**Soft Tissue Injuries**

**Anatomy of the Skin**

**Function of the Skin**
- Protection
- Sensation
- Temperature control

**Functions of Dressing and Bandaging**
- Control bleeding
- Protect the wound
- Prevent contamination

**Dressing and Bandages**
- Sterile dressings
  - Used to cover wounds
- Bandaging
  - Used to keep dressing in place

**Types of Soft-Tissue Injuries**
- Closed injuries
- Soft-tissue damage beneath the skin
- Open injuries
  - Break in the surface of the skin
- Burns
  - Soft tissue receives more energy than it can absorb
**RICES**
- Rest—keep patient quiet and comfortable as possible.
- Ice slows bleeding.
- Compression over an injury slows bleeding.
- Elevation above the level of the heart reduces swelling.
- Splinting decreases bleeding and reduces pain.

**Contusion**
- Results from blunt force striking the body

**Hematoma**
- Pool of blood that has collected in the body

**Crushing Injury**
- Occurs when a great amount of force is applied to the body for a long period of time

**Abrasions**
- Caused by friction

**Laceration**
- Smooth or jagged cut
Avulsion

- Separation of various layers of the skin

Penetrating Wound

- Results from a sharp pointed object

Gunshot Wounds

- Gunshot wounds have unique characteristics

Crushing Open Wound

- May involve damaged internal organs or broken bones

Emergency Medical Care

- Use proper BSI precautions.
- Administer oxygen if needed.
- Your treatment priority is ABC — including controlling the bleeding.
- Apply a dry, sterile dressing over entire wound
- Maintain pressure and secure dressing with a roller bandage.
- Leave original dressing in place if bleeding continues.
- Apply a second dressing on top of first and secure.
- Splint the extremity.
Chest Wounds

- A penetrating wound to the chest may cause air to enter the chest.

Chest Wound Management

- Keep the patient supine and administer oxygen.
- Seal the wound.

Abdominal Wounds

- An open wound in the abdomen may expose organs.
- An organ protruding through the abdomen is called an evisceration.

Abdominal Wound Management

- Do not touch exposed organs.
- Cover organs with a moist sterile dressing.
- Transport immediately.

Impaled Objects

- Do not attempt to move or remove the object.
- Control bleeding and stabilize object.
- Transport patient to the hospital carefully.

Amputations

- Immobilize a partial amputation with bulky dressings and a splint.
- Wrap a complete amputation in a dry sterile dressing and place in a plastic bag.
- Put the bag in a cool container filled with ice.
- Transport severed part with patient.
Neck Injuries

- An open neck injury can be life threatening.
- Air can get into the veins and cause an air embolism.
- Cover the wound with an occlusive dressing.
- Apply manual pressure.
- Secure a pressure dressing loosely over the neck and firmly through the opposite axilla.

Burns

- Burns account for over 10,000 deaths/year.
- Burns are the most serious and painful injuries.
- Remember to perform a complete assessment on burn patients for other injuries.

What is our number 1 priority when dealing with burn patients?

Our Safety!

Determining Burn Severity

- What is the depth of the burn?
- What is the extent of the burn?
- Are any critical areas involved?
- Are there any preexisting medical conditions or other injuries?
- Is the patient younger than 5 years or older than 55 years of age?
First Degree Burns (Superficial)

Second Degree Burns (Partial Thickness)

Third Degree Burns (Full Thickness)
Third Degree Burns

Rule of Nines

Inhalation Burns
- Carbon monoxide poisoning
- Toxic gas inhalation
- Smoke inhalation
- Heat inhalation
- Steam inhalation
- Asphyxiation

Signs of Inhalation Injuries

Pediatric Needs
- Burns to children are considered more serious than burns to adults.
- Children have more surface area relative to body mass than adults.
- Many burns result from abuse.
- Report all suspect cases of abuse to the authorities.

Scalding
Emergency Care for Burns

- Follow proper BSI precautions.
- Move the patient away from the burning area.
- Immerse the affected area in cool sterile water or saline solution and cover with a cool, wet dressing.
- Give oxygen if the patient has a critical burn.
- Prevent body heat loss.
- Rapidly estimate the burn’s severity.
- Check for traumatic injuries.
- Treat the patient for shock.
- Provide prompt transport.

Chemical Burns

- Occur whenever a toxic substance contacts the body.
- Eyes are particularly vulnerable.
- Fumes can cause burns.
- To prevent exposure, wear appropriate gloves and eye protection.

Care for Chemical Burns

- Remove the chemical from the patient.
- If it is a powder chemical, brush off first.
- Remove all contaminated clothing.
- Flush burned area with large amounts of water for about 15 to 20 minutes.
- Transport to the hospital quickly.

Electrical Burns

- Make sure the power is off before touching the patient.
- There will be two wounds (an entrance and an exit wound) to bandage.
- Treat patient for possible spinal injuries.
- Transport the patient and be prepared to administer CPR and AED.
Electrical Burns

Both 2nd and 3rd Degree Burns
- >20% TBSA Any Age
- >10% TBSA in Patients <10 or >50 years of age
- 3rd Degree Burns Only
- >/= 5% TBSA
- Burns of Face, Hands, Feet, Joints, and Genitals
- Significant Other Injuries

Specialized Burn Types
- Electrical/Lightning
- Chemical
- Inhalation Injury
- Circumferential Burns:
  - Chest
  - Extremities
- Significant Medical Illness
Questions?