy or lightheaded • Confused or disoriented • Pale	• Uncoordinated • Irritable or nervous • Argumentative or combative • Changed behavior or personality • Trouble concentrating • Weak • Fast or irregular heartbeat	• Unable to eat or drink • Seizures or convulsions (jerky movements) • Unconsciousness

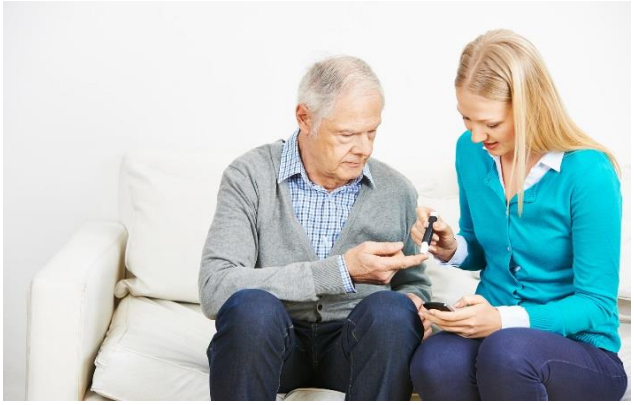
Some symptoms of hypoglycemia during sleep are:

- Crying out or having nightmares
- Sweating enough to make pajamas or sheets damp
- Feeling tired, irritable, or confused after waking up

What causes hypoglycemia in someone with diabetes?

Hypoglycemia can be a side effect of insulin or other types of diabetes medicines that help the body make more insulin. Some diabetic medications can increase the risk of hypoglycemia. Although other diabetes medicines don't cause hypoglycemia by themselves, they can increase the chances of hypoglycemia.

What other factors contribute to hypoglycemia in diabetes?



If a person takes insulin or diabetes medicines, but does not match medications with food or physical activity—hypoglycemia could develop**.** The following factors can make hypoglycemia more likely:

Not eating enough carbohydrates (carbs)

When eating foods containing carbohydrates, the digestive system breaks down the sugars and starches into glucose. Glucose then enters the bloodstream and raises the blood glucose level. If enough carbohydrates are not eaten to match medication taken, blood glucose could drop too low.

Skipping or delaying a meal

Skipping or delaying a meal could result in blood glucose dropping too low. Hypoglycemia can occur when asleep and not eating for several hours.

Increasing physical activity

Increasing physical activity beyond the normal routine can lower the blood glucose levels for up to 24 hours after the activity.

Drinking too much alcohol without enough food

Alcohol makes it harder for the body to keep the blood glucose levels steady, especially if a person hasn't eaten in a while. The effects of alcohol can also keep a person from feeling the symptoms of hypoglycemia, which may lead to severe hypoglycemia.

Being sick

When sick, a person may not be able to eat as much or keep food down, which can cause low blood glucose.

How to prevent hypoglycemia in someone with diabetes?

If taking insulin, a sulfonylurea or a meglitinide, work with the health care team to adjust their plan as needed. The following actions can also help prevent hypoglycemia:

Check blood glucose levels

Knowing the blood glucose level can help decide how much medicine to take, what food to eat, and how physically active to be.

Hypoglycemia unawareness

Sometimes people with diabetes do not feel or recognize the symptoms of hypoglycemia, a problem called hypoglycemia unawareness. If a person has had hypoglycemia, without feeling any symptoms, they may need to check their blood glucose more often. This will allow them to be able to treat hypoglycemia faster or take steps to prevent it.

Eat regular meals and snacks

A good meal plan is key to preventing hypoglycemia. Residents should eat regular meals and snacks with the correct amount of carbohydrates to help keep the blood glucose level from going too low. When having an alcoholic beverage, it's best to eat some food at the same time.

Be physically active safely

Physical activity can lower blood glucose during the activity and for hours afterward. To help prevent hypoglycemia, an individual's blood glucose may need to be checked before, during, and after physical activity depending on the type and length of the activity.

How to treat hypoglycemia?

If a person begins to feel one or more hypoglycemia symptoms, check their blood glucose, if you have an order to do so. If the blood glucose level is less than 70 (or level set by the physician,) have them eat or drink 15 grams of carbohydrates right away. Examples include:

- Four glucose tablets or one tube of glucose gel
- 1/2 cup (4 ounces) of fruit juice—not low-calorie or reduced sugar
- 1/2 can (4 to 6 ounces) of soda—not low-calorie or reduced sugar
- 1 tablespoon of sugar, honey, or corn syrup
- 2 tablespoons of raisins

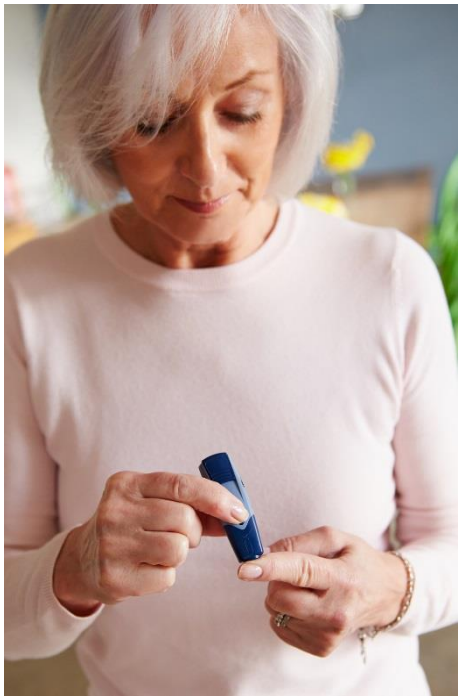
Wait 15 minutes and check the blood glucose again. If the glucose level is still low, have them eat or drink another 15 grams of glucose or carbohydrates. Check their blood glucose again after another 15 minutes. Repeat these steps until the glucose level is back to normal.

If their next meal is more than one hour away a snack should be given to keep blood glucose level in the target range. Try crackers or a piece of fruit.

If the person does not improve:

- Call 911
- Stay with the person until help arrives

*People who have kidney disease shouldn't drink orange juice for their 15 grams of carbohydrates because it contains high levels of potassium. Apple, grape, or cranberry juice are good options.



Treating hypoglycemia if the person takes acarbose or miglitol

If taking acarbose or miglitol along with diabetes medicines, which may cause hypoglycemia, glucose tablets or a glucose gel will be needed if blood glucose levels are too low. Eating or drinking other sources of carbohydrates won't raise a blood glucose level quick enough.

Scenario

It is midafternoon and Jim enjoying a game of scrabble with Tom. Checking on Tom and Jim you notice that things seem wrong. Jim seems confused, shaky, jittery and his skin looks sweaty. Based on his individual service plan, you know that Jim is diabetic. What should you do? Use the lines below to outline the steps you would take.

Chapter 6

Seizures

Types of Seizures

- Epilepsy
- Head injury
- Poisoning
- Electrical shock
- Drug or alcohol overdose
- High fever
- Stroke
- Infection of the central nervous system
- Severe hypoglycemia (abnormal decrease of sugar in the blood)
- Brain tumor

According to the CDC, about one out of ten people has had a seizure. Seizures are common and one day you might need to help someone during or after a seizure.

Would you know what to do?

First aid for seizures involves keeping the person safe until the seizure stops by itself.

Epilepsy and Seizure Video Resource 1:34min
https://www.youtube.com/watch?v=4qWPFCFmRII

First Aid for Generalized Tonic-clonic (Grand Mal) Seizures

When most people think of a seizure, they think of a *generalized tonic-clonic (grand mal)* seizure. In this type of seizure, the person may cry out, lose consciousness, fall to the ground, and have rigidity or muscle jerks that last a few minutes. During the seizure the person may also be incontinent of urine.

First Aid Procedures:

- Keep calm and reassure other people who may be nearby
- Comfort and speak calmly with the person who is having a seizure
- Prevent injury by clearing the area around the person of anything hard or sharp
- Ease the person to the floor and put something soft and flat, like a folded jacket, under their head
- Remove eyeglasses and loosen ties or anything around the neck that may make it hard to breathe
- Turn the person gently onto one side. This will help keep the airway clear
- Time the seizure. If the seizure continues for longer than five minutes without signs of slowing down, or if the person has trouble breathing, appears to be injured, in pain or recovery is unusual in some way, call 911
- Stay with the person until the seizure ends naturally and the person is fully awake
- Be friendly and reassuring as the person becomes conscious
- Monitor the person if they appear unsteady and assist with mobility until they have returned to their normal functioning level

Here are some important things **NOT** to do:

- **DO NOT**: hold the person down or try to stop their movements
- **DO NOT**: put anything in the person's mouth. Efforts to hold the tongue down can injure the teeth or jaw. A person having a seizure cannot swallow their tongue
- **DO NOT**: attempt artificial respiration unless the person does not start breathing again after the seizure has stopped, which is unlikely
- **DO NOT**: offer the person water or food until they are fully alert

Consider a seizure an emergency and call 911 if any of the following occurs:

- The seizure lasts longer than five minutes without signs of slowing down or if a person has trouble breathing, appears to be in pain, or recovery is unusual in some way
- The person has another seizure soon after the first one

- The person cannot be awakened after the seizure activity has stopped
- The person became injured during the seizure
- The person becomes aggressive
- The seizure occurs in water
- The person has a health condition like diabetes, heart disease, or is pregnant

There are other types of seizures that may have different symptoms. Some symptoms of other seizures are: blank staring or loss of awareness, involuntary blinking, chewing, or other facial movements. For these seizures follow the steps below:

- Stay calm and speak reassuringly
- Guide the person away from dangers
- Block access to dangerous items, but don't restrain the person
- Stay a distance away if the person is agitated, stay close enough to protect them until full awareness has returned

High Fever

Any temperature in an adult over 100.4 is considered a fever. If the fever is over 102 it is considered a high fever. A fever is often a sign of a bacterial or viral infection which can be life-threatening in the elderly. Report any fevers to the person's physician or nurse.

