Burn First Aid

Factsheet

ANZBA
Australian & New Zealand Burn Association

- Cooling is critical immediately after a burn injury however only approximately 70% of children and 60% of adults receive good burn first aid*
- Applying cool running water for 20 minutes to the burn up to three hours following burn injury reduces burn size, and depth, and is good for pain management

*Data obtained from Burns Registry of Australia and New Zealand (BRANZ) 2020

If on fire
- ✓ Stop, drop to ground, cover face & roll so fire is smothered.
- ✓ Smother flames with a fire blanket
- ✓ Move away from heat source

Remove clothing and jewellery (including nappies)
- ✓ Clothing can hold heat on burnt area.
- ✓ If swelling occurs jewellery can stop blood flow to burnt area.

Apply cool running water
- ✓ For at least 20 minutes
- ✓ If running water not available, spray water or wet 2 cloths and alternate them onto burn every 30 seconds (re-wet if needed to keep cool)
- ✓ If no water is available a hydrogel burn first aid dressing can be used until water is available (if within 3 hours). Caution when using on large % TBSA due to high risk of hypothermia

After first aid cover burn with clean cloth and keep patient warm

Give pain relief if required

For first aid do not use alternatives like
- × Ice
- × Butter
- × Toothpaste
- × Creams
- × Bandage

These do not cool the burn

Seek medical attention
- ✓ For any burn bigger than 3cm, or with blisters
- ✓ If any concerns

For more information go to www.anzba.org.au

Initial Management of Minor Burns

ANZBA
Australian & New Zealand Burn Association
Care • Prevention • Research • Education

Perform Primary and Secondary Surveys

Obtain clear history of burn injury

- Mechanism of injury, how and when burnt
- Any first aid (what, how long?) Clothes removed?
- Continue cooling if within 3 hours of burn

Give appropriate pain relief

Assess % total body surface area (TBSA) using Rule of Nines

Contact burn service if meets referral criteria

Clean wound bed

- With 0.1% Aqueous Chlorhexidine or Normal saline,
- Remove all foreign, loose and non-viable skin/tissue
- Debride blisters if >5cm or over joints
- Shave hair in and around wound to 2cm radius

First aid for burns

- STOP, DROP, COVER face and ROLL if on fire
- Apply 20 minutes cool running water
- Keep rest of body warm to prevent hypo-thermia
- Remove clothing and jewellery

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)

Depth	Epidermal burn (Erythema)	Superficial dermal burn	Mid dermal burn	Deep dermal burn	Full thickness burn
					
Assessment	Damage to epider-mis only. Skin intact, no blis-ters present Erythema. Red Brisk capillary refill	Damage to upper layer of dermis Pink. Blisters present or absent Brisk capillary refill (under blister)	Damage into mid dermis Dark pink to red Sluggish capillary refill	Burns extend into deeper layers of dermis but not through entire dermis Blotchy red/white Very sluggish/absent capillary refill	Destruction of entire dermis, sometimes with underlying tissue White, waxy, brown, black or yellow Nil capillary refill
Healing	Heal spontaneously within 3-7 days	Should heal within 7- 10 days with minimal dress-ing requirements	Should heal within 14 days. Deeper areas may need surgical intervention and referral	Generally needs surgical intervention. Refer to specialist unit.	Generally needs surgi-cal intervention. Refer to specialist unit.
Initial dressing	Simple moisturisers	Paraffin gauze Silicone dressings Silver products if contaminated	Silver products Antimicrobial Silicone dressings	Silver products	Silver products
Secondary dressing	Not required	Dermal burns produced a significant amount of exudate in the first 72 hours. Absorbent secondary dressings such as gauze or foam should be considered to manage excess exudate			
Fixation/ retention	Not required	Tubular or crepe bandage Tape			
Follow up	Should not be required	In 24 – 48 hours by GP or appropriate service Refer early to a surgeon if excision and skin grafting should be considered for mid dermal, deep dermal and full thickness burns. Refer appropriately if wound becomes infected or is slow to heal (Unhealed >14 days).			

