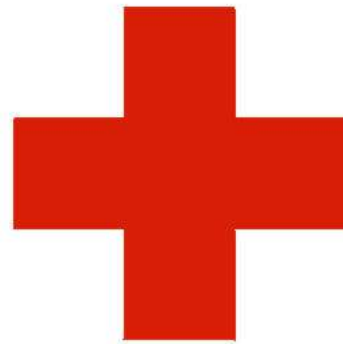

Medical Emergencies



American Red Cross

Together, we can save a life

Emergency Medical Response



Lesson 23: Medical Emergencies

You Are the Emergency Medical Responder

You are the emergency medical responder (EMR) responding to a scene on a downtown street involving a male who appears to be about 60 years old. He is confused and appears agitated. Several bystanders state that they saw the man wandering aimlessly and that he appeared to be lost. Upon interviewing the patient all you can learn is that his name is Earl. He does not seem to know where he is or where he is going. During your physical exam you note that the patient is sweating profusely but, other than his diminished level of consciousness (LOC), his vital signs are normal. More advanced medical personnel have been called. As an EMR, you want to provide proper care for the patient.

Medical Emergencies

- Medical emergencies are sometimes like solving a medical mystery!
- You are not there to diagnose, just provide appropriate care
- EMRs need to think about:
 - What is the possible problem?
 - What are the possible causes?
 - When did the condition begin to develop?
 - Acute – Diabetes, heart attack
 - Chronic – Diabetes, COPD (respiratory distress), hypothermia?

General Medical Complaints

- Guidelines for care are the same as for any emergency.
 - Size-up the scene
 - Perform a primary assessment
 - Conduct a SAMPLE/OPQRST history and secondary assessment
 - Summon more advanced medical personnel
 - Help the patient rest
 - Keep the patient safe and comfortable
 - Provide reassurance

Altered Mental Status

- One of the most common medical emergencies
- Sudden or gradual change in a person's LOC
- Drowsiness or confusion
- Partial or complete loss of consciousness
- Syncope
 - Unpleasant sight
 - Smells

DVD

"Altered Mental Status"



Emergency Medical Response

Causes of Altered Mental Status in Adults

- Fever or infection
- Poisoning or overdose
- Blood sugar/endocrine problems
- Head injury
- Inadequate oxygenation or ventilation
- Conditions leading to decreased blood flow or oxygen to the brain
- Cardiac or diabetic emergencies
- Shock
- Stroke
- Behavioral illness
- Seizures

Causes of Altered Mental Status in Children

- Respiratory failure
- Hypoxemia
- Shock
- Hypoglycemia
- Brain injury
- Seizures
- Poisoning or intentional overdose
- Sepsis – blood poisoning
- Meningitis
- Hyperthermia or hypothermia

Care for Altered Mental Status

- Conduct primary and secondary assessments and SAMPLE / OPQRST history
- Perform ongoing assessment
- Ensure an open airway; place in a recovery position
- Give nothing to eat or drink
- Take spinal precautions if trauma is suspected
- Loosen restrictive clothing
- Elevate legs 8-12" if you suspect no spinal injury

Seizures

DVD

- A seizure is temporary abnormal electrical activity in the brain caused by injury, disease, fever, infection, metabolic disturbances or conditions that decrease oxygen levels
- Epilepsy is neurologic disorders involving recurrent seizures
- Status epilepticus – any epileptic seizure lasting longer than 5 minutes without slowing down – true medical emergency

Types of Seizures

- Generalized tonic-clonic (grand mal)
 - Most recognized
 - Characterized by an aura, LOC, muscle rigidity (tonic phase lasting 2-5 minutes), LOBF (clonic phase), & mental confusion, followed by deep sleep, headache, and muscle soreness (postictal)
- Partial
 - Simple – patient remains aware
 - Complex – last about 1-2 min; awareness impaired
- Absence (petit mal) – blank stare, occur in children
- Febrile - < 5 years of age; increase in temperature

Scenario

You arrive at the scene of a motor-vehicle crash and begin to provide care to two patients who are both alert and conscious with minor lacerations. They are sitting on the curb. Suddenly one of them falls to the side and begins to have a tonic-clonic seizure.

What are the appropriate action to take in this situation?

Care for Seizures

Active seizure

1. DO NOT restrain;
2. Remove objects that are harmful to the patient;
3. Loosen restrictive clothing;
4. Turn the victims head to the side if possible;
5. DO NOT force anything into the mouth;
6. Protect the patient, but DO NOT try to hold

Post seizure

1. Protect the airway, place in the recovery position if possible;
2. If the patient is cyanotic, open the airway & ventilate;
3. Treat any injuries that may have occurred, immobilize the C-spine if you suspect injury;
4. Monitor vitals and summons more advanced help

Diabetes

DVD – “Diabetic Emergencies”

- Two major types:
 - Type 1 – insulin dependent
 - Type 2 – adult-onset
- Hyperglycemia (glucose high; insulin low)
- Hypoglycemia (glucose low; insulin high)
- Gestational – usually goes away after birth