Over the counter medication such as Tylenol or ibuprofen can be given if the physician has ordered it for a fever. Other things that can help are bathing or sponge bath with lukewarm water, dress the person in light clothing and use only light sheets to cover them. Encourage lots of liquids to keep the person hydrated.

Scenario

Lorraine is walking down the hallway to her apartment. Passing her you stop to say “Hello.” Lorraine starts to shake and falls to the ground. Her entire body continues to shake. What are the first aid steps you should take? Use the lines below to outline the steps you will take.

Chapter 7

Fainting

Fainting is the when a person becomes temporarily unconscious.

Some common causes include:

- Low blood glucose levels
- Low blood pressure
- Syncope (loss of consciousness due to lack of blood flow to the brain)
- Dehydration
- Problems with the heart's rhythm (such as a low pulse)
- Neurologic syncope (loss of consciousness caused by a seizure or stroke)
- Straining
- Hyperventilating

Symptoms that may indicate that unconsciousness is about to occur include:

- Sudden inability to respond
- Slurred speech
- A rapid heartbeat
- Confusion
- Dizziness or lightheadedness

Actions to take:

- Call 911
- Check if the person is breathing. If they are breathing, lay the person on their back
- Raise the legs of the person at least 12 inches above their heart
- Loosen any restrictive clothing or belts
- Check the airway for obstruction
- Continue to monitor the person's breathing until emergency personnel arrive

Chapter 8

Stroke

According to the CDC stroke is the fifth leading cause of death in the United States and is a major cause of adult disability. About 800,000 people in the United States have a stroke each year. On average one American dies from a stroke every four minutes.

Stroke is a medical emergency. Know the signs and symptoms of a stroke and call 911 right away if you think someone might be having a stroke. Getting fast treatment is important to preventing death and disability from stroke.

To understand a stroke, it helps to understand the brain. The brain controls our movements; stores our memories; and is the source of our thoughts, emotions, and language. The brain also controls many functions of the body, like breathing and digestion.

To work properly, the brain needs oxygen. Although the brain makes up only 2% of body weight, it uses 20% of the oxygen breathed. Arteries deliver oxygen-rich blood to all parts of the brain.

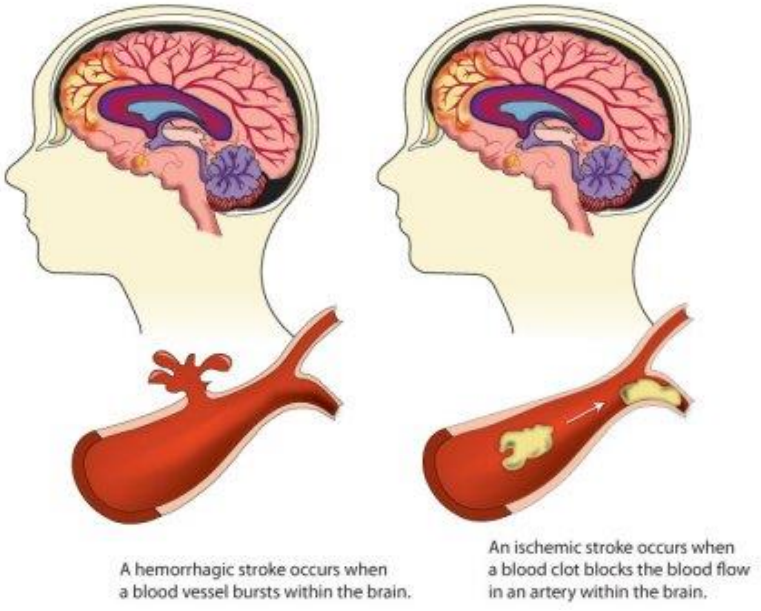
Video Resource - Know Stroke Signs, Symptoms and Treatment 2:31 min
https://youtu.be/mkpbbWZvYmw

What Happens During a Stroke?

If something happens to interrupt the flow of blood, brain cells start to die within minutes because they can't get oxygen. This is called a stroke. Sudden bleeding in the brain can also cause a stroke if it damages brain cells. A stroke can cause lasting brain damage, long-term disability, or even death.

If brain cells die or are damaged because of a stroke, symptoms of that damage start to show in the parts of the body controlled by those brain cells.

Types of Stroke



From www.cdc.gov

The main types of stroke are:

- Ischemic stroke
- Hemorrhagic stroke
- Transient ischemic attack (a warning or "mini-stroke")

Ischemic Stroke

Most strokes (85%) are ischemic strokes.[1] In an ischemic stroke, the artery that supplies oxygen-rich blood to the brain becomes blocked. Blood clots often cause the blockages that lead to ischemic strokes.

Hemorrhagic Stroke

A hemorrhagic stroke occurs when an artery in the brain leaks blood or ruptures (breaks open). The leaked blood puts too much pressure on brain cells, which damages them.

High blood pressure and aneurysms—balloon-like bulges in an artery that can stretch and burst—are examples of conditions that can cause a hemorrhagic stroke.

There are two types of hemorrhagic strokes:

- **Intracerebral hemorrhage** is the most common type of hemorrhagic stroke. It occurs when an artery in the brain bursts, flooding the surrounding tissue with blood
- **Subarachnoid hemorrhage** is a less common type of hemorrhagic stroke. It refers to bleeding in the area between the brain and the thin tissues

Transient Ischemic Attack (TIA)

A transient ischemic attack (TIA) is sometimes called a "mini-stroke." It is different from the major types of stroke because blood flow to the brain is blocked for only a short time—usually not more than five minutes.[2]

It is important to know that:

- A TIA is a warning sign of a future stroke
- A TIA is a medical emergency, just like a major stroke
- Strokes and TIAs require emergency care. **Call 911** right away if someone says they feel signs of a stroke or you see symptoms in someone
- There is no way to know in the beginning whether symptoms are from a TIA or from a major type of stroke
- Like ischemic strokes, blood clots often cause TIAs
- More than a third of people who have a TIA end up having a major stroke within one year if they do not receive treatment, and 10%-15% will have a major stroke within three months of a TIA[2]

Recognizing and treating TIAs can reduce the risk of a major stroke. If someone has a TIA, their health care team can find the cause and take steps to prevent a major stroke.

Preventing Stroke: Healthy Living

Physical activity can help maintain a healthy weight and lower cholesterol and blood pressure. Healthy lifestyle choices can help prevent a stroke. A healthy lifestyle includes the following:

- Eating a healthy diet
- Maintaining a healthy weight
- Getting enough exercise
- Not smoking
- Limiting alcohol use

Healthy Diet

Choosing healthy meal and snack options can help avoid stroke and its complications. Provide residents with healthy snacks and meal options when developing the menu.

Eating foods low in saturated fats, trans fat, and cholesterol and high in fiber can help prevent high cholesterol. Limiting salt (sodium) in a diet can also lower someone's blood pressure.

For more information on healthy diet and nutrition, see http://www.cdc.gov/nccdphp/dnpao/index.html.

Healthy Weight

Being overweight or obese increases the risk for stroke. To determine whether someone's weight is in a healthy range, doctors often calculate body mass index (BMI). Doctors sometimes use waist and hip measurements to measure excess body fat.

Physical Activity

Physical activity can help maintain a healthy weight and lower cholesterol and blood pressure levels. Encourage the person to be active in the CBRF's planned activities and exercise programs.

No Smoking

Cigarette smoking greatly increases the risk of stroke. If someone smokes, quitting will lower the risk of stroke. Doctors can suggest ways to help quit.

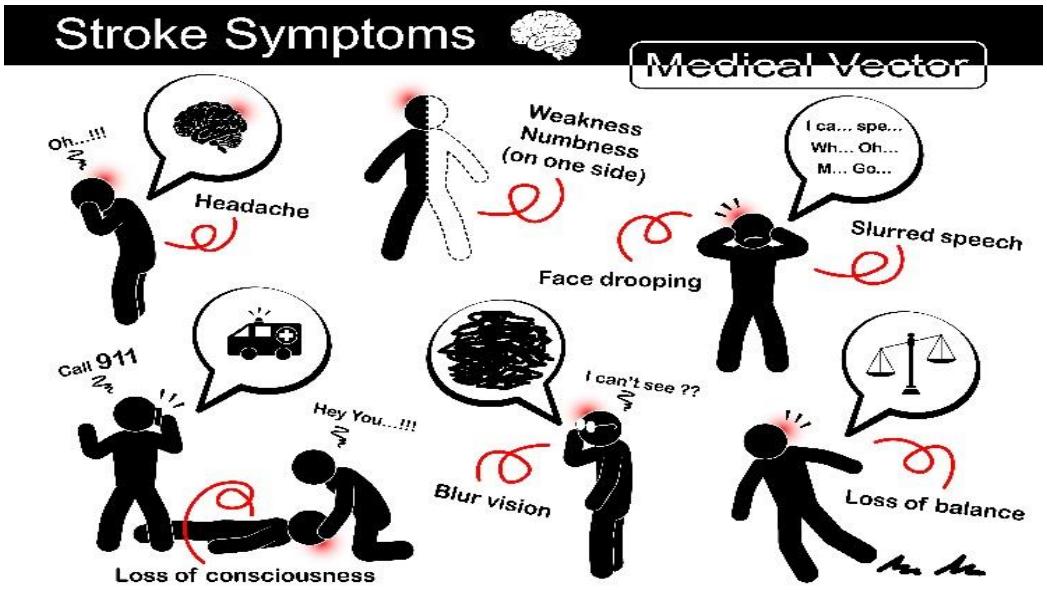
For more information about tobacco use and quitting, see http://www.cdc.gov/tobacco.