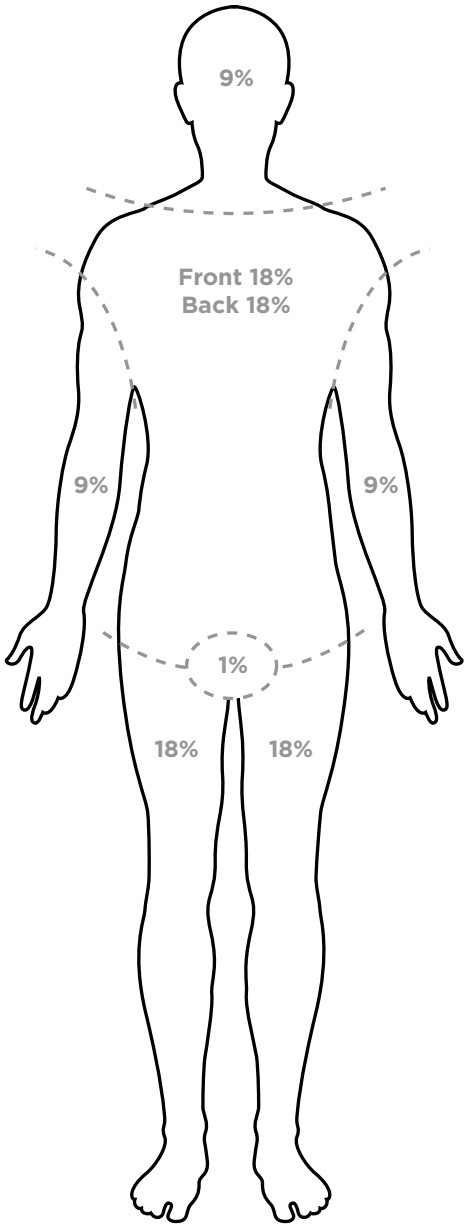
For further information contact your local burn service or visit ANZBA website
www.anzba.org.au

Burns Size Assessment - Rule of Nines

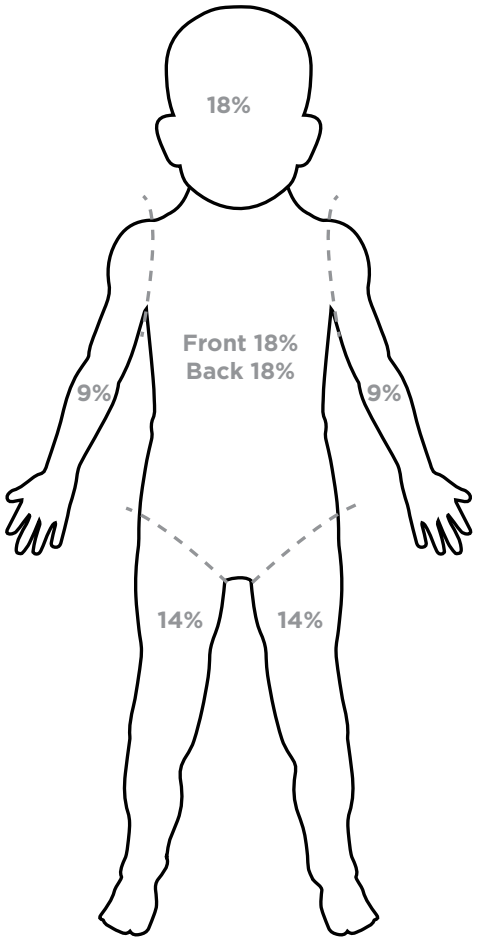
Burn size assessment

- It is important to accurately assess the surface area involved and possible depth of the burn. The most experienced clinician, in burns, available should assess the patient. Surface area should be charted on an appropriate chart.
- Record an accurate weight to assist calculation of pain relief medication (especially important in children), and fluid requirements if necessary.

Rule of Nines



Adult



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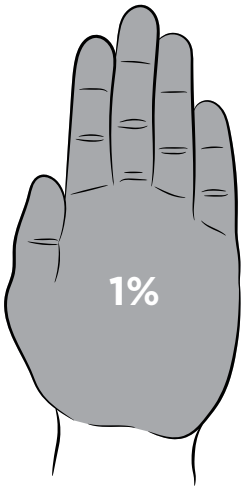


Palmar, palm + fingers of patient = 1%

For every year of life take 1% from the head and add ½% to each leg.
Use adult Rule of Nines from 10yrs.

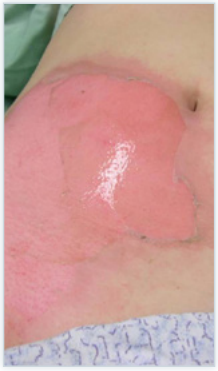
Recognising burn depths chart

Epidermal burn (erythema)

- damage to epidermis only; skin intact, no blisters present
- erythema; red
- brisk capillary refill
- heals spontaneously within 3–7 days with moisturiser or protective dressing.