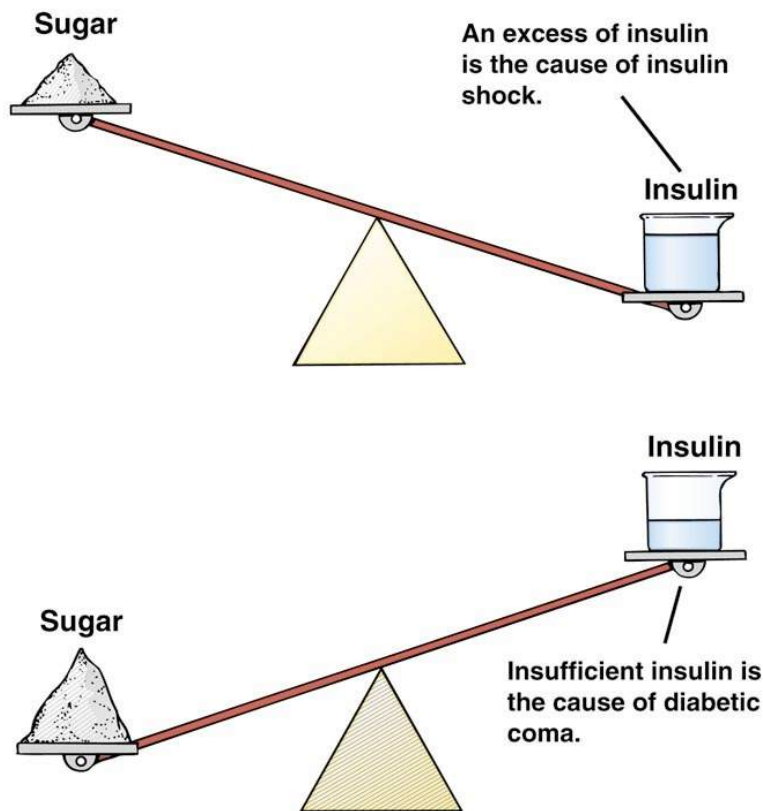
Diabetic Emergencies

Signs and Symptoms

- Change in LOC
- Irregular breathing
- Abnormal pulse (rapid or weak)
- Looking or feeling ill
- Abnormal skin characteristics

Diabetic Emergency

Signs of Hyperglycemia - Diabetic Coma



- Gradual onset;
- Frequent urination;
- Extreme thirst;
- Fruity breath odor (ketones);
- Heavy breathing;
- Vomiting;
- Drowsiness;
- Flushed, dry, warm skin;
- Eventual LOC

An unconscious diabetic who is hyperglycemic is said to be in a diabetic coma

Diabetic Emergency

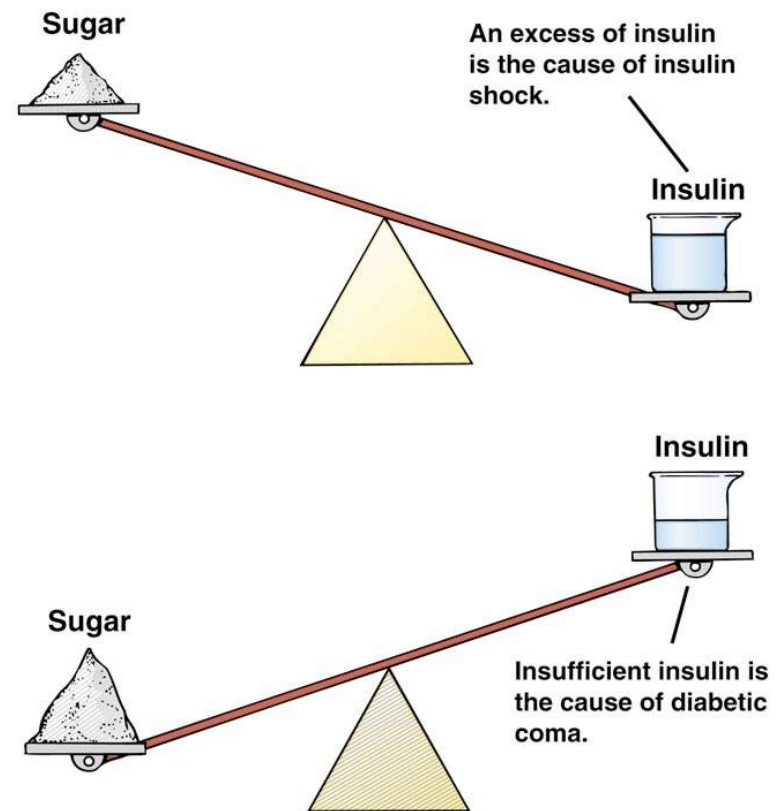
Hypoglycemia

- When the circulating glucose level falls the body reacts by allowing the adrenal glands to release adrenaline into the blood
- This stimulates the release of stored sugar, however, it also stimulates the heart, makes a person sweaty, shaky and agitated
- These are also signs of shock, therefore, the term insulin shock is used