Limit Alcohol

Avoid drinking too much alcohol which can raise blood pressure. Men should have no more than two drinks per day, and women only one.

Signs of Stroke in Men and Women

- Sudden **numbness** or weakness in the face, arm, or leg, especially on one side of the body
- Sudden **confusion**, trouble speaking, or difficulty understanding speech
- Sudden **trouble seeing** in one or both eyes
- Sudden **trouble walking**, dizziness, loss of balance, or lack of coordination
- Sudden **severe headache** with no known cause



Call 911 immediately if someone has any of these symptoms and remain with the person until help arrives. While waiting:

- If the person is not conscious, assure the person's airway is open and care for any life threatening conditions
  - Place the person in the rescue position, if fluid is present in their mouth. This will allow fluid to drain out of their mouth
  - Stay with the person until help arrives
- If the person is conscious:
  - Stay with the person and reassure them until help arrives
  - Help them into a comfortable and safe position
  - Do not give them anything to eat or drink

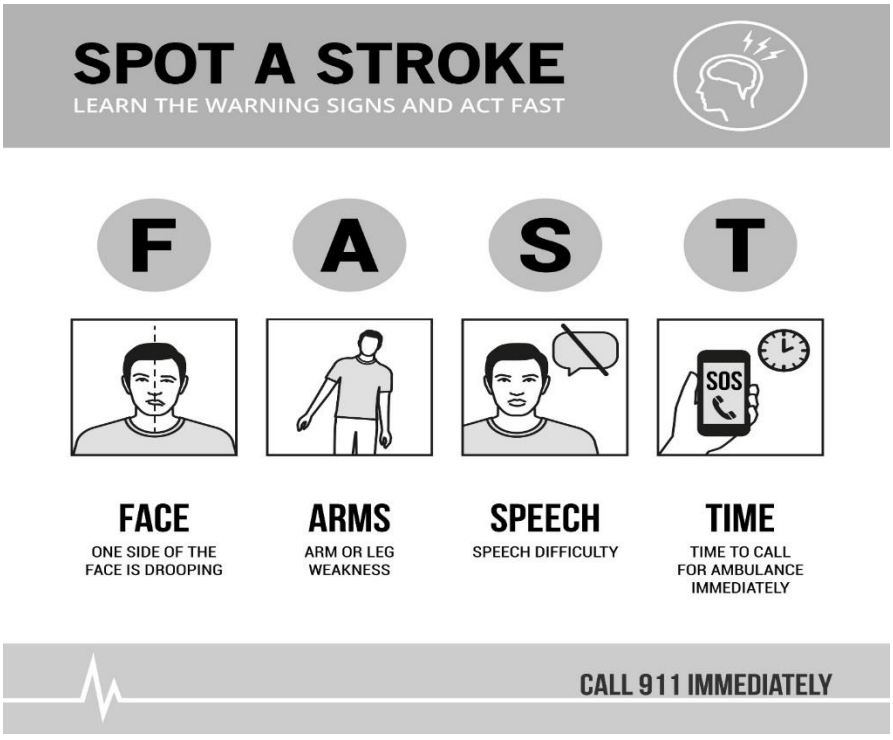
Acting F.A.S.T.

Acting F.A.S.T. can help stroke patients get the treatments they desperately need. The most effective stroke treatments are only available if the stroke is recognized and diagnosed within three hours of the first symptoms. Stroke patients may not be eligible for the most effective treatments if they don't arrive at the hospital in time.

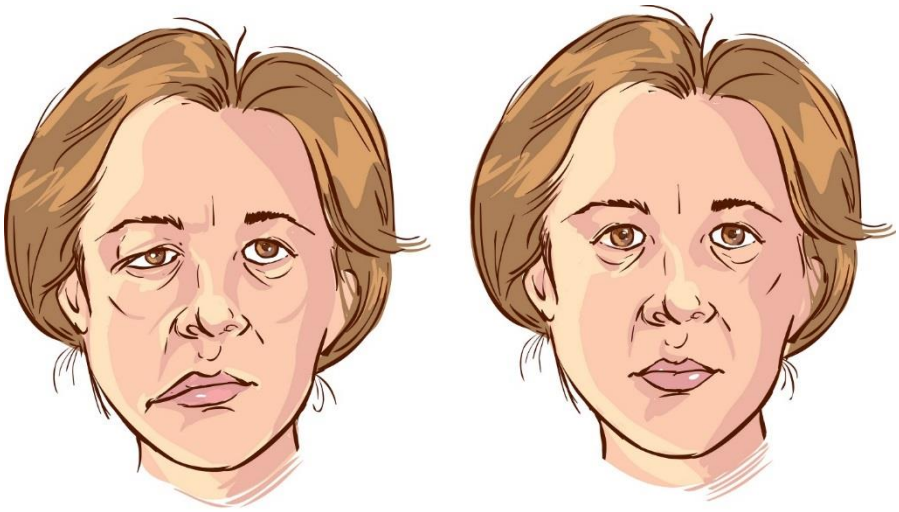
If you think someone may be having a stroke, act F.A.S.T. and do the following simple test:

F—Face: Ask the person to smile. Does one side of the face droop
A—Arms: Ask the person to raise both arms. Does one arm drift downward
S—Speech: Ask the person to repeat a simple phrase. Is their speech slurred or strange
T—Time: If you observe any of these signs, call 911 immediately

Note the time when any symptoms first appear. Some treatments for stroke only work if given in the first three hours after symptoms appear. Do not drive to the hospital or let someone else drive the person. Call an ambulance so that medical personnel can begin life-saving treatment on the way to the emergency room.



Scenario



While assisting Sally with getting dressed and ready for breakfast you notice her face seems to droop on one side. You ask her if she feels okay and her response is slurred and hard to understand. What should you do? Take a moment to write down the first aid steps on the lines below.

Chapter 9

Poisoning

Poisons are all around us and can affect anyone, anywhere and at any time of life. Protect people from being poisoned by learning what a poison is, who is at risk, and how to prevent a poisoning from happening. Below is helpful information from the Health Resources and Services Administration. More information can be found at www.poisonhelp.hrsa.gov.

What is a Poison?

A poison is anything that can harm someone if it is:

- Used in the wrong way
- Used by the wrong person
- Used in the wrong amount

Some poisons may be harmful if they come into direct contact with eyes or skin. Others may be toxic if they are breathed or swallowed. Poisons can come in four forms: solids (such as pain medicine pills or tablets), liquids (such as household cleaners, including bleach), sprays (such as spray cleaners) and gases (such as carbon monoxide, or CO).

Most consumer products are safe if the label directions are followed, but some can be poisonous if used incorrectly.

Who Is at Risk?

Anyone, regardless of their age, race, ethnicity, or career, can be poisoned. Poisonings happen more often than you think.

In 2008, 2.5 million people called a poison center because someone had been exposed to a poison. Children under the age of six accounted for half of all human poison exposures reported to poison centers. However, adults are also at risk. That year, more than three-quarters of all poisoning deaths reported to poison centers occurred among people ages 20-59.

What are the risks throughout life?

Certain kinds of poisonings are common among specific age groups. For example, older adults specifically need to be aware of the poisoning risks involved with taking prescription medications. Persons with impaired cognition are commonly poisoned through painkillers, cosmetics, personal care or cleaning products, pest killers, and plants. Pre-teens through older adults are commonly poisoned through herbal products, prescription drugs, alcohol, over-the-counter medicines, and spoiled food.

People of all ages may be stung by a bee, splashed with a chemical, exposed to carbon monoxide in their homes, or handling cleaning products without gloves.

Examples of poisons include:

- **Alcohol**
- **Carbon monoxide (CO) gas**
- **Medicines**, such as prescription (painkillers, iron pills), over-the-counter (cough and cold medicines), and illegal drugs (cocaine, heroin)
- **Food supplements**, such as vitamins, minerals, and herbal products
- **Personal care products**, such as nail polish and nail polish remover, cologne, aftershave, deodorant, mouthwash, hydrogen peroxide, makeup, soap, contact lens solution, lotion, baby oil, and diaper rash products

- **Household and automotive chemicals or products**, including bleach, laundry or dish detergent, furniture polish, cleanser, drain and toilet bowl cleaner, antifreeze, gasoline, paint, varnish, bug and weed killers
- **Other household items** such as batteries, lighter fluid, alcohol, cigarettes
- **Plants,** including many house plants, outdoor plants, and mushrooms
- **Bites and stings,** including scorpion, wasp, and bee stings, as well as snake and spider bites
- **Hazardous chemicals** in the work environment such as industrial cleaners

What to look for:

A poisoned person may or may not look, act, or feel sick. If you think someone has been poisoned, immediately call the toll-free Poison Help line (1-800-222-1222). Do not wait for signs of poisoning.

First Steps in a Poisoning Emergency:

Follow these basic steps at the first sign of a poisoning.