Superficial dermal burn

- damage to upper layer of dermis
- pink; blisters present or absent
- brisk capillary refill (under blister)
- should heal within 7–10 days with minimal dressing requirements.



Mid dermal burn

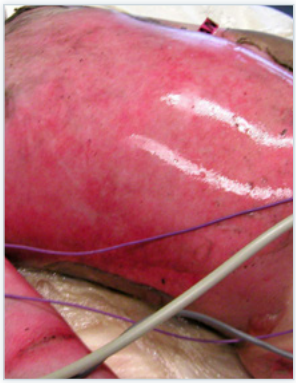
- damage into mid dermis
- dark pink
- sluggish capillary refill
- should heal within 14 days
- deeper areas may need surgical intervention and referral.

Deep dermal burn

- burn extends into deeper layers of dermis, but not through entire dermis
- blotchy red/white
- sluggish to absent capillary refill
- generally needs surgical intervention
- refer to specialist unit.

Full thickness burn

- destruction of entire dermis; sometimes underlying tissue involved
- white, waxy, cherry red, brown, black
- no capillary refill
- surgical intervention and long-term scar management required
- refer to specialist unit.



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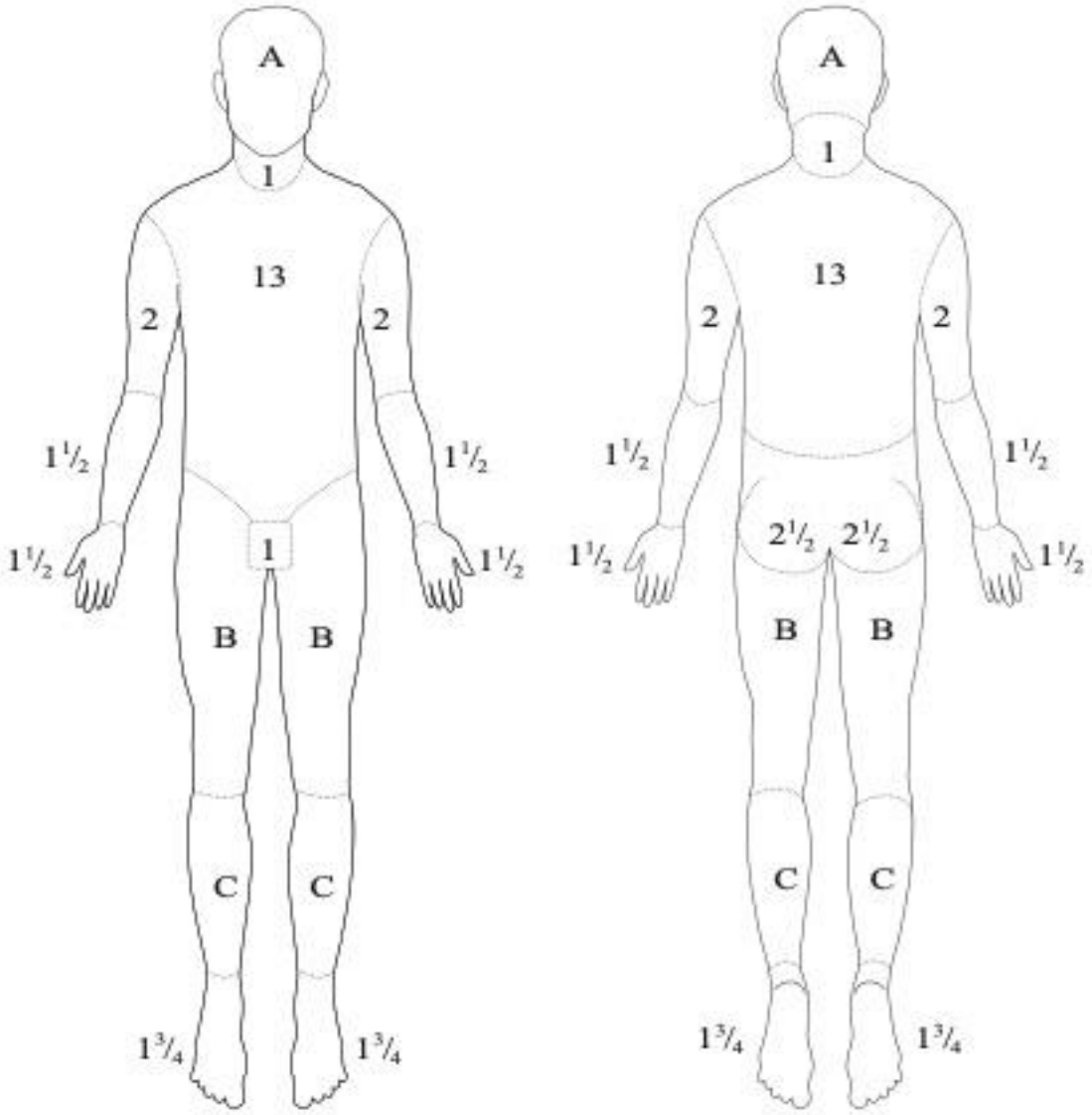
Therapeutic Guidelines

