First Aid

- Heat Emergencies
- Syncope (fainting)
- Seizures
- Allergic Reactions / Anaphylaxis
- Asthma
- Hyperventilation
- Diabetic Emergencies
- Heart Attack
- Skin Injuries
- Musculoskeletal Injuries
- Bloodborne Pathogens

PATIENT EVALUATION:

1. FIRST – IS "SCENE SAFE ? ? ?"

2. "ABC's" = AIRWAY, BREATHING, PULSE
3. IDENTIFY if SHOCK is present.
4. SECONDARY ASSESSMENT
   1. VERBAL
   2. PHYSICAL

SHOCK ASSESSMENT

SHOCK =

INADEQUTE TISSUE PERFUSION

- STARTS THE INSTANT YOU SEE PATIENT
- ENDS WHEN YOU REACH THE PATIENT'S SIDE

SHOCK ASSESSMENT

LOC:	ANXIOUS RESTLESS LETHARGIC UNCONSCIOUS	AWAKE ALERT & ORIENTED
SKIN:	PALE / ASHEN CYANOTIC COOL DIAPHORETIC	NORMAL HUE WARM DRY
BREATHING:	TACHYPNEA	NORMAL
PULSE:	WEAK / THREADY TOO FAST or SLOW	STRONG
STATUS:	SHOCK	NORMAL

SHOCK

= CALL 911

List of COMMON CAUSES of SHOCK:

- Blood loss (Dehydration vs. internal / external bleeding)
- Diabetic emergency (Insulin Shock)
- Anaphylaxis (Allergic reaction)
- Cardiogenic (Heart Attack, Heart Rhythm Disorder, Heart Failure)
- Psychogenic
- Respiratory
- And more . . . !

HEAT RASH

HEAT RASH – often first sign of overheating

- Clusters of red bumps on skin
- Often appears on neck, upper chest, folds of skin

TREATMENT: Remove from heat. If outdoors get in shade. Reduce physical exertion. Fluids

HEAT CRAMPS

HEAT CRAMPS may be first sign of overheating

- Muscle spasms, pain
- Usually in abdomen, legs and/or arms

TREATMENT: Remove from hot environment. Drink electrolyte replacement beverage (e.g. "Gatorade,") or water or other cool beverages. Cease exertional activities.

HEAT EXHAUSTION

ADVANCED HEAT EMERGENCY.

- Skin Cool, Moist, Sweating, PALE
- Headache
- Nausea / Vomiting
- Dizziness / weakness
- Thirst

Remove IMMEDIATELY to COOL ENVIRONMENT.

Drink electrolyte replacement beverage (if tolerable). If patient won't keep down liquids, call 911, take to hospital. (IV fluids most likely necessary). Cool compresses / ice packs

HEAT STROKE

TRUE LIFETHREATENING EMERGENCY.

- Hot, flushed, dry skin
- Confusion
- Possible Seizures
- Body Temperature very high

IMMEDIATELY remove from hot environment. Cool water – shower/ hose; cold/ice packs; call 911. Survival is dependent on quickly cooling patient.

SYNCOPE / FAINTING

- Loss of consciousness (usually momentary)
- Can be from many causes:
  - Dehydration / heat exposure
  - Emotional distress

SYNCOPE / FAINTING

- Causes (potentially life-threatening)
  - Cardiac Dysrhythmia **SUSPECT THIS DURING ANY ATHLETIC EVENT**
  - TIA (“mini-stroke”)
  - Low blood sugar

SYNCOPE / FAINTING

- Lay flat with legs elevated
- Attempt to arouse
- If no response – check for breathing
  - If no breathing START CPR, APPLY AED, Call 911
- If signs of shock (cold, clammy, pale skin): call 911
- If arousable, no signs of shock: put in quiet setting, determine cause, supportive care . . . .
- If unable to determine cause – seek medical care

SEIZURES

GRAND-MAL: Patient loses consciousness, uncontrollable shaking (tonic-clonic movement) all over.

- Move objects from immediate area that could cause injury
- Attempt to protect head but do not attempt to control seizure activity
- Call 911
- Seizures USUALLY self-resolving
- After seizure subsides check for breathing – if no breathing start CPR, apply AED

ALLERGIC REACTIONS:

MILD:

- Sneezing (upper respiratory allergy)
- Itching (near exposure area)
- Hives (red rash – near exposure area)

Remove from allergen source.

Antihistamine (e.g. “Benadryl”)

ALLERGIC REACTIONS:

MODERATE:

- Itching – over body, including away from exposure site
- Hives -- over body, including away from exposure site

Remove from allergen source.

Antihistamine (e.g. “Benadryl”)

Monitor breathing / have Epi Pen available

Consider calling 911

ALLERGIC REACTIONS:

SEVERE:

- Itching and Hives over entire body
- Wheezing / shortness of breath
- Extreme anxiety
- Signs of shock may develop

LIFETHREATING EVENT.

CALL 911

USE EPI-PEN

GIVE 50mg BENADRYL LIQUID (if pill- chew)

ASTHMA

- Wheezing
- Use of accessory muscles to breathe

Often patient has known history of asthma.

