SCR Key OEC Concepts

Central Division

South Central Region

Burn Treatment

The following excerpts come from pages 399-407 and 422-427 of the 6th edition of the Outdoor Emergency Care manual.

A burn is a unique type of soft-tissue injury that is caused by exposure to excessive ultraviolet light (sunburn), thermal heat, heat resulting from friction, chemicals, electricity, lightning, or nuclear radiation. Treatment varies depending on the severity and source of the burn. Refer to the OEC manual for more specifics.

Although most burns are minor, severe burns can develop numerous complications, including shock, sepsis, repiratory distress, and cardiac arrest. Extensive burns require transport to a definitive-care facility.

Key Points:

- **Protect Yourself** – Protect yourself from the source of heat, chemicals, and electricity. Wear protective gear.
- **Stop the Burn** – Stop the burning process. Remove clothing and jewelry near the affected area.
- **ABCD Still Applies** – Treatment of burn patients, as for any patients, starts with correcting any ABCD-related problems.
- **Dressing** – Once a larger burn is sufficiently cooled, cover with dry, sterile dressings. Burns smaller than 5% TBSA may benefit from application of a clean, wet, and cool dressing.
- **Potential Airway Injury** – Always assess patients with hoarseness for potential respiratory compromise.
- **Pediatric Considerations** – The burn injury may not be accidental. Be on alert for possible child abuse.
- **Chemical Burn Alert** – Caution! Do not apply neutralizing agent (including water) because this may cause a thermal reaction, worsening the injury.
- **Entrance and Exit Wounds** – Electrical injury patients may appear better off than they are because burns are beneath the surface. Take vitals frequently and prepare for resuscitation (CPR and AED).
- **Extensive Burns** – Patients with extensive burns lose the ability to thermoregulate. Wrap them in warm dry sheets.

According to the American Burn Association, patients who meet any of the following criteria are considered critical and should be taken to a designated burn center:

- A child under 10 years of age or adults over 65
- Involving more than one body part (e.g. torso and leg)
- Involving head, neck, hands, feet, genitals, or major joints
- Inhalation injury or burns
- Associated with difficulty breathing or hoarseness
- Chemical or electrical burns (including lightning)
- Partial-thickness (2nd degree) burn greater than 10% of TBSA
- Any full-thickness (3rd or 4th degree) burn
- Associated with trauma

- A patient who has special social, emotional, or physical needs
- Exposure to radioactive materials

Classification of Burns: Severity

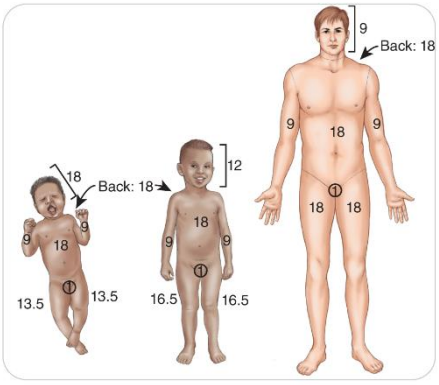
Table 19-2 Burn Classification

Burn	Appearance of Skin	Skin Layers Affected	Pain
Superficial (first-degree burn)	Red, no blisters	Epidermis	Significant
Partial thickness (second-degree burn)	Blisters, wet appearance	Epidermis and dermis	Intense
Full thickness (third-degree burn)	Charred or white, dry	Epidermis, dermis, and underlying soft tissues	None
Full thickness (fourth-degree burn)	Black	Muscle and bone	None

Classification of Burns: Calculation of Burn Area - Percent of Total Body Surface Area (TBSA)

- Calculate the total area of skin for partial-thickness or full-thickness burns. Superficial burns should not be included in this calculation.

- Utilize the "Rule of Nines".
    - The surface area of the body is divided into 11 sections.
    - Each represents 9% of the total body surface area (TBSA).



For further information, refer to chapter 19 of the 6th edition of the OEC manual.

Since its origins in 1939 as "Ski Safety and First Aid", today's Outdoor Emergency Care has come a long way. The OEC curricula has continually evolved as new medical information becomes available. OEC is written following the principle of *evidence-based medicine*, and thus the changes that come with each new edition. The source for the content in this bulletin is the 6th edition of Outdoor Emergency Care manual.