Lund and Browder chart for calculating the percentage of total body surface area burnt (Fig 14.19)



Region	Partial thickness (%) [NB1]	Full thickness (%)
head		
neck		
anterior trunk		
posterior trunk		
right arm		
left arm		
buttocks		
genitalia		
right leg		
left leg		
Total burn		
NB1: Do not include erythema		

Area	Age 0	1	5	10	15	Adult
A = half of head	9½	8½	6½	5½	4½	3½
B = half of one thigh	2¾	3¼	4	4½	4½	4¾
C = half of one lower leg	2½	2½	2¾	3	3¼	3½

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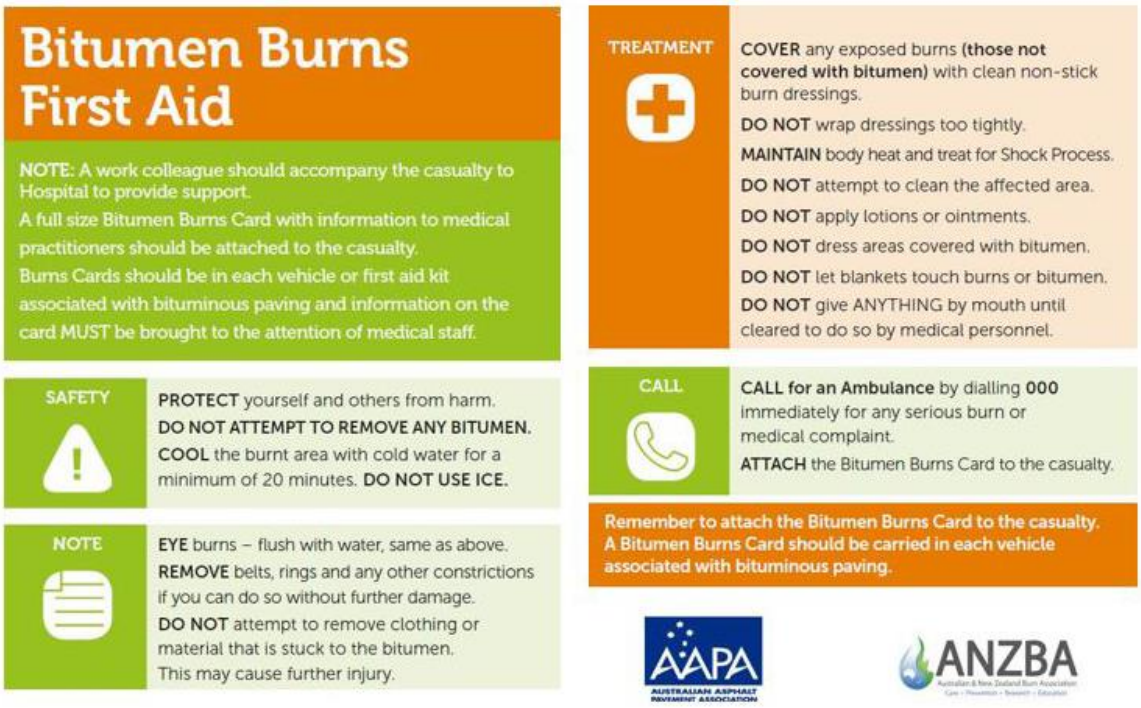
AAPA Bitumen Burn first aid card



ANZBA Referral Criteria

- Burns greater than 10% Total Body Surface Area (TBSA)
- Burns greater than 5% TBSA in children
- Full Thickness burns greater than 5% TBSA
- Burns of Special Areas – Face, Hands, Feet, Genitalia, Perineum, Major Joints and circumferential limb or chest burns
- Burns with inhalation injury
- Electrical burns
- Chemical burns
- Burns with pre-existing illness
- Burns associated with major trauma
- Burns at the extremes of age – young children and the elderly.
- Burn injury in pregnant women
- Non-accidental burns