Administer INHALER treatment (if provided by patient)

Call 911 if NO INHALER available or inhaler treatment not effective

HYPERVENTILATION

- Patient breathing very fast and deeply
- Usually induced by emotional duress
- Advanced cases – may complain of sharp stabbing chest pain with "pins and needles" sensation in hands and feet
- Involuntary curling of fingers and hands

CALM patient

COACH breathing – slow rate

If not effective, call 911

DIABETIC EMERGENCIES

- Patient usually has history of diabetes
- "took insulin or other diabetic medicine, but didn't eat, or vomited up food, or under extreme physical or emotional distress
- Skin pale, cool, clammy
- Patient Agitated, confused

Have patient DRINK sugar-laden beverage (REAL sweeteners –no artificial)

IF no immediate improvement call 911

HEART ATTACK

- Chest pain (usually "pressure-like," or "dull")
  - Center of chest, behind breast bone
  - May radiate to shoulders, L/R arm, neck or and/or jaw.
  - Usually UNCHANGED by DEEP BREATH, movement, or position
  - May have been preceded by similar "episodes" but now is constant.

HEART ATTACK

- Shortness of Breath – may or may not be present
- Nausea / vomiting – may or may not be present

CALL 911

GET AED. DO NOT appy unless patient becomes unconscious and stops breathint

START CPR – if patient becomes unconscious and stops breathing.

SKIN INJURIES – ABRASIONS:

- If bleeding, usually minor "oozing" – apply direct pressure, preferably with dry sterile dressing, ELEVATE above heart level
- Clean wound with soap and water
- Dress with dry, sterile dressing
- Seek medical attention as soon as possible

SKIN INJURIES – LACERATIONS:

- For active bleeding – Apply DIRECT PRESSURE and ELEVATE ABOVE HEART LEVEL.
- Seek medical attention – larger lacerations may require sutures.
- **For SEVERE, "SPURTING" BLEEDING that CAN NOT be controlled with DIRECT PRESSURE and ELEVATION, apply tourniquet ABOVE injury site and call 911**

MUSCULOSKELETAL INJURIES

Comprised of STRAINS, SPRAINS and FRACTURES.

STRAINS: soft tissue injury involving muscles. Usually involves a tear of muscle tissue.

Symptoms: abrupt soreness, pain, local tenderness that worsens with use of the involved muscle.

MUSCULOSKELETAL INJURIES

Comprised of STRAINS, SPRAINS and FRACTURES.

SPRAINS: Soft tissue injury of the ligaments. Vessel rupture, edema and tissue bleeding.

Usually CAUSED by excessive wrenching/twisting motions.

Pain and disability worsens 2-3 hours after injury.

MUSCULOSKELETAL INJURIES

TREATMENT of SPRAINS and STRAINS: "RICE"

R: Rest the affected area to promote healing

I: Ice. Apply intermittently for 20-30 minutes

C: Compression. A bandage is applied to control swelling and offer support

E: Elevation. Try to elevate above level of heart to reduce inflammation.

MUSCULOSKELETAL INJURIES

BONE FRACTURES: "The FIVE P's:"

- Pain
- Pulselessness
- Paresthesia
- Paralyisis
- Pallor

MUSCULOSKELETAL INJURIES

BONE FRACTURES: Classifications:

OPEN or CLOSED. The SKIN is intact or open. Open fractures have high infection complication rates.

DISPLACED or NON-DISPLACED. With a DISPLACED fracture, the affected body part is misshapen, bent at an abnormal angle.

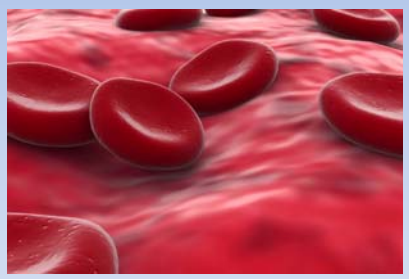
MUSCULOSKELETAL INJURIES

BONE FRACTURES: EMERGENCY Treatment

- IMMOBILIZE:
  - Splint joint above and below fracture – or -
  - If 911 called, keep patient IMMOBILE while EMS responds
- ICE to injury site.
- Do NOT manipulate JOINT fractures – If extremity is PULSELESS, EMS will attempt to straighten.

What is a Bloodborne Disease?

- Bloodborne pathogens are germs that are found in the bloodstream and can cause disease in humans.
- Examples of common bloodborne diseases include Hepatitis B, Hepatitis C and HIV (AIDS)



Facts about Hepatitis:

- Hepatitis B (HBV) is a virus spread by blood or through sexual contact. There is a vaccine for HBV. HBV can live on surfaces for 7-10 days – or MORE.
- Hepatitis C (HCV) is spread the same way, but there is not a vaccine for HCV.