Diabetic Emergency

Signs of Hypoglycemia

- Usually a sudden onset;
- AMS (lack of glucose);
 - Poor coordination, confusion, combativeness, anxiety
- Intoxicated appearance, staggering;
- Cold, clammy;
- Sudden hunger;
- Excessive sweating;
- Trembling;
- Seizure (low blood sugar);
- Eventual LOC



(“Insulin Reaction” or “Low-Blood Sugar”)

Care for Diabetic Emergencies

- Perform a primary assessment and care for life-threatening conditions
- Conduct a physical exam and SAMPLE history (if patient is conscious); note medical ID tag or bracelet
- Conscious patient: (Always treat as Hypoglycemia)
 - Give sugar (glucose tablets, fruit juice, nondiet soft drink, table sugar or commercial sugar source)
- Unconscious patient:
 - Monitor patient's condition, prevent chilling or overheating, summon more advanced medical personnel and administer emergency oxygen, if available

Stroke

- Cerebrovascular accident or brain attack
- Causes
 - Blood clots blocking blood flow to brain
 - Rupture and bleeding of arteries in the brain
- Transient ischemic attack (TIA): “mini-stroke”

DVD – “Stroke”

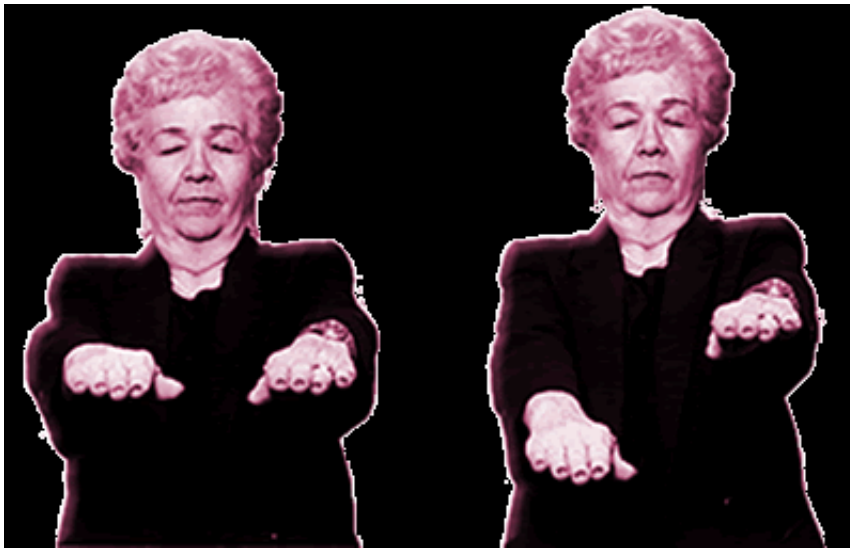
Stroke: Signs and Symptoms

- Looking or feeling ill (common)
- Weakness or numbness (face, arm or leg)
- Facial drooping or drooling
- Speech difficulties - aphasia
- Visual disturbances or loss
- Dizziness, confusion, agitation or loss of consciousness
- Loss of balance or coordination
- Incontinence

Stroke Assessment Scales



- FAST Scale (Cincinnati Prehospital Stroke Scale)
 - Facial Droop
 - Have the person smile or show teeth
 - Arm Drift
 - Close eyes and hold arms out straight
 - Speech
 - You can't teach an old dog new tricks
 - Time



Stroke Assessment Scales

- Cincinnati Stroke Scale – 89% Specificity
- Time is Brain!
 - Last time they were well?
 - Were they watching TV programs?
- Los Angeles Prehospital Stroke Scale - [LAPSS](#)

Care for Stroke

- Ensure an open airway
- Care for life-threatening conditions
- Position the patient on side to allow fluids to drain
- Monitor the patient's condition
- Offer comfort and reassurance (if conscious)
- Do not give anything by mouth
- Time, Time, Time

Abdominal Pain

- Can be life-threatening; require immediate care
- Sudden onset: Acute abdomen
- Intensity of pain not necessarily an indicator of the seriousness of the condition
- Signs and symptoms:
 - Abdominal tenderness
 - Anxiety
 - Nausea or vomiting
 - Rigid, tense or distended stomach
 - Rapid pulse / blood pressure changes

Abdominal Pain

- Care:
 - Ensure an open airway; call for transport
 - Watch for signs of potential aspiration due to vomiting
 - Do not give anything by mouth
 - Watch for signs of shock

Hemodialysis: Special Considerations

- Information on past dialysis and complications; current dialysis session; patient's dry weight; amount of fluid removed
- Fluid status, mental status, cardiac rhythm and shunt location (and whether active or non-functional)
- Any associated medical problems
 - Shunts
- Evidence of possible hypovolemia or hypervolemia
- Signs and symptoms of altered mental status
- Cardiac rhythm

You Are the Emergency Medical Responder

As you continue monitoring the patient, he becomes even more confused and agitated. You begin to notice signs of shock.

As an EMR, what should you do while awaiting emergency medical services (EMS) personnel?

