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AN EVIDENCE-BASED APPROACH TO PEDIATRIC EMERGENCY MEDICINE ▲ EBMEDICINE.NET

EVIDENCE-BASED CLINICAL RECOMMENDATIONS FOR PRACTICE

An Evidence-Based Approach To Pediatric Burns

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An evidence-based review of the evaluation and management of burn injuries in the emergency department is presented in this issue of Pediatric Emergency Medicine Practice. Here, we outline key recommendations for practice based on valid research evidence within the journal issue. For a more detailed and systematic look at the latest evidence on pediatric burns as well as other considerations such as diagnostic studies, clinical pathways, and special circumstances not noted here, see the full text article.

Key Points	References*	Comments
Burn injuries are common and are the third leading cause of unintentional injuries in children age 0 to 18 years old, only behind motor vehicle traffic and drowning.	1-4	Scald injuries are the most common etiology in children < 4 years of age. Burn injuries from open flames are a major source of injury in children > 4 years of age. Fire injuries account for the majority of burn injuries in children 5 to 19 years of age.
Burns are classified into superficial, superficial partial-thickness, deep partial-thickness, and full-thickness based on the depth of the injury.	26	The size is measured in percent total body surface area (TBSA) affected by partial-thickness or full-thickness injury using a variety of methods including the Lund and Browder chart, the rule of nines, or the 1% palm rule.
Burns greater than 20% TBSA can have systemic effects that require aggressive fluid resuscitation.	47,53,54	There are several resuscitation formulas that can be used to initiate infusion. Lactated Ringer's is the most utilized. Urine output is the most effective measure of adequate fluid resuscitation.
Evaluation of the burned child requires identification of life-threatening conditions and associated injuries as well as evaluation of the burn itself.		Blast injuries should raise concern of associated trauma, crush-like injury, or corneal abrasions. Care should be taken to correlate the patient's injuries to the historical account of the incident.
Oligoanalgesia is common among pediatric patients.	80-82	A burned child should be assessed for pain and treated adequately. Traditionally, morphine sulfate is most often used but other medications may be just as effective.
Burns should be cleansed with a mild soap and water, debrided, and treated with a topical antimicrobial agent or a medicated or occlusive dressing. Blisters should remain intact.	86-90	Blister management continues to be a controversial aspect of partial thickness wound care. Experts have begun to favor leaving blisters intact unless they are large or painful or if rupture is imminent.
A high index of suspicion for abuse should be kept in children with burn injuries.	137,138	Approximately 6% of burned children under the age of 12 years old are victims of abuse. If there is any concern of an inflicted injury the appropriate authorities should be notified.

* See reverse side for reference citations.

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These references are excerpted from the original manuscript. For additional references and information on this topic, see the full text article at ebmedicine.net.

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