

Severe Burns

First-hour management of major burns: stop the burning, protect the airway, calculate area with the rule of nines, start Parkland fluids with available crystalloid, and prepare early referral. Adapt volumes to local policy.

1. IMMEDIATE

- ☐ **Stop the burning: remove from source, remove hot or burnt clothing and jewellery**
- ☐ **Cool the burn with running water for 20 min (worthwhile within 3 h of injury)**
Cool the burn, warm the patient — avoid hypothermia, especially in children
- ☐ **Do NOT apply ice, toothpaste, egg or traditional remedies**
- ☐ **High-flow oxygen for any flame or enclosed-space burn**

2. AIRWAY CHECK

- ☐ **Look for facial burns, singed nasal hair, soot in the mouth, hoarse voice**
- ☐ **Stridor or voice change = impending obstruction — most experienced person manages the airway, refer immediately**
- ☐ **Sit the patient up; reassess the airway every 15 min — swelling worsens for hours**
- ☐ **Suspect carbon monoxide after enclosed-space fires; SpO2 may read falsely normal**

3. ASSESS AREA AND DEPTH

- ☐ **Rule of nines (adult): head 9%, each arm 9%, chest 9%, abdomen 9%, upper back 9%, lower back 9%, each leg 18%, perineum 1%**
Child: head 18%, each leg 14%. The patient's palm with fingers is about 1% for patchy burns
- ☐ **Count only partial and full thickness areas (blistered, raw or leathery) — not simple redness**
- ☐ **Full thickness: white or charred, leathery, painless to pinprick**

4. FLUIDS (PARKLAND)

- ☐ **IV fluid resuscitation if burn over 20% TBSA in adults, over 10% in children**
- ☐ **Parkland: 4 mL x weight (kg) x %TBSA of Ringer's lactate (or 0.9% saline) over 24 h**
Give HALF in the first 8 h counted from the time of BURN, half over the next 16 h
- ☐ **Two large IV cannulas, through unburnt skin if possible**
- ☐ **Urinary catheter; target urine 0.5 mL/kg/h (children 1 mL/kg/h)**
Adjust the rate up or down by urine output — the formula is only a starting point
- ☐ **Analgesia: IV morphine titrated; keep the patient warm**

5. WOUND CARE AND REFERRAL

- ☐ **Cover burns with clean dry cloth or cling film — no wet dressings on large burns**
- ☐ **Tetanus toxoid 0.5 mL IM**
- ☐ **Refer: over 10% TBSA, face/hands/perineum/joints, full thickness, inhalation, electrical, circumferential burns**
- ☐ **Send the burn chart, fluid totals and urine record with the patient**