Treatment for the Walking Wounded

(On scene, in a community hospital or medical office setting, and at home)

Treatment for minor burn injuries should target three goals:

- Minimize extent of the burn
- Clean the wound
- Address the patient's pain

Initial Treatment

Certain types of burn need specific immediate treatment:

- **Scalds**: remove clothing immediately to reduce burn injury
- **Chemical burns**: assume all clothing is contaminated, remove all clothing using protective gear (gloves, goggles, etc.)
- **All burns:** remove all items (clothing, belts, jewelry, diapers, or accessories that could cause a tourniquet effect with swelling
- Patients with larger TBSA burns may have difficulty regulating their temperature, so examinations should be done in a warm environment if possible.

Active Cooling

- Cooling of the burn surface with running tap water (~45°F to 75°F) for at least 20 minutes can reduce burn depth, improve healing time, and decrease grafting requirements.
- Ideally, cooling should begin within 30 minutes of the burn, but positive results can be achieved up to 3 hours after initial burn injury.
- **Do not use wet dressings** to cool burn wounds.
- **Do not use ice** to cool burn wounds, as its constrictive effects can risk of further tissue injury.
- Foreign substances, chemicals, and other contaminants - as well as loose necrotic skin - should be removed with gentle irrigation to prevent infection.
- Irrigation with **tap water does not increase infection** rates.

Cleaning

- Gently wash the burn area with clean water. Some of the burned skin might come off with washing. Pat the area dry with a clean cloth or gauze.
- Use cool water to gently wash the burn. Try to keep the burn area under water for at least 5 minutes and up to 30 minutes. Gently pat the burn dry with a clean towel.

Dressings

First Degree Burns (superficial) do not require dressings, but covering burns may reduce pain.

- Aloe vera cream can help reduce pain and inflammation and is an effective moisturizing agent.
- Nonsteroidal anti-inflammatory drugs may assist with pain control.

Second Degree Burns (partial thickness) require a moist, protected environment to promote healing while preventing the wound from drying out, reducing the progression of the burn, and helping prevent secondary infection. There are two methods for dressing partial-thickness burns. The selection of method will be based upon available dressings.

- **Method 1: Silvadene and gauze**
  - Apply a topical antimicrobial agent such as Silvadene with a simple dressing (gauze with burn net to keep it in place works well)
  - Change dressing every 12 to 24 hours to allow for monitoring of burn progression.

- **Method 2: Mepilex AG**
  - Apply advanced silver-impregnated dressings (such as Mepilex AG) to the wound and keep in place for up to 14 days, depending on manufacturer specifications.
  - These dressings are inherently antimicrobial, designed to keep the wound moist, and absorb fluids.
  - They only require one or two dressing changes until re-epithelialization, which reduces the need for painful, at-home dressing changes.