- Remove the person from the source of poisoning
- If the person inhaled poison, get to fresh air right away. Call the toll-free Poison Help line (1-800-222-1222), which connects you to your local poison center
- If the person has poison on the skin, take off any clothing the poison touched. Rinse skin with running water for 15 to 20 minutes. Call the toll-free Poison Help line (1-800-222-1222)
- If the person has poison in the eyes, rinse eyes with running water for 15 to 20 minutes. Call Poison Help (1-800-222-1222)
- In some cases, you should not try to give first aid. For example, if the person swallowed the wrong medicine or too much medicine: Call Poison Help (1-800-222-1222)

Call 911 if you have a poison emergency and the victim has collapsed or is not breathing. If the victim is awake and alert, dial 1-800-222-1222. Try to have the following information ready:

- The victim's age and weight
- The container or bottle of the poison if available
- The time of the poison exposure
- The address where the poisoning occurred
- Stay on the phone and follow the instructions from the emergency operator or poison control center

Call 911 for any life threatening conditions (the person is unconscious or not breathing, or a change in the level of consciousness has occurred.)

Scenario:

June has dementia and lives at Bayview Assisted Living Community. One of the new staff members accidently left the sanitizing spray sitting at her table. You walk in just after June has opened the sanitizer, thinking it was creamer, and added it to her coffee. She has already begun to drink the coffee. What should you do? Use the lines below to outline the steps you would take.

Chapter 10

Injuries

Soft Tissue Injuries

The most common cause of soft tissue injuries, in assisted living, is from a fall. Often times soft tissue injuries will not be serious and are treatable with a few minutes of first aid intervention. However, some injuries may be serious or may develop into a serious injury. This is why it is important that after providing first aid you document the incident that caused the injury, the care provided, and communicate the injury to your supervisor and other staff. Injuries need to be monitored until the injury is healed.

If the source of the injury cannot be determined, immediately report the injury to your supervisor. An investigation of the cause of the injury of unknown origin will need to be started in accordance with DHS 83.12(3). Soft tissue injuries can be a sign that physical abuse may have occurred.

Some common soft tissue injuries are:

- Bruises (contusions)
- Skin tears (avulsions)
- Abrasions
- Lacerations
- Puncture wound
- Pressure injuries
- Sprains
- Strains

What to look for:

Internal bleeding can occur in soft tissue injuries and can be very serious. Some signs of internal bleeding are:

- Swollen, bruised, tender, or hard areas
- Weak pulse that is rapid
- Cool or moist skin, it may also look pale or bluish
- Coughing up or vomiting blood
- Being thirstier than normal
- An extremity that is blue or extremely pale
- Change in mental state – new confusion, feeling faint or drowsy, or if the person becomes unconscious

When to Call 911

- Severe pain or the person cannot move a body part without pain
- An extremity is blue or causes the person extreme pain
- The abdomen is tender or distended
- Coughing up or vomiting blood
- Change in consciousness or signs of shock

Bruises

Bruises are caused when a blow crushes the underlying muscle fibers and connective tissue without breaking the skin. Often this is caused when the body falls or hits against a hard surface.

Treatment for bruises that do not require 911 calls:

- Reduce bruising and swelling by:
  - Apply ice to the area 20 minutes on and 20 minutes off. (Always place a thin barrier between the skin and ice, do not place ice directly on the skin)
  - Rest the injured area
  - If possible, elevate the injured area
  - Treat symptoms of pain with medication as ordered by a physician (always follow physician's orders and never give medications unless a written physician's order is available)
  - Notify the physician of the injuries and follow instructions
  - Continue to monitor the bruise until it has healed. If it worsens or pain increases, notify the physician immediately of changes

Did You Know?

Using a gait belt for all transfers can reduce the risk of soft tissue injuries. Gait belts help caregivers by providing them something to hold onto. Without a gait belt, caregivers must grab the person's hands or arms, resulting in bruising or injury. (Per OSHA guidelines)

Open Wounds (Skin tears, Abrasions, Lacerations, Puncture Wounds)

Abrasions are often described as carpet burns. They are caused when a rough or hard surface rubs against the skin, causing a minor injury to the skin. Many times they do not bleed or, if they do bleed, they bleed very little. Dirt is often rubbed into the affected area causing the injury to need to be cleaned thoroughly with soap and water.

Lacerations are a cut to the skin caused by a force splits that the skin. These injuries sometimes are caused by a sharp object such as a knife or scissors. The amount of damage to the skin, nerve cells, muscle, fat, and blood vessels depends on how deep the laceration is. Lacerations are susceptible to infection.

Skin tears or avulsions are when a portion of the skin, and sometimes additional soft tissue, is partially or completely torn away. In extreme instances, when the force is violent, the body part might be completely torn away. This would be called an amputation. In an amputation the tissue often closes around the blood vessels and will limit the bleeding, however, if the injury was caused by a violent act the bleeding may be hard to control.

Puncture wounds are caused when an object goes through the skin into the soft tissue. When the object remains in the body, it is called an embedded object. All puncture wounds have a high risk of infection because they allow germs and dirt to enter the body.

When to call 911

- Call 911 for any wound that is major (bleeding does not stop, deep or large wound, embedded object, loss of feeling, etc.)
- Control bleeding and prevent infection by covering with dressings and bandages while applying pressure

Evaluation

- Ensure that the scene is safe for you to approach the person
- Observe standard precautions while participating in all aspects of wound care
- Obtain a detailed history from the person and perform an appropriate examination to rule out additional injuries

Treatment

- Apply direct pressure to any bleeding wound. Tourniquets should only be used as a last resort since they may reduce tissue viability and cause more damage
- Examine wounds for apparent contamination, damaged tissue, and foreign bodies
- Remove rings or other jewelry from the injured body part
- Cleanse the wound with soap and sterile water or available solutions
- Provide pain relieving cream or medicine if available and a physician's order is present
- Leave open contaminated wounds, bites, and punctures. Wounds that are sutured in an unsterile environment, or are not cleansed, irrigated, and debrided appropriately, are at high risk for infection. These types of wounds should be checked and treated by trained medical personnel
- Cover wounds with dry dressing. Deep wounds may require packing with saline soaked gauze and subsequent coverage with a dry bulky dressing. This should be determined and treated by trained medical personnel
- Follow-up as directed by the physician for medication, treatment, and potential vaccinations

Other Considerations

- Ensure adequate referral, follow-ups, and re-evaluations
- Dirty water and soil can cause infection. Wounds can become contaminated by small amounts of dirt
- Puncture wounds can carry bits of clothing and debris into the wound resulting in an infection
- Crush injuries are more susceptible to infection than wounds from shearing forces
- Trained medical personnel may need to stitch the injury if the edges do not come together, the laceration is on the face or if it is over half inch long
- When in doubt have the person checked by a health care provider or call 911

Basic Care for Minor Open Wounds

A dressing is used to prevent infection and protect the injury. The bandage helps healing to occur by absorbing blood and other fluids. Dressings need to be larger than the wound and should be sterile. Most dressings should have at least a half inch boarder overlapping the wound. A common type of dressing is made out of cotton gauze and comes in a variety of sizes.

Bandage is the term for material that is used to cover or wrap any body part. Bandages come in many different varieties. Common types are adhesive compresses, bandage compresses, and roller bandages. Some bandage uses are to:

- Hold dressings in place
- Apply pressure to control bleeding
- Protect a wound from infection or dirt
- Provide support to an injured extremity or body part

Adhesive bandages are available in many sizes and have a small gauze area on an adhesive strip. This type of bandage is most commonly used at home. Compresses are tied in place and have a thick gauze dressing that is attached to the bandage. Roller bandages are normally made of gauze and they come in various lengths and widths. These bandages can be used to wrap a strain, sprain or hold a dressing in place.

When applying a roller bandage follow the below steps:

- Check the surrounding area before and after applying the bandage. The area should be warm and have normal color
- Place the bandage in a way that is the most comfortable for the person
- Support the injured body part prior to applying the bandage
- Starting at the top of the area, hold the roller bandage tight, wrap the first part, unrolling a few inches at a time

- Secure the end with a turn of the bandage and then continue to wrap the bandage around the body part until it goes past the dressing by at least several inches
- Tie or tape the bandage in place
- Do not cover toes or fingers. Being able to see them is important to assure the bandage is not too tight. If the fingers or toes become cold, pale or blue the bandage is too tight. Remove the bandage and reapply it looser

Other Considerations:

Severed Body Parts

If a body part has been severed call 911. Try to find the body part and wrap it with sterile gauze. The wrapped part should then be placed in a plastic bag and sealed. Preserve the body part by placing it in a larger bag filled with ice that has been mixed with water. Be sure to send the part with the person to the hospital. Do not freeze the body part.

Embedded Objects

When a puncture wound still has the object embedded, do not remove the object. Instead, place dressings around it to keep it from moving, then place a bandage around the area and call 911.

Splinters on the surface of the skin can be removed with a tweezers. After the splinter has been removed wash the area with soap and water. After drying, apply antibiotic ointment (if the person has a physician's order), cover it, and keep it clean.

Chest Injuries

Call 911 for any chest injury, especially if the person has a puncture wound. Also, call if you suspect fractured ribs or the person is having trouble breathing.

If the person has an open or sucking chest wound, cover with a large occlusive (air and watertight) dressing, a piece of plastic wrap, or a plastic bag folded several times. Tape around the dressing, except for one side or corner, which should remain loose. Monitor the person's breathing while you wait for help to arrive.

