

# BURNS

## Learners Guide

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### PRE-READING FOR LEARNERS

Minor burns <https://dontforgetthebubbles.com/minor-burns/>

Airway burns

<https://dontforgetthebubbles.com/picu-qa-airway-injuries-due-burns/>

LITFL management - <https://litfl.com/paediatic-burns/>

Childrens Burns Trust

<https://www.cbtrust.org.uk/learning-zone/parents-carers-and-professionals/>

This is an excellent talk from DFTB18

[https://dontforgetthebubbles.com/cutting\\_edge\\_burns\\_management\\_fiona\\_wood\\_dftb18/](https://dontforgetthebubbles.com/cutting_edge_burns_management_fiona_wood_dftb18/)

PEM playbook major burns podcast. (It also has some really nice resources on the notes page) <https://pemplaybook.org/podcast/major-burns-in-children/>

Good recent review article - [“Early management of paediatric burn injuries”](#)  
by Gill and Falder

## CASE SCENARIO 1 (15 MINS)

30 minutes ago, 8-year-old Billy fell from a first-floor window, trying to escape a house fire.

Paramedics were on scene within 10 minutes. They parcelled him up and put him in the back of the ambulance. His oxygen saturations were 95% in air, respiratory rate 30, heart rate 150 and systolic BP 100. They gave him high flow oxygen via a non-rebreathe mask. He was in a lot of pain, so they covered his burns with cling film, gave some morphine and set off for your Emergency Department.

**You lead the burns team and your SHO tells you that on their primary survey, they note a contusion over the child's chest and abdomen.**

**Billy remains tachycardic despite fluid resuscitation and analgesia.**

**How would you proceed?**

## CASE SCENARIO 2 (15 MINS)

So you're on shift in Paeds ED on Thursday evening at 6pm, you're due to finish at 7pm and just starting to think about that glass of wine, the sofa and the next episode of your current Netflix box set.

The sister from resus comes through to let you know about an imminent blue call of a 13 year old girl involved in a chemical attack with suspected acid burns to her face and eyes and upper chest arriving in 10 minutes.

**How would you prepare the team?**

**What can you do to manage the burn?**

[This DFTB post](#) on chemical burns is great for a next level discussion about pH, Diphoterine, and safeguarding.

## CASE SCENARIO 3 (15 MINS)

A 4 year old girl presents with right hand burns after inserting a kitchen knife into an electrical socket at home.

**How would you manage this case differently compared to a simple thermal burn?**

This [PEM Playbook](#) has a great set of questions to ask in the history specific to electrical exposure.

## QUIZ QUESTIONS (10 MINS)

A 1 year old boy is brought to Paediatric ED by his father at 0100 on a Saturday nightshift. He reports the bath run at 7pm was too warm and after going to bed his son was unsettled. He weighs 9.5kg.



Image from [this Paediatric Trauma Society talk](#)

## Question 1

You see evidence of skin loss over the front and back of the arm at the level seen here. How would you size this burn?

- A - 4.5%
- B - 9%
- C - 18%
- D - 40%

## Question 2

Does this child require fluid management? If so, how much?

- A - Oral fluid challenge 5ml every 5min
- B - 20ml/kg bolus (so 300ml) and assess response
- C - No fluid resuscitation needed
- D -  $3 \text{ or } 4 \text{ ml} \times \text{burn surface area (\%)} \times \text{kg}$ . 50% given in first eight hours; 50% given in next 16 hours.

### Question 3

**Where would you refer this child for management of the burn?**

- A - Paediatric team on call
- B - Burns Service
- C - General Surgical Theatres for urgent debridement

### Question 4

**Who else would you involve in the management of this case?**

- A - Paediatric safeguarding team
- B - Paediatric and/ or ED Consultant
- C - Clinical Photography
- D - All of the above

## Top 5 take home tips

- 1** Try to remember that burns are actually really easy to manage - the diagnosis is made for you, most cases are simple, and any complex case needs advice or face to face management from a specialist.
- 2** Ask for help early if you are not feeling comfortable managing a burn.
- 3** Download and practice using the Mersey Burns or NSW trauma app for sizing and fluid calculations now to ensure it is familiar in an emergency.
- 4** Remember other injuries and do not be afraid to 'trauma call' a burn patient - the mechanism of injury is your clue to hidden pathology.
- 5** Encourage burns simulation teaching in your ED- if this isn't happening, suggest it!

## REFERENCES

**Child protection evidence systematic review on burns - RCPCH July 2017**  
**World Health Organisation burns factsheet**  
**Victoria Adult Burns Service Management Guide**  
**London and South east of England Burn Network**

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