Poisoning

POISON
Help
1-800-222-1222



Emergency Medical Response



Lesson 24: Poisoning

You Are the Emergency Medical Responder

Your police unit is summoned to a residence on a report of an unconscious person. When you arrive and size-up the scene, you discover parents with their 2-year-old child. The mother is distraught and says she found her toddler on the kitchen floor very drowsy. She noticed that the under-the-sink cabinet door was open, and there was a bottle of liquid kitchen cleaner lying next to the child. She called 9-1-1 because he was not responding when she tried to wake him up.

**Do you suspect poisoning?
What do you do first?**

Poison

- Any substance that causes injury, illness or death if it enters the body
- Toxins are poisonous substances produced by microorganisms that can cause certain diseases but also are capable of stimulating neutralizing antibodies or antitoxins
- Every person will/can react to poisons differently



Poison Control Centers

- Specialized health care centers that provide information on poisons and suspected poisoning emergencies
- 24-Hour Poison Help Hotline: 1-800-222-1222
- Pharmacists, physicians, nurses, toxicologists
- 70% of poison exposure cases can be managed over the phone

Poison Control Centers

- Poison Control Information
 - Name, phone number, county, and zip code
 - Victim's age and weight
 - Any symptoms the victim has related to the poisoning
 - Time the poisoning took place
 - Name of the substance or poison
 - Amount of the substance or poison
 - Current health problems of the victim
 - Medicines the victim is taking

How Poisons Enter the Body

- Ingestion
 - Swallowed
- Inhalation
 - Breathes
- Absorption
 - Skin / Mucus membranes
- Injection
 - Bites, stings needles



Poison Ivy.
© Shutterstock.com/Tim Mainiero



Poison oak
© Shutterstock.com/Dwight Smith



Poison sumac
Courtesy of www.poison-ivy.org

Ingested Poisons

- Young children and elderly higher risk
- Foods are the most common
 - Bacterial food poisoning (*Salmonella* or *E. coli*)
 - Chemical food poisoning (containers lined with zinc, cadmium, copper, lead or mercury)
- Drugs or medications
- Household items

Signs and Symptoms of Ingested Poisons

- Nausea, vomiting
- Chest, abdominal pain
- Difficulty breathing
- Sweating
- LOC
- Seizures
- Headache, dizziness
- Weakness
- Irregular pupils
- Burning/tearing eyes
- Abnormal skin color
- Burn injuries
 - Lips
 - Around mouth

Providing Care for Ingested Poisons

- Call more advanced medical personnel / PCC
- Do not give anything to eat/drink unless told to do so.
- If patient vomits, save some in plastic bag
- Induce vomiting only if instructed to do so.
- Do Not induce vomiting if:
 - Unconscious
 - Corrosive substance
 - Pregnant (last trimester)

Inhaled Poisons

- Carbon monoxide
- Carbon dioxide
- Chlorine gas
- Ammonia
- Sulfur dioxide
- Nitrous oxide
- Chloroform
- Dry cleaning solvents
- Fire extinguisher gases
- Industrial gases
- Hydrogen sulfide

Signs and Symptoms of Inhaled Poisons

- Difficulty breathing
- Chest pain
- Nausea or vomiting
- Headache, dizziness
- Altered mental status
- Seizures
- Cyanosis

Providing Care for Inhaled Poisons

- Follow appropriate safety precautions to ensure you do not inhale the substance and become poisoned as well
- Remove patient from source without endangering yourself
- Call more advanced medical personnel / PCC
- Administer oxygen as soon as possible
- Toxic fumes - may have to call hazard material team

Carbon Monoxide Poisoning

- Carbon Monoxide (CO) and Cyanide result from fires, industrial accidents, and Weapons of Mass Destruction (WMD)
- CO is the leading cause of poisoning deaths in the US
- It is colorless, odorless, and tasteless
- CO is a byproduct of combustion, therefore at-risk individuals include:
 - Boats, Bar-B-Que inside a closed garage
 - Sleeping inside a running car
 - Faulty furnace, wood stove, or water heater

Carbon Monoxide Poisoning

Signs and Symptoms

- Dull throbbing headache
- Nausea or vomiting
- **Bluish** skin color
- Chest pain
- Confusion
- Convulsions
- Dizziness
- Drowsiness
- Fainting
- Hyperactivity
- Impaired judgment
- Irritability
- Loss of consciousness
- Low blood pressure
- Muscle weakness
- Rapid or abnormal heart beat
- Shock
- Shortness of breath

Care for Carbon Monoxide Poisoning

- Ensure that EMRs are properly outfitted for safety
- Remove the patient from the situation as quickly as possible
- Alert ER staff and physicians about the suspicion of CO poisoning
- Inform the patient that he or she may have a blood test to confirm diagnosis
- Monitor and treat everyone in the area
- Administer emergency oxygen
- Home CO detector



Absorbed Poison

- Enters the body through skin or mucus membranes of the eyes, mouth, and nose
- Plants
 - Poison ivy
 - Poison oak
 - Poison sumac
- Dry chemicals
- Wet chemicals
- Topical medications

Signs and Symptoms of Absorbed Poisons

- Traces of the liquid, powder or chemical on the patient's skin
- Skin that looks burned, irritated, red, or swollen
- Blisters that ooze fluid or a rash
- Itchy skin

Providing Care for Absorbed Poisons

- Follow appropriate safety precautions to ensure you do not come into contact with the substance and become poisoned as well - BSI
- Brush / flush with water at least 20 minutes
- Eyes, do not rinse into good eye!
- Call more advanced medical personnel / PCC



Activity

You arrive at a local nursery in response to a call that an employee was splashed in the face and on the neck with a liquid chemical to kill weeds. The employee is conscious and is complaining that his skin and eyes feel "like they are on fire."