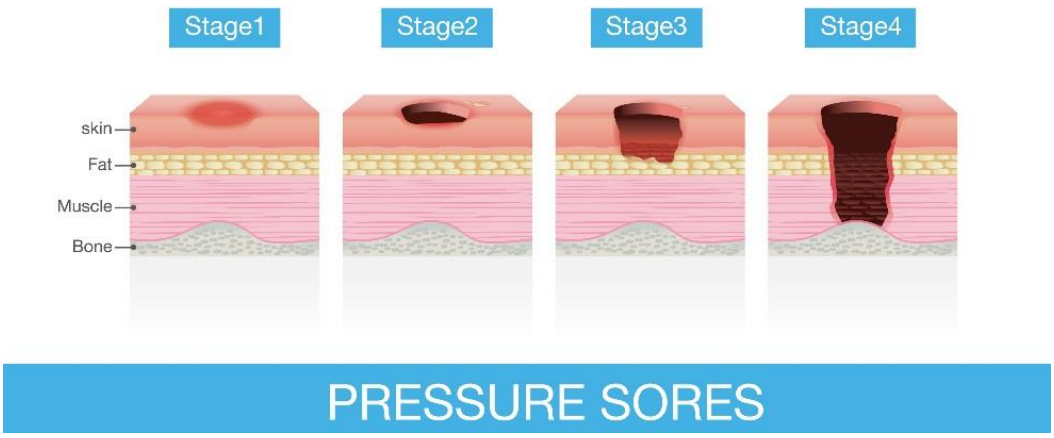
Cleaning Cuts and Scrapes: Video resource 4:40 min:
https://www.youtube.com/watch?v=fL2vFvtBv5M

Pressure Injuries (Previously known as Pressure Ulcers)

Definition of Pressure Injuries

In 2016 the National Pressure Ulcer Advisory Panel (NPUAP) redefined pressure wounds to pressure injuries. NPUAP defines a pressure injury as "localized damage to the skin and underlying soft tissue, usually over a bony prominence or related to a medical or other device. The injury can present as intact skin or an open ulcer and may be painful. The injury occurs as a result of intense and/or prolonged pressure or pressure in combination with shear."

Types of Pressure Injuries



Stage 1 Pressure Injury: An area of skin that has non-opened sores. It may be painful and red. In dark-skinned people, the area may appear different from the surrounding skin but will not be red. To tell if there is the start of an injury on darker skin, rub the area with a small amount of vegetable oil. The stage 1 area will remain shiny and bright compared to the rest of the skin. Stage 1 pressure injuries do not include purple discoloration; these may indicate a deep tissue pressure injury (bruise) which is not classified as a pressure injury.

Stage 2 Pressure Injury: Partial-thickness skin loss and forming of an ulcer occurs, with the ulcer expanding into the deeper layers of the skin. This can be tender and painful. Often it can look like a scrape, blister, or a shallow crater.

Stage 3 Pressure Injury: Full-thickness skin loss. The sore extends into more layers of tissue beneath the skin and makes a small crater.

Stage 4 Pressure Injury: Full-thickness skin and tissue loss. This sore is very deep and reaches into the muscle and bone.

Medical Device Related Pressure Injury: Result from the use of devices designed and applied for diagnostic or therapeutic purposes. The resulting pressure injury generally conforms to the pattern or shape of the device. The injury should be staged using the staging system above.

Mucosal Membrane Pressure Injury: Is found on mucous membranes when a medical device has been used at the location of the injury. Due to the anatomy of the tissue these ulcers cannot be staged. An example would be a sore in the mouth caused by dentures.

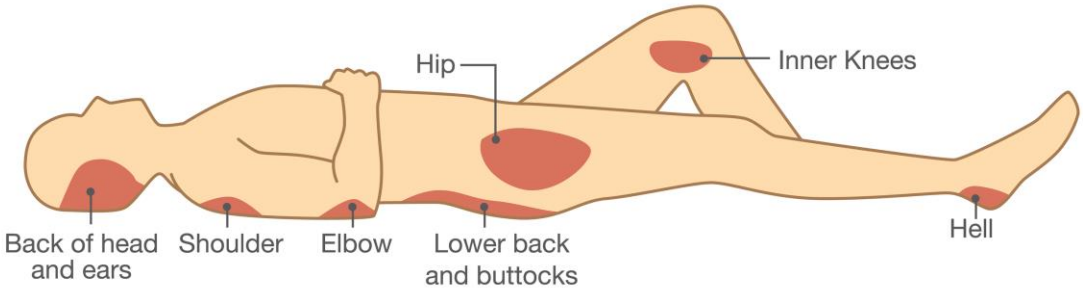
Staging of pressure injuries should be completed by trained medical professionals.

Prevention

Preventing pressure injuries is much easier than treating them after they have occurred.

Below are some prevention tips:

- People with reduced mobility are at risk of pressure injuries. Encourage movement and change of position every two hours
- Monitor for fragile skin or boney areas
- Inspect skin for all people requiring assistance– report any changes to their physician or supervisor. Below are areas at risk to develop pressure injuries:



PRESSURE SORES

- Clean the skin immediately after episodes of incontinence
- Moisturize dry skin daily
- Report weight changes to supervisor or physician and explore dietary supplements that are high in protein
- Report changes in oral intake immediately
- Heels should be raised off the bed when a person has reduced bed mobility
- Consider pressure relieving mattress, overlays, or cushions for individuals with reduced mobility

First Aid for Pressure Injuries:

- Remove or reduce the source of pressure – depending on where the injury is. Do not position the person on the affected area. If unable to avoid putting pressure on the area consult with their physician to order pressure relieving products
- Report the wound to the physician and follow orders
- Keep the wound clean to prevent infection. For Stage 1, when the skin is not broken, gently wash the area with mild soap and pat dry. For Stage 2 or greater, consult physician or nurse, immediately, for further instructions. While waiting, a dry, sterile dressing can be placed over a bleeding wound. Instructions should be received the same day in order to provide prompt and adequate treatment. **Do not** leave a pressure injury for multiple days without a treatment plan

Sprains and Strains

Sprains and strains are common injuries and share many of the same signs and symptoms. A sprain involves the tearing or stretching of the ligaments, while a strain is the tearing or stretching of a muscle or tendon.

Minor sprains and strains can be treated with the RICE method:

- **R**est the injured area
- **I**ce for 20 minutes every hour (always place a thin barrier between the skin and ice, do not place ice directly on the skin)
- **C**ompress the area by wrapping an elastic bandage lightly around the joint or limb. Make sure to wrap it loosely, as wrapping it tight can reduce circulation and cause further injury. Monitor surrounding skin. It should remain warm and pink in color
- **E**levate the injured area if able. It is best to raise it above the heart level

When to see the doctor or call 911:

- The injury has a “popping” sound when moved
- If they cannot bear weight on the joint or use the joint
- Numbness in the area of injury
- The person can no longer move the area injured
- There is severe pain, swelling, fever, or open wounds

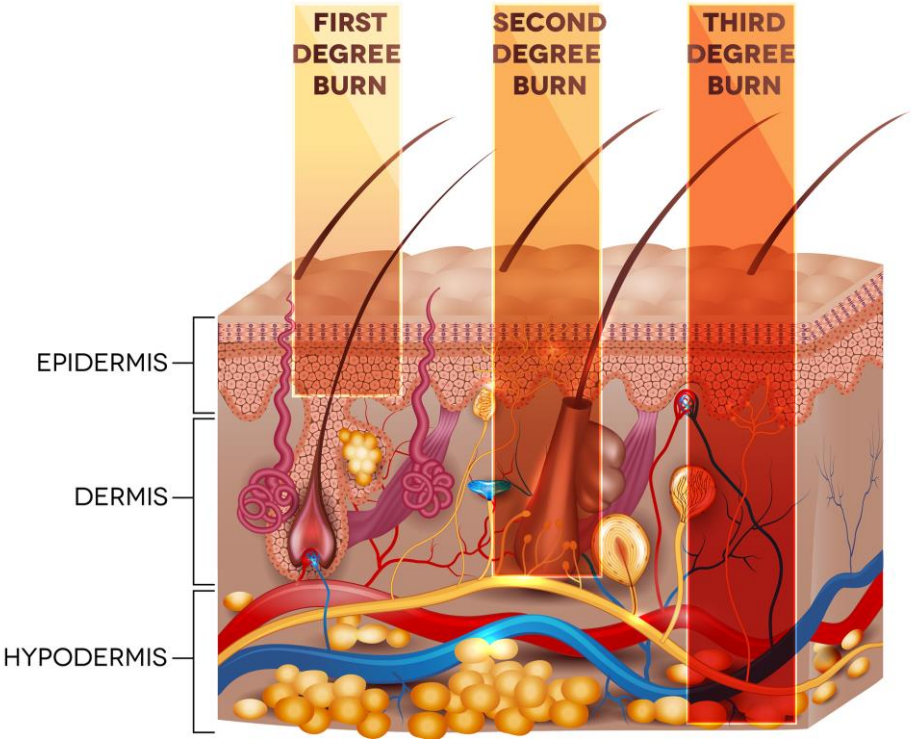
Burns

Treatment given for a burn in the first few minutes after it occurs can reduce the severity of the injury.

Immediate Treatment for Burns

- "Stop, drop, and roll" to smother flames
- Remove all burned clothing. If clothing adheres to the skin, cut or tear around the burn area. Do not try to pull off the burned clothing that adheres to the skin
- Remove all jewelry, belts, tight clothing, etc., from the burn areas and around the victim's neck. This is important because the burned areas swell immediately
- Call 911 if the person is having trouble breathing, if you suspect that the burns may have affected the airway or a large area of the body is burned

Types of Burns



Burns are staged in three categories. The stages are:

- First degree
- Second degree
- Third degree

First Degree Burns

First-degree burns involve the top layer of skin. Sunburn is a first-degree burn.

