



Chemical and Electrical Burn

History

- Type of exposure (heat, gas, chemical)
- Inhalation injury
- Time of Injury
- Past medical history/ Medications
- Other trauma
- Loss of Consciousness
- Tetanus/Immunization status

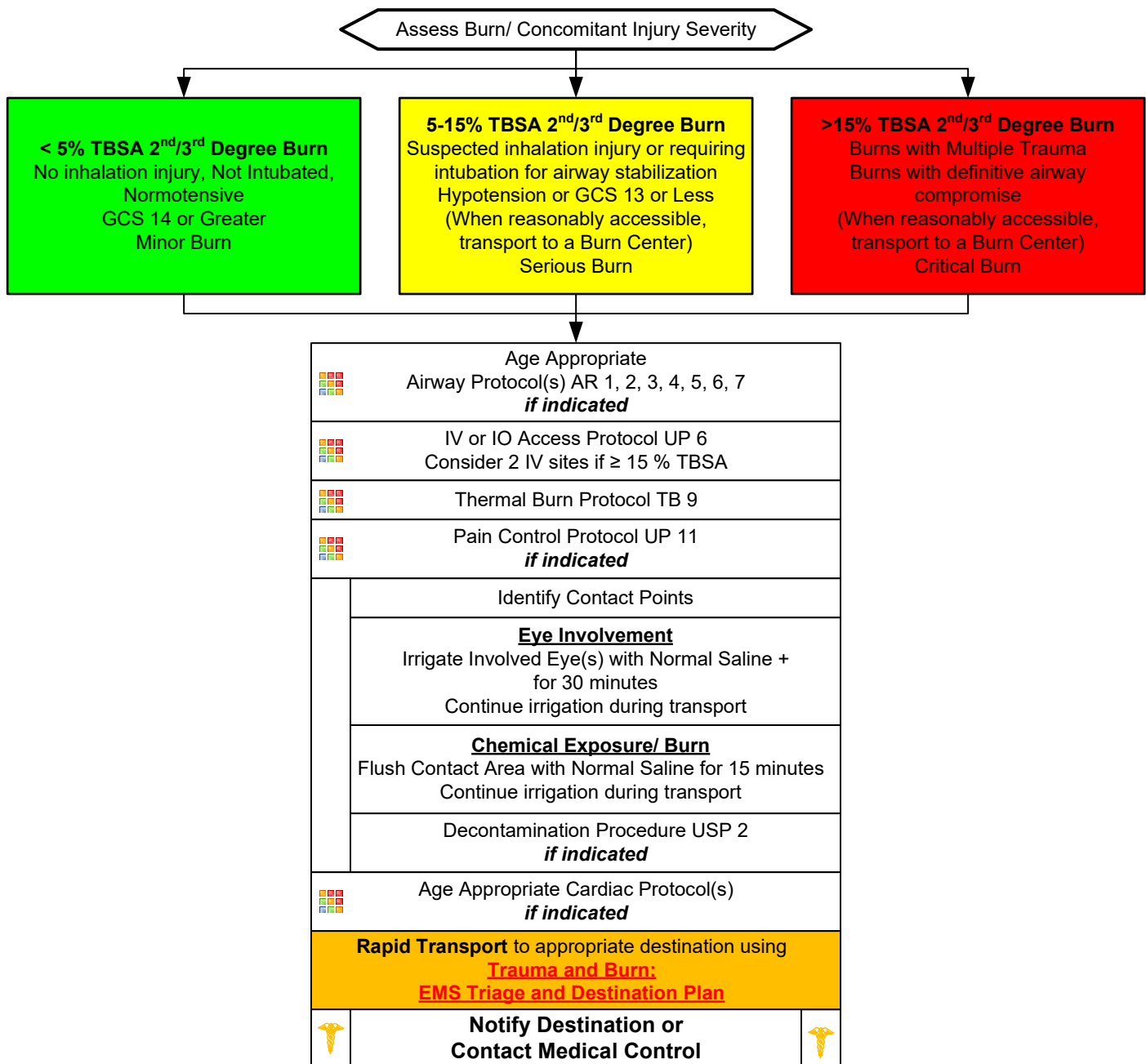
Signs and Symptoms

- Burns, pain, swelling
- Ocular burns/ vision changes
- Loss of consciousness
- Hypotension/ shock
- Compartment syndrome
- Airway compromise/ distress could be indicated by hoarseness/ wheezing
- Electrical burn may be misleading with small contact/ external burn and major internal injury – burn/ trauma center transport is recommended

Differential

- Thermal / Chemical / Electrical Burn Injury
 - Superficial
 - (1st Degree) red – painful (Don't include in TBSA)
 - Partial Thickness
 - (2nd Degree) blistering
 - Full Thickness
 - (3rd Degree) painless/charred or leathery skin
- Radiation injury
- Blast injury

**Assure Chemical Source is NOT Hazardous to Responders.
Assure Electrical Source is NO longer in contact with patient before touching patient.**





Chemical and Electrical Burn

Pearls

- **Recommended Exam: Mental Status, HEENT, Neck, Heart, Lungs, Abdomen, Extremities, Back, and Neuro**
- **Green, Yellow, and Red in burn severity do not apply to the Start/ JumpStart Triage System.**
- **Refer to Rule of Nines.**
- **Transport and Destination:**
 - In general, chemical and electrical burns should be transported to a burn center.**
 - Burn center should be initial destination choice unless EMS system access is limited by time and/ or distance.**
 - When EMS transport to burn center is limited, transport to and stabilization at local center is appropriate.**
- **Chemical Burns:**
 - Refer to Decontamination Procedure.
 - With dry powders/ substances, gently brush or wipe off prior to irrigation. Do not aerosolize by brushing too vigorously.
 - Normal Saline or Sterile Water is preferred, however if not available, do not delay irrigation and use tap water. Other water sources may be used based on availability.
 - Flush the area as soon as possible with the cleanest, most readily available water or saline solution and use copious amounts of fluids.
 - Flush contact area for a minimum of 15 minutes and continue until arrival at receiving facility.
 - Hydrofluoric acid burns:**
 - Monitor ECG for peaked T waves, which can be sign of hypocalcemia.
 - Eye involvement:**
 - Irrigation is recommended for a minimum of 30 minutes and continue until arrival at receiving facility.
- **Electrical Burns:**
 - Remember the extent of the obvious external burn from an electrical source does not always reflect more extensive internal damage. Small external injury may have large internal injury.**
 - Do not refer to wounds as an entry and exit wound.**
 - DO NOT contact patient until you are certain the source of the electrical shock is disconnected.**
 - Attempt to locate contact points (generally there will be two or more.) A point where the patient contacted the source and a point(s) where the patient is grounded.
 - Sites will generally be full thickness (3rd).
 - Cardiac Monitor: Anticipate ventricular or atrial irregularity including VT, VF, atrial fibrillation, and/ or heart blocks.
 - Attempt to identify the nature of the electrical source (AC or DC), the amount of voltage, and the amperage the patient may have been exposed to during the electrical shock.
 - Lightning strike:**
 - Lightning strike victims are amenable to airway, breathing, cardiac compressions, as well as early defibrillation.
 - Use concept of reverse triage with multiple casualties. Resuscitate lightning strikes as the priority.**
 - Lightning strike victims found alive do not often deteriorate quickly.