What is the appropriate care?

Flush for 20 minutes

Injected Poison

- Bites or stings of insects, spiders, aquatic life, animals or snakes
- Drugs or misused medications injected with a hypodermic needle



Signs and Symptoms of Injected Poisons

- Bite or sting mark at point of entry
- Stinger, tentacle or venom sac near entry site
- Redness, pain, tenderness around entry site
- Signs of allergic reaction
 - Itching, hives, rash
- Weakness, nausea, dizziness
- Severe allergic reactions
 - Anaphylaxis

Providing Care for Injected Poisons

- Scene size-up / standard precautions
- Primary assessment – provide care for conditions found
- Apply ice/cold pack if appropriate
- Provide specific care – chapter 16
- Call more advanced medical personnel / PCC

You Are the Emergency Medical Responder

You complete your assessment and find that the toddler is unresponsive and his respiratory and pulse rates are extremely slow. He also has some redness around his mouth and lips, and there is a strong odor of bleach. Based on your findings, you suspect poisoning.

How would the poison have entered the body?

What should you do first?

Substance Abuse and Misuse



Emergency Medical Response

Lesson 25: Substance Misuse and Abuse

You Are the Emergency Medical Responder

Your emergency medical services (EMS) unit is summoned to a residence on a report of an unconscious person. When you arrive and size-up the scene, you discover an older couple. The wife is distraught and says that her husband had been drinking alcoholic beverages heavily earlier in the day. Shortly after taking his prescribed Valium®, she says he became drowsy and incoherent, and then collapsed. Unable to get him to respond, she called 9-1-1. On assessing the patient, you find that he is unresponsive, his breathing is shallow and slow, his heart rate is slow and his pulse is weak.

How would you respond?

Substance Abuse and Substance Misuse

- *Abuse:* The deliberate, persistent and excessive use of a substance without regard to health concerns or accepted medical practices
- *Misuse:* The use of a substance for unintended purposes or for appropriate purposes but in improper amounts or doses
- Includes use of illegal (or illicit or controlled) substances and legal substances, such as nicotine, alcohol and over-the-counter (OTC) medications, such as sleeping pills and diet pills

Substance Abuse Terms

- Dependency – the desire to continuously use
- Addiction – compulsive need for the substance
- Withdrawal – stop using when addicted
- Tolerance – effects on the body decrease
- Overdose – excessive amount of the substance
- Synergistic effect – two or more substances used at the same time – can be fatal



Emergency Medical Response

Categories of Abused Substances

- Stimulants – central nervous system
- Hallucinogens – alters time and space
- Depressants – central nervous system
- Narcotics – act as a depressant
- Inhalants – depresses the central nervous system
- Cannabis products – impaired judgment and motor coordination

*General Principles of Care

- Size-up the scene
- Perform a primary assessment
- Summon more advanced medical personnel
- Perform a physical exam
- Take a SAMPLE history to try to find out what substance was taken, how much was taken and when it was taken*
- Calm and reassure the patient
- Keep the patient from getting chilled or overheated
- Keep the patient's airway clear
- If the patient has difficulty breathing, administer emergency oxygen, if available

Factors Contributing to Substance Abuse

- Lack of parental supervision
- Breakdown of traditional family structure
- Wish to escape unpleasant surroundings and stressful situations
- Widespread availability of substances
- Peer pressure and the basic need to belong
- Low self-esteem, including feelings of guilt or shame
- Media glamorization promoting the idea that using substances enhances fun and popularity
- History of substance abuse in the home or community environments

Prevention Guidelines and Unintentional Misuse or Overdose

- Read the product information; use only as directed
- Ask a doctor or pharmacist about intended use and side effects; if taking more than one medication, check for possible interaction effects
- Never use another person's prescribed medications
- Always keep medications in their original, marked containers
- Discard all out-of-date medications
- Keep medications out of reach of children

You Are the Emergency Medical Responder

Based on your findings, you suspect that the patient ingested a combination of drugs and alcohol.

What initial care can you provide?
Is this a case of substance misuse?

Environmental Emergencies



Emergency Medical Response



Lesson 26: Environmental Emergencies

You Are the Emergency Medical Responder

As the nearest park ranger in the area, you are summoned to a campsite for an incident involving a possible venomous snakebite. When you arrive and size-up the scene, you find several campers apparently assisting one of the others, a young adult male. As you begin your primary assessment and investigate the patient's chief complaint, you see two puncture wounds and swelling on his right hand. The patient described the snake as having a triangular shaped head and distinct diamond-shaped patterns on its body. It struck him like "a bolt of lightning" when he bent down to move some rocks beside the stream. He says the pain is about an 8 or 9, on a scale of 1 to 10. There is a medical facility at the park headquarters and a regional medical center with antivenin nearby.