Signs:

- Red
- Painful to touch
- Skin will show mild swelling

Treatment:

- Apply cool, wet compresses, or immerse in cool, fresh water. Continue until pain subsides
- Cover the burn with a sterile, non-adhesive bandage or clean cloth
- Do not apply ointments or butter to a burn; as it may cause infection
- Over-the-counter pain medications may be used to help relieve pain and reduce inflammation, if ordered by a physician
- First degree burns usually heal without further treatment. However, if a first-degree burn covers a large area of the body, or the victim is an infant or elderly, seek emergency medical attention

Second Degree Burns

Second degree burns involve the first two layers of skin.

Signs:

- Deep reddening of the skin
- Pain
- Blisters
- Glossy appearance caused from leaking fluid
- Possible loss of skin

Treatment:

- Immerse in fresh, cool water, or apply cool compresses. Continue for 10 to 15 minutes
- Dry with clean cloth and cover with sterile gauze
- Do not break blisters
- Do not apply ointments or butter to burns; as it may cause infection
- Elevate burned arms or legs

- Take steps to prevent shock in serious burn situations: lay the victim flat, elevate the feet about 12 inches, and cover the victim with a coat or blanket. Do not place the victim in the shock position if a head, neck, back, or leg injury is suspected, or if it makes the victim uncomfortable
- Call 911 as further medical treatment is required. Do not attempt to treat serious burns unless you are professionally trained

Third Degree Burns

A third degree burn penetrates the entire thickness of the skin and permanently destroys tissue.

Signs:

- Loss of skin layers
- Often painless (pain may be caused by patches of first- and second-degree burns which often surround third-degree burns)
- Skin is dry and leathery
- Skin may appear charred or have patches that appear white, brown or black

Treatment:

- Call 911
- Cover burns lightly with sterile gauze or clean cloth. (Don't use material that can leave lint on the burn)
- Do not apply ointments or butter to burns; as it may cause infection
- Elevate the burned area higher than the victim's head when possible. Keep the person warm and comfortable and watch for signs of shock
    - Take steps to prevent shock: lay the victim flat, elevate the feet about 12 inches
- Have the person sit up if face is burned. Watch closely for possible breathing problems
- Do not place a pillow under the victim's head if the person is lying down and there is an airway burn. This can close the airway
- Call 911 as immediate medical attention is required. Do not attempt to treat serious burns unless you are a trained professional

Special types of burns:

Chemical Burns – A burn caused by coming in contact with a chemical substance that can damage skin

- Chemical burns will continue to cause damage as long as the chemical is still in contact with the person. Therefore, it is important to remove the chemical as quickly as possible
- Dry chemicals must be brushed off using a gloved hand or towel before using water. Remember to remove any contaminated clothing
- The burn should be flushed with large amounts of water. The water should be cool and it is best to use running water. Continue to flush the burn for at least 20 minutes or until EMS arrives. This is especially important if the eye is burned. This can be accomplished by having the person tilt their head, under a stream of water, so that the affected eye is lower than the unaffected eye

Electrical Burns – A burn caused when a person comes into contact with electricity (example: touching a frayed electrical cord)

- When coming across a person with an electrical burn, never approach the person until you are sure the person is no longer in contact with the source of power. This can be accomplished by turning off the power at its source
- Follow the first aid steps above based on the degree of burn

Scenario:

Jane is one of the chefs at Bayview Assisted Living. She works hard providing the residents with meals that they enjoy. At lunch, Jane gets busy and distracted. Jane grabs a pan off of the stove, but forgets to first grab a potholder, grabbing the pan barehanded. She quickly drops the pan but she has already burned herself. As a bystander, what first aid steps should you take? How do you identify the degree of burn? Outline the steps on the lines below.

Injuries to Bones, Joints, and Heads

Bone and Joint Injuries

According to the CDC, every second of every day in the United States an older adult falls, making falls the number one cause of injuries and deaths from injury among older Americans.

What conditions make you more likely to fall?

Research has identified many conditions that contribute to falls. These are called risk factors. Many risk factors can be changed or modified to help prevent falls. They include:

- Lower body weakness
- Vitamin D deficiency (not enough vitamin D in a person's system)
- Difficulties with walking and balance
- Use of medicines, such as tranquilizers, sedatives, or antidepressants. Some over-the-counter medicines can affect a person's balance
- Vision problems
- Foot pain or poor footwear
- Home hazards or dangers such as:
    - Broken or uneven steps
    - Throw rugs or clutter that can be tripped over
    - No handrails along stairs or in the bathroom

Most falls are caused by a combination of risk factors. The more risk factors a person has, the greater their chances of falling.

Assisted living staff can reduce the risk of falls by knowing the factors above.

In 2014 alone, older Americans experienced 29 million falls causing seven million injuries and costing an estimated 31 billion dollars in annual Medicare costs, according to a new report published by the CDC, as outlined in Morbidity and Mortality Weekly Report (MMWR).

One of the most serious fall injuries is a broken hip. It is hard to recover from a hip fracture and afterward many people are not able to live on their own. As the U.S. population gets older, the number of hip fractures is likely to go up.

- Each year over 300,000 older people—those 65 and older—are hospitalized for hips[1]
- More than 95% of hip fractures are caused by falling,[2] usually by falling sideways[3]
  - Women experience three-quarters of all hip fractures[1]
  - Women fall more often than men
- Women more often have osteoporosis, a disease that weakens bones and makes them more likely to break
- The chances of breaking hips go up as a person ages

Working in assisted living, it is important to understand bone and joint injuries and how to provide first aid for them.

Types of Injuries

Fractures

A fracture is when a bone breaks or cracks. Most fractures that occur under the skin are called a closed (simple) fracture. A bone breaking and puncturing through the skin is called an open (compound) fracture

What to look for:

- Swelling
- Difficulty moving
- Movement in a direction that is not natural for the joint
- One limb is shorter than the other or is twisted or bent
- Grating noise or feeling when moving
- Loss of strength
- Shock

Open fracture video resource, 3:16 min:
https://www.youtube.com/watch?v=wIFcIjnIsMo

What to do:

- If you believe a fracture has occurred, call 911
- If it is an open fracture
    - Cover the wound with a sterile dressing and secure it with a bandage
    - Apply pressure around the wound to control bleeding
- Do not move the body part, provide support to keep it from moving. By doing this, pain should be eased and it will help prevent further damage
- Protect the injured area by using bandages to secure it to an uninjured part of the body. This is often referred to as splinting. Examples are using a sling for an arm or if the leg is injured tying it to the other leg
- Stay with the person until help has arrived
- Check for signs of shock

Dislocated Joints

Dislocations are often easier to spot than a fracture. A dislocation is when the bone, at a joint, is moved away from its normal location. The joint will no longer function and a bump, ridge, or indentation is formed where it does not normally exist. If you believe a dislocation has occurred, call 911 and wait with the person until help arrives. Encourage the person to remain still.

Head, Neck, and Spinal Injuries

According to the CDC: Traumatic brain injury (TBI) is a major cause of death and disability in the United States, contributing to about 30% of all injury deaths.[1] Every day, 138 people in the United States die from injuries that include TBI. Those who survive a TBI can face effects lasting a few days to disabilities which may last the rest of their lives. Effects of TBI can include impaired thinking or memory, movement, sensation (e.g., vision or hearing), or emotional functioning (e.g., personality changes, depression). These issues not only affect individuals, but can have lasting effects on families and communities.

What is a TBI?

A TBI is caused by a bump, blow, or jolt to the head or a penetrating head injury that disrupts the normal function of the brain. Not all blows or jolts to the head result in a TBI. The severity of a TBI may range from "mild" (i.e. a brief change in mental status or consciousness) to "severe" (i.e. an extended period of unconsciousness or memory loss after the injury). Most TBIs that occur each year are mild, commonly called concussions.[2]

Risk factors for TBI

Among TBI-related deaths in 2006–2010:

- Men were nearly three times as likely to die as women
- Rates were highest for persons 65 years and older
- The leading cause of TBI-related death varied by age
  - Falls were the leading cause of death for persons 65 years or older

Among non-fatal TBI-related injuries for 2006–2010:

- Men had higher rates of TBI hospitalizations and emergency department (ED) visits than women
- Hospitalization rates were highest among persons aged 65 years and older
- Falls were the leading cause of TBI-related ED visits for all but one age group
- The leading cause of TBI-related hospitalizations varied by age:
  - Falls were the leading cause among adults 45 years and older

Concussion: Signs and Symptoms

What are the signs and symptoms of concussion?

Most people with a concussion have a good recovery from symptoms experienced at the time of the injury. But for some people, symptoms can last for days, weeks, or longer. In general, recovery may be slower among older adults, than in young children, and teens. Those who have had a concussion in the past are also at risk of having another one and may have a longer recovery period.

Symptoms of concussion usually fall into four categories:

Thinking/ Remembering	Physical	Emotional/ Mood	Sleep
Difficulty thinking clearly	Headache Fuzzy or blurry vision	Irritability	Sleeping more than usual
Feeling slowed down	Nausea or vomiting (early on) Dizziness	Sadness	Sleep less than usual
Difficulty concentrating	Sensitivity to noise or light Balance problems	More emotional	Trouble falling asleep
Difficulty remembering new information	Feeling tired, having no energy	Nervousness or anxiety	

Some of these symptoms may appear right away, while others may not be noticed for days or months after the injury, or until the person resumes their everyday life. Sometimes people do not recognize or admit that they are having problems. Others may not understand their problems nor how the symptoms are impacting their daily activities.

