




Initial Management of Severe Burns

For burn injuries in adults >20% TBSA / children >10% TBSA or meeting other ANZBA referral criteria. Consider early consultation with retrieval and burn services

Specific points to note in the primary survey with respect to burn injury:

AIRWAY		<ul style="list-style-type: none"> Assess for history of burn in enclosed space, signs of upper airway oedema, sooty sputum, facial burns, respiratory distress (dyspnoea, stridor, wheeze, hoarse voice). If any above present, airway at risk. Consider need for intubation; secure airway as required. Maintain spinal precautions as required especially with explosion or electrical burns.
BREATHING		<ul style="list-style-type: none"> Assess breathing and support as required. Assess adequacy of breathing if circumferential burn on chest wall - consider escharotomy. Administer humidified 100% FiO2. Establish baseline ABGs and SaO2 (goal: >95%).
CIRCULATION		<ul style="list-style-type: none"> Assess circulation: colour, refill, HR, BP. Insert 2 large bore peripheral IV cannulae. If unable consider central or intraosseous access

Specific points to note in the secondary survey and initial management of burn injury:

FLUID MANAGEMENT	<ul style="list-style-type: none"> Modified Parkland formula: 3ml Hartmanns solution x kg body weight x % TBSA calculated from time of injury <ul style="list-style-type: none"> ½ given in the first 8 hrs ½ given in the following 16 hrs Paediatric maintenance fluids: 5% Dextrose in 0.9% Sodium Chloride <ul style="list-style-type: none"> Up to 10kgs: 4mls/kg/hr 10-20kgs: 2mls/kg/hr + 40mls/hr >30kgs: 1ml/kg/hr + 60mls/hr Insert urinary catheter. Titrate fluid resuscitation to urine output goals: Adults 0.5- 1.0 ml/kg/hr; Paediatrics <30kgs: 1ml/kg/hr Maintain accurate fluid balance chart
ANALGESIA	<ul style="list-style-type: none"> Assess pain score to determine analgesic requirements Adults: IV Morphine 2-5mg; repeat every 5 minute Paediatrics: IV Morphine 0.1mg/kg; repeat every 5 minutes. Maximum 0.3mg/kg Re-assess pain score and adjust analgesia accordingly. Consider Morphine infusion
WOUND MANAGEMENT	<ul style="list-style-type: none"> Assess: Extent and depth of burn injury, and for circumferential injury First aid: Cool running H2O for 20 mins Clean wound: Normal saline or 0.1% Chlorhexidine. Remove loose dermis or blisters >5mm Cover: Cling wrap longitudinally if immediate transfer (<8hrs). Paraffin gauze or silver dressing if transfer delayed (discuss with local burn service)
CIRCUMFERENTIAL BURNS	<ul style="list-style-type: none"> Elevate limbs where circumferential burns present. Assess perfusion distal to burn: capillary refill, pulse, warmth, colour. Liaise with burn service if escharotomy required (cool to touch, weak or no pulse distally).
OTHER	<ul style="list-style-type: none"> Cover the patient to prevent heat loss. Insert nasogastric tube. Administer tetanus immunoglobulin if required. Investigative tests as indicated.

ANZBA referral criteria

Size	>10 % TBSA (adult) > 5 % TBSA (child) > 5 % TBSA full thickness (any age)
Person	Pre-existing illness Pregnancy Extremes of age
Area	Face / hands / feet / perineum / major joints Circumferential (limb or chest) Lungs (inhalational)
Mechanism	Chemical / electrical Major Trauma Non-accidental injury (including suspected)

Transfer checklist

<ul style="list-style-type: none"> ✓ Airway secure ✓ O₂ insitu ✓ IV access established & secure ✓ Fluid resuscitation commenced ✓ Urinary catheter inserted ✓ Pain controlled ✓ Wounds are covered 	<ul style="list-style-type: none"> ✓ Retrieval Services aware ✓ Patient is warm ✓ Burnt area elevated as appropriate ✓ Tetanus toxoid administered if indicated ✓ Nasogastric insitu as necessary ✓ Next of kin aware ✓ History & relevant documentation copied
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For further information contact your local burn service or visit ANZBA website www.anzba.org.au