How would you respond?

Body Temperature

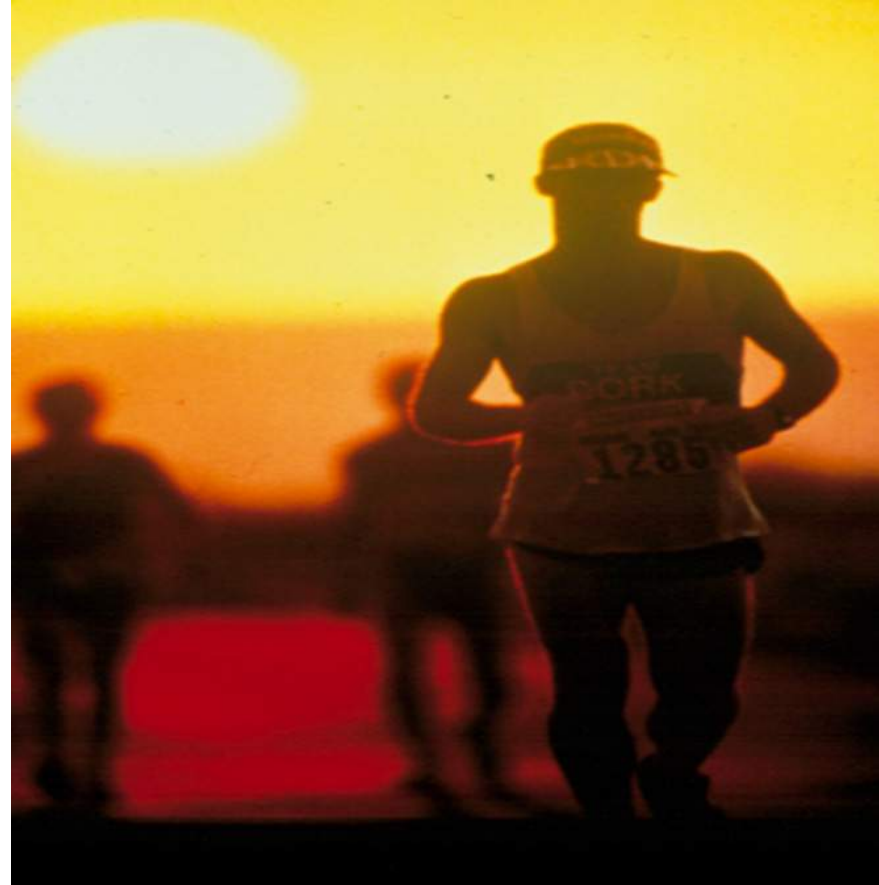
- Constant core temperature: 98.6° F or 37° C
- How the body stays warm -
 - Heat production via metabolism
 - Food and drink into energy
- Hypothalamus as the control mechanism
- Body too cold, then blood vessels constrict
- Body too warm, then blood vessels dilate

Factors Increasing Risk for Heat-Related Illnesses

- Climate
- Exercise and activity – heat index
- Age – very young/old
- Pre-existing illness or conditions
- Drugs and/or medications
- Clothing

Heat-Related Illnesses

- Dehydration
 - Heat cramps
 - Heat exhaustion
 - Heat stroke
-
- DVD
“Heat Related Illness”



Dehydration: Signs and Symptoms

- Inadequate fluid in body tissues; can lead to other heat-related illnesses
- Very young and old have highest risk
- Early signs:
 - Fatigue or weakness
 - Headache, irritability or dizziness
 - Nausea
 - Dizziness
 - Excessive thirst
 - Dry lips and mouth

Dehydration: Signs and Symptoms

- Later signs:
 - Disorientation/delirium
 - Loss of appetite or severe thirst
 - Dry mucous membranes or sunken eyes
 - Lowered blood pressure or rapid pulse
 - “Tenting” of skin
 - Lack of tears
 - Decrease in perspiration
 - Dark, amber urine/lack of urine output
 - Unconsciousness

Dehydration: Care

- Replace lost fluid
- If the patient is conscious and able to swallow, encourage the patient to drink small amounts of a carbohydrate/electrolyte-containing liquid, such as a commercial sports drink or milk, juice or water
- If dehydration is severe, fluids may need to be replaced intravenously

Heat Cramps

- Cramps are painful, involuntary muscle spasms most often occurring in legs and abdomen
- To reduce cramps—
 - Rest
 - Gently massage and lightly stretch
 - Consume fluids, such as a commercial sports drink, milk or water
 - Resume activity with caution if the patient feels better and cramping resolves