The signs and symptoms of a concussion can be difficult to sort out. Early on, problems may be missed by the person with the concussion, family members, or doctors. People may look fine even though they are acting or feeling differently.

When to Seek Immediate Medical Attention

Danger Signs in Adults

In rare cases, a dangerous blood clot may form in the brain in a person with a concussion and crowd the brain against the skull. Call 911 if you see any of these signs or symptoms after a person has hit their head.

- Headache that gets worse and does not go away
- Weakness, numbness or decreased coordination
- Repeated vomiting or nausea
- Slurred speech
- Look very drowsy or cannot be awakened
- Have one pupil (the black part in the middle of the eye) larger than the other
- Have convulsions or seizures
- Cannot recognize people or places
- Are getting more and more confused, restless, or agitated
- Have unusual behavior
- Lose consciousness (*a brief loss of consciousness should be taken seriously and the person should be checked by professional healthcare workers*)

All injuries to the neck, spine, or head are potentially serious. If a person states that they have hit their head or its believed that they have a neck, spine, or head injury, call 911. While waiting for the EMS, have the person remain in their current position and stabilize their head, by placing one hand on each side of their head and holding it still. If the head is sharply turned to one side, do not try to straighten it. Support the head in its current position.

Scenario:

Joan has always been very independent, but lately her Parkinson's disease has made her less stable. She insists on getting up on her own at night and sometimes forgets to use her walker. You go in to check on her at 3:00am and find her laying on the floor. After checking her head to toe and talking to her, you learn that she hit her head on the dresser. She has a large bump on her forehead, complains of a headache, and dizziness. What should you do next? Use the lines below to outline the next steps to take.

Eye Injuries

First Aid per CDC Standards

Specks in the Eye

- Do not rub, touch or apply pressure to the eye. This could cause a corneal abrasion on the surface of the eye
- Flush the eye with large amounts of water
- See a doctor if the speck does not wash out or if pain or redness continues

Cuts, Punctures, and Foreign Objects in the Eye

- Do not wash out the eye
- Do not try to remove a foreign object stuck in the eye. This may cause further damage
- If the object is small, cover the eye with sterile dressing
- If the object is large, use an eye shield. If one is not available, a paper cup can be used to cover the eye instead
- Call 911 immediately

Chemical Burns

- Immediately flush the eye with a steady stream of lukewarm water. Open the eye as wide as possible and continue flushing for at least 15 minutes. For caustic or basic solutions continue flushing while on the way to the hospital
- If a contact lens is in the eye, begin flushing over the lens immediately. Flushing may dislodge the lens
- Call 911

Blows to the Eye

- Apply a cold compress or crushed ice in a plastic bag to the forehead and allow it to rest gently on the injured eye
- Seek immediate medical attention if pain continues, vision is reduced, or blood or discoloration appears in the eye

Mouth and Injuries

Broken or knocked out teeth

Causes

Tooth accidents are commonly caused by:

- Accidental falls
- Sports-related trauma
- Fighting
- Car accidents
- Biting on hard food

First Aid

Locate the tooth that has been knocked out. Bring it to the person's dentist as soon as possible. The longer the delay, the less chance the dentist can to fix it. Hold the tooth only by the crown (chewing edge).

The tooth can be taken to the dentist in any of the following ways:

- Try to place the tooth back in the mouth where it fell out so it is level with other teeth. Have the person bite down gently on a gauze or a wet tea bag to help keep it in place. Monitor the resident to prevent them from swallowing the tooth. The sooner the tooth is replaced the greater the chance the tooth will survive
- If the above step cannot be done, place the tooth in a container and cover it with a small amount of cow's milk or saliva
- The person can also hold the tooth between their lower lip and gum or under their tongue
- A tooth-saving storage device (Save-a-Tooth, EMT Tooth Saver) may be available at a dentist's office. This type of kit contains a travel case and fluid solution.

Additional steps:

- Apply a cold compress on the outside of the mouth and gums to ease pain
- Apply direct pressure using gauze to control bleeding
- If the tooth is badly broken, nerve endings may be exposed. The person will need dental help right away to avoid infection and pain

The person may not need an emergency visit for a simple chip or a broken tooth that is not causing discomfort. They should still have the tooth fixed to avoid sharp edges that can cut their lips or tongue.

DO NOT: If a tooth breaks or is knocked out:

- **DO NOT** handle the roots of the tooth. Handle only the chewing edge – the crown (top) portion of the tooth
- **DO NOT** scrape or wipe the root of the tooth to remove dirt
- **DO NOT** brush or clean the tooth with alcohol or peroxide

When to Contact a Medical Professional

- Call the dentist immediately when a tooth is broken or knocked out. If you can find the tooth, bring it with to the dentist. Follow the steps in the First Aid on the previous page
- Call 911 immediately if the person cannot close their upper and lower teeth together, the jaw may be broken. A broken jaw requires medical help immediately at a dentist's office or hospital

Bites and Stings

Insect bites and stings:

Insect bites and stings can cause an immediate skin reaction. Most of these reactions are mild, and may cause itching, swelling and/or redness around the site. A bite from fire ants and the sting from bees, wasps, and hornets are most often painful. Bites caused by mosquitoes, fleas, and mites are more likely to cause itching than pain.

Insect and spider bites cause more deaths from venom reactions than bites from snakes.

Considerations

In most cases, bites and stings can be easily treated at the CBRF, except for extreme reactions that will require immediate medical treatment to prevent death.

Certain spider bites, such as the black widow or brown recluse, can cause serious illness or death. Most spider bites are harmless. If possible, bring the insect or spider that bit you when you go for medical treatment so it can be identified.

Symptoms

Symptoms depend on the type of bite or sting. They may include:

- Pain
- Redness
- Swelling
- Itching
- Burning or numbness
- Tingling

Some people have severe, life-threatening reactions to bee stings or insect bites. This is called anaphylactic shock. This condition can occur quickly and lead to rapid death if not treated quickly.

Symptoms of anaphylaxis can occur quickly and affect the whole body. They include:

- Chest pain
- Face, mouth or eyelid swelling
- Difficulty swallowing
- Difficulty breathing
- Rapid heartbeat
- Fainting or lightheadedness
- Abdominal pain or vomiting
- Rash, hives or flushing

First Aid

For severe reactions, first check the person's airways and breathing. **Call 911**. Then, follow these steps:

- Reassure the person. Try to keep them calm
- Remove nearby rings and constricting items because the affected area may swell
- Use the person's auto-injector pen, if they have one. (Some people who have serious insect reactions carry it with them)
- If appropriate, treat the person for signs of shock. Remain with the person until medical help arrives

General steps for most bites and stings:

- Remove the stinger by scraping the back of a credit card or other straight-edged object across the stinger. Do not use tweezers -- these may squeeze the venom sac and increase the amount of venom released
- Wash the site thoroughly with soap and water, followed by these steps:
    - Place ice (wrapped in a washcloth) on the site of the sting for 10 minutes on and 10 minutes off. Repeat this process
    - If necessary and a physician’s order is present, administer an antihistamine, or apply creams that reduce itching
    - Over the next several days watch for signs of infection (such as increasing redness, swelling, or pain)

Human and Animal Bites

First aid for bites by an animal or another person:

- Clean the wound immediately by running warm tap water over it for a couple of minutes – it's a good idea to do this even if the skin doesn't appear to be broken
- Remove any objects from the bite, such as teeth, hair or dirt
- Encourage the wound to bleed slightly by gently squeezing it unless it is already bleeding freely
- If the wound is bleeding heavily, put a clean pad or sterile dressing over it and apply pressure
- Dry the wound and cover it with a clean dressing
- Offer pain medication if physician's order is present
- Seek medical advice unless the wound is minor
- If the bite has severed a body part follow first aid procedures from the amputation section of this training

When to Seek Medical Advice

- If the bite has broken the skin, seek immediate medical attention after cleaning the wound. Don't delay seeking help until symptoms of infection appear
- Minor bites can be treated at a walk in clinic or the person's primary care provider. For severe bites, call 911

Signs a Bite May Be Infected

Symptoms that suggest a wound has become infected include:

- Redness and swelling around the wound
- The wound feels warm and increasingly painful
- Liquid or pus leaks from the wound
- A fever of 100.4F or above
- Sweats and chills
- Swollen glands under the chin or in the neck, armpits or groin
- Red streaks extending along the skin from the wound

Get medical help as soon as possible if you think the wound is infected.

Chapter 11

Environmental Emergencies

Environmental emergencies are defined as “sudden-onset disasters or accidents resulting from natural, technological or human-induced factors, or a combination of these, that causes or threatens to cause severe **environmental** damage as well as loss of human lives and property.”