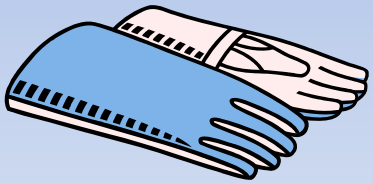
Facts about HIV:

- HIV is the virus that causes Acquired Immune Deficiency Syndrome (AIDS). It weakens the body's immune system leading to serious infections and diseases.
- More than 1,000,000 Americans are infected with the HIV virus.
- There is no cure or vaccine available at this time.

Transmission of Bloodborne Pathogens

- Transmission of a bloodborne pathogen can occur any time that blood or certain other body fluids from an infected person enters the body of someone else through a break in the skin or mucous membrane, sexual contact, sharing of needles, or blood transfusions.
- Sweat, tears, saliva, vomit, urine, and feces are not considered to be potentially infectious unless visible blood is present.

Universal Precautions



- Universal precautions are practices and procedures that help prevent the transmission of bloodborne pathogens.

Using Universal Precautions

- All blood and body fluids should be treated as if they could be infectious.
- Following careful procedures can prevent exposures.
- Handwashing is the best way to prevent spreading infections.

Good Handwashing

- Wet hands thoroughly under warm or cold water.
- Dispense liquid soap into hands.
- Vigorously rub hands together for one minute, paying particular attention to the nails, cuticles, spaces between the fingers, and under jewelry.
- Rinse hands thoroughly.
- Dry hands with disposable towel.
- Use towel to turn off the water.
- Dispose of paper towel into a waste receptacle.

Personal Protective Equipment (PPE)

- Disposable Gloves – used for provision of first aid, or contact with any blood or other potentially infectious materials
  - Every teacher and every school office employee has a supply of gloves & bandaids; leave a note in your nurse's mailbox when you need more!
  - Every school bus has a first aid kit and gloves – notify your supervisor if you need more.
  - Custodians and cafeteria staff have their own gloves that meet requirements for their areas and their jobs.

Additional Personal Protective Equipment (PPE)

- CPR Masks
- Sharps containers, red biohazard bags, utility gloves, goggles, aprons and gowns – these are provided for certain areas with high risk for bloodborne exposure
- Ask your school nurse if you are concerned that you need something you don't have

Using Disposable Gloves

- Maintain a supply of disposable gloves in a readily accessible location.
- When giving first aid or wound care, always wear gloves.
- Students should clean their own wounds if possible.
- Slip each hand into a clean glove, pulling it snugly over the fingers to assure a good fit.
- Pull glove over the wrist as far as it will go to maximize coverage.
- Do not reuse gloves

Safe Removal of Gloves

- Remove gloves by turning the glove inside out as it is pulled over the hand. During the removal of the second glove, avoid touching the outer surface by slipping the fingers of the ungloved hand under the glove and pulling it inside out as it is pulled over the hand.
- Dispose of used gloves in a waste container lined with a plastic bag.
- Wash hands thoroughly following hand washing procedures.

Clean Ups

- Call custodian to clean up blood or body fluids on surfaces.
- Custodians will use germicidal cleaners which kill bloodborne pathogens.
- Items contaminated with blood should be disposed of in a plastic lined pail. If very large amounts of blood are present, biohazard disposal bags are used (available in the school health office).

First Aid for Bloody Noses

- Have student pinch nostrils with tissue for at least 5-10 minutes
- Have student sit upright with their head leaning slightly forward (this is best done where and when the nose bleed is first noted)
- If assistance is needed, always put on gloves first
- Student and caregiver should always wash hands well when bleeding has stopped
- Seek nursing evaluation if the nose bleed lasts more than 5 minutes and does not resolve with above treatment.

First Aid for Cuts and Scrapes

- Student should wash affected area with soap and water
- Those providing assistance should always wear gloves
- Contaminated clothing should be sealed in a plastic bag to be washed at home
- Contaminated surfaces should be cleaned and disinfected

First Aid for Human Bites

- Wash affected area right away with soap and water
- Seek evaluation by the school nurse
- Human bites that break the skin can transmit a bloodborne disease

Exposure to Body Fluids

- Always wear gloves when coming in contact with body fluids
- Clean and disinfect contaminated surfaces and objects
- Contaminated materials should be double bagged and put into a plastic lined trash can. Materials containing large quantities of liquid blood should be placed in a biohazard “red bag” available in the nurse’s office

Significant Exposure

- Any puncture of the skin by a sharp object such as a needle that contained blood or body fluids
- Mucous membranes of nose, mouth or eyes splattered with blood
- Exposure of broken/open skin with blood, saliva, urine or vomitus (e.g. bites)

Post Exposure Protocol

- Wash exposed area immediately with soap and water.
- Report exposure to the principal and school nurse

Hepatitis B Vaccine

- Staff whose position puts them at increased risk for bloodborne pathogen exposure may request the HBV vaccine series.
- Refer to school policy regarding Hep B Vaccinations.

At Risk Staff for Bloodborne Pathogens Exposure

- Designated athletic coaches
- Designated building custodians
- Teachers/assistants working with students with or without identified disabilities/illnesses
- Staff designated to provide First Aid

Resources for More Information

- Your School Nurse, or School Nurse Supervisor
- Centers for Disease Control and Prevention (http://www.cdc.gov/)