Heat Exhaustion: Signs and Symptoms

- More severe form, fluid loss is not replaced
- Cool, moist, pale ashen or flushed skin
- Weakness, dizziness, light-headedness or headache
- Rapid, weak pulse, shallow breathing or low blood pressure
- Exhaustion
- Decreasing LOC or fainting
- Heavy sweating
- Nausea
- Muscle cramps (heat cramps)



Heat Exhaustion: Care

- Move to a cooler area
- Apply cool wet cloths or towels to the skin
- Encourage rehydration
- Apply ice packs or cold packs to the wrists, ankles, armpits, groin and back of the neck
- Call for more advanced medical personnel and provide care for heat stroke if patient does not improve in a few minutes, refuses to drink water, vomits, shows other signs of heat stroke or begins to lose consciousness

Heat Stroke

- Truly life-threatening condition
- Two types:
 - Classic: due to environmental changes – develops slowly
 - Exertional: due to excess heat loss through exercise exceeding body's ability to cool off – younger, active individuals

Heat Stroke: Signs and Symptoms

- Flushed or red skin, dry or moist
- Extremely high body temperature
- Rapid, weak pulse or shallow breathing
- Low blood pressure
- Throbbing headache
- Dizziness, nausea or vomiting
- Decreasing LOC/altered mental status
- Confusion, disorientation, irrational behavior or attention deficit
- Unconsciousness or coma
- Convulsions or seizure

Heat Stroke: Care

- Immediately call for more advanced medical personnel
- Perform a primary assessment
- Begin rapid cooling methods
- Douse the patient with ice water-soaked towels over the entire body, spray with cold water, fan or cover the patient with ice towels or bags of ice placed over the body
- Take steps to minimize shock
- Be prepared to give ventilations or perform CPR, if needed

Cold-Related Emergencies

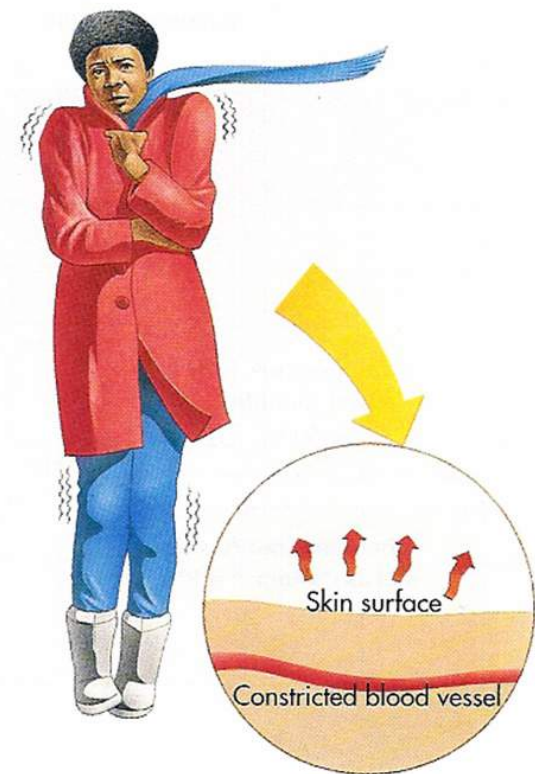
- Hypothermia: generalized cold exposure
 - Colder than core temperature
 - Excessive heat loss/body's inability to produce heat
- Frostbite: localized cold exposure
- DVD – “Cold-Related Emergencies”

Hypothermia

- Predisposing factors:
 - Cold environment
 - Wet environment
 - Wind
 - Age
 - Medical conditions
 - Alcohol, drugs and poisoning
 - Clothing

Hypothermia: Signs and Symptoms

- Shivering (may be absent in later stages of hypothermia)
- Numbness
- Glassy stare
- Apathy or decreasing LOC
- Weakness
- Impaired judgment



Hypothermia: Care

- First priority is to slowly and carefully move the patient to a warmer environment
- Perform a primary assessment
- Call for more advanced medical personnel
- Remove wet clothing and dry the patient
- Passively rewarm the patient by wrapping all exposed body surfaces with anything at hand (blankets, clothing or newspapers)

Hypothermia: Care (cont'd)

- If far from definitive health care, begin active rewarming. Place the patient near a heat source and apply heat pads, hot water bottles or chemical hot packs to the wrists, ankles, armpits, groin and back of the neck
- Giving the patient warm—not hot—liquids
- Administer emergency oxygen, if available, and monitor the patient's condition
- Do not rub or massage the patient's extremities nor immerse the patient in warm water
- Be prepared to perform CPR or use an AED

Frostbite: Signs and Symptoms

- Lack of feeling in the affected area
- Swelling
- Skin that appears waxy, is cold to the touch or is discolored (flushed, white, yellow or blue)
- Blisters, which may form and the affected part may turn black and show signs of deep tissue damage, in more serious cases



Frostbite: Care

- Get the patient out of the cold
- Handle the frostbitten area carefully
- Rewarm the affected area
 - Minor: Use skin-to-skin contact
 - More serious: Soak in warm water
- Loosely bandage the area
- If fingers and toes are frostbitten, place a dry, sterile gauze between them
- Avoid breaking blisters and take precautions to prevent hypothermia
- Monitor and care for shock
- Do not give ibuprofen or other NSAIDs

Activity

You arrive at a local elementary school in response to a call that a child has been stung by a bee. School officials do not know if the child is allergic to bees.