Heat Related Illnesses

Individuals who are medically compromised, elderly, frail or young are at high risk for heat related illness. The two types of heat related illnesses are:

HEAT EXHAUSTION	HEAT STROKE
I. Cause Depletion of body fluids and electrolytes due to exposure to intense heat or the inability to acclimatize to heat, resulting in prolonged or severe diaphoresis. May progress to heat stroke.	**I. Cause** Failure of temperature- regulating mechanism of the body due to prolonged exposure to high temperature.
II. Onset May develop slowly after exposure to heat for several days and inadequate or unbalanced replacement of fluids and electrolytes.	**II. Onset** May develop quickly (within minutes).
III. Similarities Headache Vomiting Dizziness Muscle cramps (arms, legs, abdomen) Fatigue Rapid pulse (tachycardia) Nausea	**III. Similarities** Headache Vomiting Dizziness Muscle cramps (arms, legs, abdomen) Fatigue Rapid pulse (tachycardia) Nausea

IV. Differences Profuse perspiration Cool, moist skin Rapid respiration Body temperature may be normal, or slightly below normal, or as high as 102.2 degrees F. Possible giddiness	**IV. Differences** Absence of perspiration Hot, dry, red or mottled skin Slow, deep respiration Extremely high temperatures (104 degrees F/40 degrees C or above, rectally) Mental confusion, disorientation, delirium, irrational behavior, feelings of euphoria or impending doom, diminished level of consciousness, loss of consciousness may be abrupt Confusion may occur early or late Signs of shock Coma
V. How to Intervene Cool fluids, loosen tight clothing, recumbent position, cool, shaded environment, elevate legs, transport to medical facility for medical follow up.	**V. How to Intervene** If a change in mental status such as confusion, sleepiness, vision disturbances and seizures, apply rapid active cooling measures such as; placing in a cool tub of water or shower, placing ice packs, or cool towels around neck, armpit or groin area or cover with damp sheet. Call 911.

Conditions that can increase the risk for heat-related illness include:

Age: the young children under four and the elderly over 65 are more vulnerable.

Obesity: people who are overweight have greater difficulty regulating body temperature.

Medical conditions: conditions such as cardiovascular disease, respiratory disease, or renal diseases may increase a person's susceptibility to heat-related illness, as the medications may cause dehydration.

Medications: use of psychotropic medications and other medications that affect the body's ability to perspire and/or regulate the heat response can greatly decrease the person's ability to cope in hot weather.

Medications of particular concern include the following (not all-inclusive):

- Antipsychotic agents, including: aripiprazole (Abilify), risperidone (Risperdal/Consta), ziprasidone HCI (Geodon), thioridazine (Mellaril), chlorpromazine (Thorazine), and clozapine (Clozaril)
- Tranquilizers and antiemetic's; Anticholinergics such as benztropine (Cogentin), Trihexyphenidyl (Artane), Diphenhydramine (Benadryl), and others
- Lithium, especially in combination with excessive alcohol consumption, can cause dehydration and may produce serum drug levels that are toxic

Any questions about the action or side effects of a medication can be answered by the pharmacist or the prescribing practitioner.

Alcohol abuse: people who are prone to acute alcohol intoxication are at greater risk for sudden death when intoxication is combined with extreme heat.

Excessive exposure: people who are outdoors for long periods can be overcome easily with heat and humidity.

Dehydration: people prone to body fluid loss due to extreme exertion, lack of sufficient fluid intake, medications, or a medical condition.

Lack of air-conditioning: people housed in communities without air-conditioning or proper ventilation for decreasing heat and humidity.

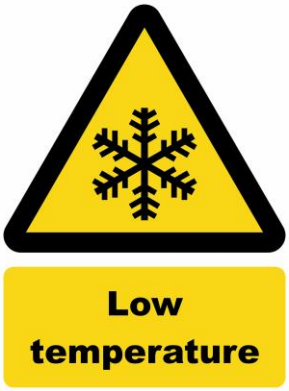
The implementation of simple precautions can greatly reduce the risk of heat-related illness and death. Some of these are:

- Keep air circulating and use air conditioning when possible
- Avoid using fans directed on individuals when the ambient temperature exceeds approximately 100 degrees F
- Actively monitor for early warning signs of dehydration, heat exhaustion and heat stroke. All staff should know the symptoms of heat related illness and when to contact emergency assistance if conditions deteriorate

- Supervise persons with cognitive impairments, especially when the weather is very hot and humid
- Protect individuals and the environment from direct sunlight by drawing shades, blinds and curtains
- Keep outdoor activities to a minimum, especially between the hours of 10:00am and 2:00pm. Persons who must be transported should not be kept in vehicles for long periods to avoid heat that can build up
- Provide and encourage the consumption of extra fluids, including fruit juices
- Outings should be re-evaluated based on the circumstances presented
- Advise residents or clients to dress appropriately. Use lightweight clothing that easily absorbs perspiration (e.g. cotton or other natural fibers) or a single sheet if a person must be in bed

Cold Related Emergencies

Hypothermia



According to the CDC, when exposed to cold temperatures, the body begins to lose heat faster than it can be produced. Prolonged exposure to cold will eventually use up the body's stored energy. The result is hypothermia, or abnormally low body temperature. A body temperature that is too low affects the brain, making the person unable to think clearly or move well. Hypothermia is particularly dangerous because a person may not know what is happening therefore, lessoning their ability to seek help.

Symptoms

Symptoms of hypothermia can vary depending on how long the person has been exposed to the cold temperatures.

Early Symptoms

- Shivering
- Fatigue
- Loss of coordination
- Confusion and disorientation

Late Symptoms

- No shivering
- Blue skin
- Dilated pupils
- Slowed pulse and breathing
- Loss of consciousness

First Aid

Take the following steps to treat a person with hypothermia:

- Call 911
- Move the victim into a warm room or shelter
- Remove their wet clothing
- Warm the center of their body first-chest, neck, head, and groin-using an electric blanket, if available; or use skin-to-skin contact under loose, dry layers of blankets, clothing, towels, or sheets
- Warm beverages may help increase the body temperature, but do not give alcoholic beverages. Do not try to give beverages to an unconscious person
- After their body temperature has increased, keep the victim dry and wrapped in a warm blanket, including the head and neck

Frostbite

According to the CDC frostbite is the actual freezing of the tissue or a body part. It often affects the ears, nose, fingers and toes. Warning signs of frostbite include:

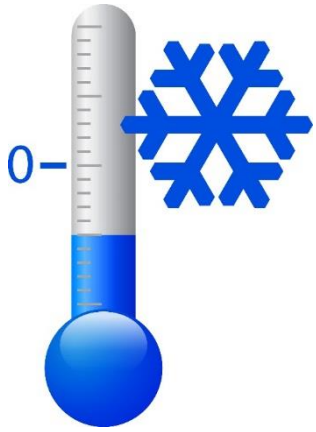
- Pale or waxy white or gray skin
- Numbness
- Tingling or stinging sensation in the affected body part
- Aching in the affected body part
- Reduced blood flow

If frostbite is detected, seek medical care. If there is frostbite, but no sign of hypothermia *and* immediate medical care is not available, do the following:

- Move to a warm, dry area
- Remove wet or tight fitting clothes
- Avoid walking on frostbitten toes or feet
- Gently place the affected area in warm water – **DO NOT** use water any hotter than 105°F
- **DO NOT** use a heating pad, heat lamp or stove, fireplace or radiator for warming
- **DO NOT** rub the affected area, this can cause more damage
- After warming, the injured area should be wrapped in sterile gauze, keeping the affected fingers and toes separated
- If normal sensations haven't returned in 30 minutes, seek medical attention

Preventing Frostbite and Hypothermia

- Be aware of the warning signs of cold-related illness, such as uncontrollable shivering, sleepiness, confusion, changes in skin color, slurred speech and loss of consciousness



- Stay indoors and in a warm area. If heat is not available, consider a visit to a shopping mall, public library, movie theatre, church, community building or shelter
- Increase fluid intake – regardless of activity level. Don't wait until the person feels thirsty to drink fluids
- Avoid drinks containing caffeine and alcohol because they affect how the body reacts to the cold. Warm fluids such as broth or juice are good, as well as sports drinks
- Wear something on the head. Fifty percent of all body heat is lost through the head, so wearing a hat will keep the entire body warmer
- Protect the ears and face. Wear a scarf to protect lungs from cold air – it will also protect ears and face
- Boots should be waterproof
- Several layers of clothing are better than a single heavy layer
- Check with a doctor or pharmacist if they are taking any prescription drugs. Some drugs affect the way the body reacts to the cold
- Minimize sitting or squatting in the cold for prolonged periods of time. These positions can hinder circulation
- While outdoors, take frequent breaks in a warm place
- Adjust outdoor activity. Reschedule trips and outdoor activities during extreme cold
- Monitor whereabouts of individuals with dementia or a cognitive deficit during periods of cold weather
- Prevent chapped skin by frequent application of protective lotions

Resources

The following are resources used in the development of this curriculum. These resources may also provide valuable information about current standards and practices. Instructors and participants are encouraged to explore the resources to increase program knowledge.

Occupational Safety and Health Administration (OSHA) - https://www.osha.gov

Centers for Disease Control - http://www.cdc.gov/

Wisconsin Administrative Rule - http://docs.legis.wisconsin.gov/code/admin_code/dhs/030/83.pdf

National Institutes of Health - https://www.nih.gov/

MedlinePlus - https://medlineplus.gov/

Poison Help - http://www.poisonhelp.hrsa.gov/faqs/basic-first-aid-tips/index.html

US National Library of Medicine - https://www.nlm.nih.gov/

Health Resources and Service Administration - http://www.hrsa.gov/index.html

Epilepsy Foundation - http://www.efepa.org/

Mayo Clinic - http://www.mayoclinic.org/

St. John's Ambulance - https://www.sja.org.uk/sja/default.aspx

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World Health Organization - http://www.who.int/en/

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