**First Aid**

First aid can be effective for up to **three hours post burn**. First aid can reduce the size and ultimate depth of burn injury.

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**Burns Service of Western Australia**

**Initial assessment and management of the adult and paediatric burn**

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**Referral criteria to State Adult Burn Unit at FSH**

- Burns greater than 10% total body surface area
- Circumferential partial thickness or full thickness burns
- Inhalational burns
- Electrical burns
- Chemical burns
- Special area burns i.e. face, neck, hands, feet, perineum, joint or inhalation burns
- Burns with concurrent injury or co-morbidities

**Referral criteria to pediatric Burns Unit at PMH**

- Burns greater than 1% total body surface area
- Circumferential partial thickness
- Full thickness burns
- Inhalational burns
- Electrical burns
- Chemical burns
- Special area burns i.e. face, neck, hands, feet, perineum, joint or inhalation burns
- Burns with concurrent injury or co-morbidities
- Suspected non accidental injury
- Infected burns
- Paralyses

**Burn first aid** - give immediately after burn injury or within the first 3 hours of burns. Conduct routine ABCs of first aid initially.

**Primary survey**

- Airway: Check for any patency. There may be head damage to the respiratory tract with burns to the face, neck or upper torso. Check if the burn took place in a confined space, or if there was an explosion.
- Breathing: Is the patient in respiratory distress, intubation is considered early. Check airway blood gas when possible. Hypertension should be commenced as soon as possible. Palpate the patient in the left chest position if not contraindicated i.e. suspected cardiac or other spinal injury.
- Circulation: Check capillary refill times (should be < 2 seconds). Areas of circumferential burns may cause constriction to circulation and underestimating burn size may progress to compartment syndrome.

**Secondary survey**

- Check if the patient is taking any regular medications or if the patient/ family/ GP/ transferring
- History of how, when and where the injury occurred
- Duration of the burning process
- Burning agent
- Cause of the burn i.e. flame, scald, contact with hot surface, chemical, electricity or friction
- Circumferential burns - time how long the person was in contact with the burning agent
- Time of the burn - the 3-hour burn resuscitation period is commenced from the time of the burn
- How did the burn happen - did the burn occur in a confined space? Was there an explosion? If so there is more risk of inhalation of heat, smoke or poisonous gases.

**Burn depth**

- **Superficial** involves the epidermis - pink, red, paresthesia
- **Partial thickness** - involves the epidermis and portion of the dermis - blistered, mottled pink, cool
- **Full thickness** - may extend through the skin and underlying structures - may be cold to touch, typically white, sloughed or black, painful, refractory, may have from pre-existing blood vessels, no hair present or hair falls out when rubbed.

**Fluid resuscitation**

**Fluid Resuscitation** - For adults with burns >15%TBSA and children >10%TBSA

Insert two large bore cannulae and commence 2L of isotonic crystalloid over 2 hours. Insert nasogastric tube and commence gradual enteral feeding over 24 hours. Document fluid administration and urinary output and ensure all relevant documentation accompanies the patient for transfer to the Burn Unit.

**Burn wound management**

**Burn wound management** aims to prevent infection, promote healing, abscess-ecdese, maintain function and ultimately optimize your outcome for each patient.

**Reassess**

- Observe for signs of infection:
  - pain, redness, purulent exudate, odour, swelling, heat, conversion to deeper wound or patient febrile.
  - Pus, necrosis, sloughing, vitamin, general malaise
- Shock can develop rapidly if untreated
- High mortality rate
- Refer to PMH or FSH if any of the above signs or if “minor” burn is not healed after seven days.

**Urinary**

- Fluid therapy regime is titrated to the amount of urine measured hourly to maintain the urine output at 0.5 mL/kg body weight per hour with a specific gravity >1.025. 1 mL/kg body weight per hour for electrical burns to flush out pigmentation. People who have an irritation burn are dehydrated or intoxicated may also have greater fluid resuscitation requirements.

**Wound management**

- Keep the patient at the same time, heat the resuscitation room if necessary-keep the patient’s hands warm at all times.
- Antibiotics are not always necessary. Antimicrobial dressings (Acticoat) can be used but not alone. This retains heat and may increase the risk of infection.

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**For further information or advice contact:** pmhburnstelehealth@health.wa.gov.au

For more information visit: [www.woundswest.com](http://www.woundswest.com), PMH Intranet, FSH Intranet, Fiona Wood Foundation website address - [www.fionawoodfoundation.com](http://www.fionawoodfoundation.com).