What would be appropriate care?

Up to 5 percent of the population is severely allergic to insect stings, and these allergic reactions account for nearly 50 reported deaths each year.

Bites and Stings

Insect Stings: Care

- Remove stinger
 - Scrape away from skin
- Clean site
- Cover with a dressing
- Apply ice or cold compress
- Watch for signs and symptoms of anaphylaxis
 - Difficulty breathing, wheezing
 - Swelling of the face, neck or tongue
 - Rash or hives



Epinephrine Auto-Injector

- Pre-loaded dose of epinephrine in a spring-loaded plunger activated by pushing it against a large muscle
- Always obtain consent and adhere to standard precautions
- DVD, "Assisting"
- Read Enrichment pages 397-399



Tick Bites

- Diseases such as:
 - Rocky Mountain spotted fever
 - *Babesia* infection
 - Ehrlichiosis
 - Lyme disease

Tick Bites: Care

- Remove tick with tweezers
 - Do not burn/apply nail polish, vasoline
- Clean site with soap and water
- Apply antiseptic or antibiotic ointment
- Advise patient to seek medical advice – risk of contracting a tickborne disease



Spider Bites and Scorpion Stings: Signs and Symptoms

- A mark indicating a possible bite or sting
- Severe pain in the sting or bite area
- A blister, lesion or swelling at entry site
- Nausea and vomiting
- Stiff or painful joints
- Chills or fever
- Difficulty breathing or swallowing/signs of anaphylaxis
- Sweating or salivating profusely
- Irregular heart rhythms
- Muscle aches or severe abdominal or back pain
- Dizziness or fainting
- Chest pain
- Elevated blood pressure and heart rate
- Infection of the bite

Recluse Spider Bite: Signs and Symptoms

- Little or no pain initially but localized pain developing in an hour or more
- A blood-filled blister forming under the skin surface, possibly in a target or bull's-eye pattern
- A blister increasing in size and eventually rupturing and leading to tissue necrosis and a black scab





Black Widow Spider Bite: Signs and Symptoms

- Intense pain or an immediate feeling of a sharp pinprick followed by a dull pain in the area
- Muscular rigidity in the shoulders, chest back and abdomen
- Restlessness, anxiety, dizziness, headache and profuse sweating
- Weakness, drooping or swelling of the eyelids

Spider Bites and Scorpion Stings: Care

- Wash area thoroughly and bandage it
- Apply a topical antibiotic ointment if protocols allow and the patient has no known allergies
- Apply ice or a cold pack to the site to reduce swelling and pain
- Have patient seek medical attention or, if symptoms are severe, transport patient to a medical facility, keeping the bite area elevated and as still as possible

Venomous Snake Bites

- 7000 to 8000 in U.S. bitten, fewer than 5 die
- Rattlesnakes account for most venomous
- Signs and symptoms:
 - Evidence of puncture wound
 - Severe pain and burning
 - Swelling and discoloration



Venomous Snake Bites: Care

- Wash area
- Keep area still and lower than the heart
- Transport via stretcher or carry
- Apply elastic roller bandage
- *Never* apply ice, cut the wound, apply suction or a tourniquet or administer electric shock (car battery)



Other Bites

- Aquatic life:
 - For most jellyfish: Flush area with vinegar, remove stingers/tentacles then use hot-water immersion or dry hot or cold packs. For bluebottle jellyfish, flush with ocean water instead of vinegar
 - Stingrays, sea urchins and spiny fish: Flush with tap or ocean water, immobilize the injured part and soak in water as hot as patient can stand
- Animals: Clean wound and seek more advanced medical care; tetanus and rabies immunizations may be necessary
- Humans: more contaminated - Clean wound, control bleeding and seek follow-up care

Water-Related Emergencies

Contributing Factors to Drowning

- Fifth most common cause of unintentional death; rises to second among 1-14 years of age
- Drowning may/may not result in death
- Children left alone or unsupervised around water
- Use of alcohol and recreational drugs
- Traumatic injury
- Sudden illness
- Mental illness

Signs and Symptoms: Drowning Incident

- Persistent coughing
- Shortness of breath/no breathing
- Disorientation/confusion
- Unconsciousness
- Vomiting
- Respiratory and/or cardiac arrest
- No pulse
- Rigor mortis

Considerations for Water Rescues

- Patient's condition
 - Responsiveness, ability to cooperate
- Water condition
 - Water temp, movement, depth
- Resources available



Guidelines for Water Rescue

- Requirements:
 - Good swimmer
 - Specially trained in water rescue
 - Wearing of a personal floatation device
 - Accompanied by other qualified rescuers
- Use “reach, throw, row and then go” technique
- “Go” only for those trained in deep-water rescue



You Are the Emergency Medical Responder

Based on your findings, you suspect that the snake was venomous and the patient appears to be adversely reacting to the bite.

What care should you provide?