

Chart for Estimating Severity of Burn and Fluid Replacement in Adults and Children

Patient label

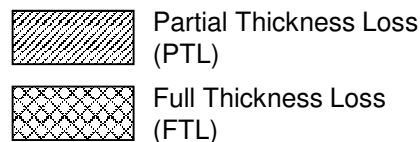
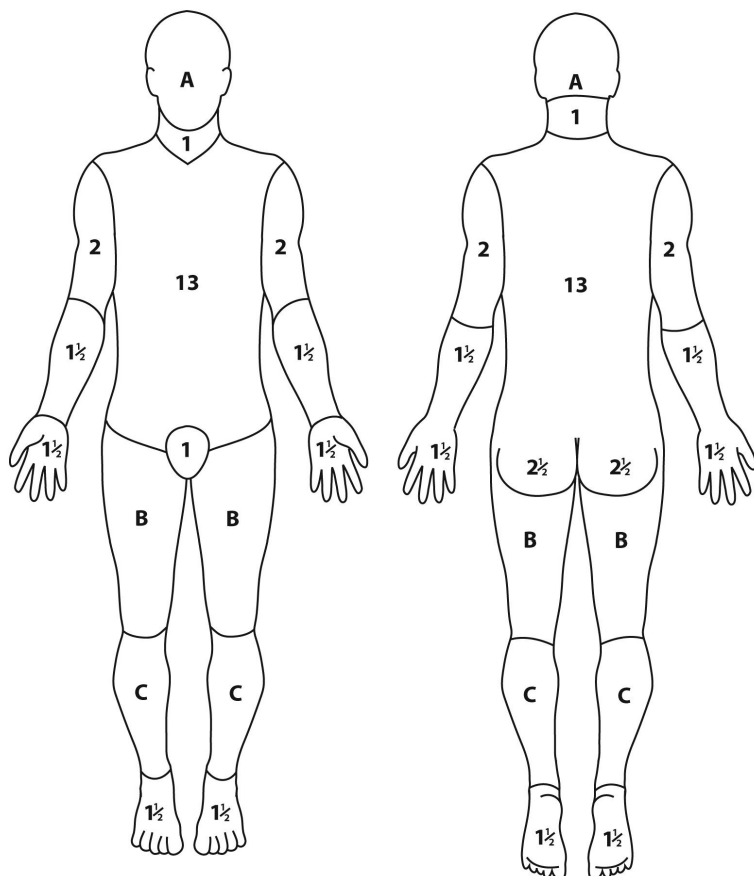
Admission Date: _____

Time of Injury: _____

Time of Arrival: _____

Weight: _____ kg (Estimated / Actual)

Lund and Browder Charts



IGNORE SIMPLE ERYTHEMA

REGION	%	
	PTL	FTL
Head		
Neck		
Ant. Trunk		
Post. Trunk		
Right Arm		
Left Arm		
Buttocks		
Genitalia		
Right Leg		
Left Leg		
Totals		
TOTAL BURN		

RELATIVE PERCENTAGE OF BODY SURFACE AREA AFFECTED BY GROWTH						
AREA	AGE 0	1	5	10	15	ADULT
A = 1/2 of Head	9 1/2	8 1/2	6 1/2	5 1/2	4 1/2	3 1/2
B = 1/2 of one Thigh	2 3/4	3 1/4	4	4 1/2	4 1/2	4 3/4
C = 1/2 of one Leg	2 1/2	2 1/2	2 3/4	3	3 1/4	3 1/2

Parkland Formula for fluid replacement following loss due to thermal burns:

4ml/kg / % burn of Ringer's Lactate / Hartmann's Solution (or 0.9% Saline)

1/2 given over first 8hrs (from time of injury) then 1/2 given over subsequent 16hrs[†]

[[†] In children 4.5% albumin should be used as the burn replacement fluid for this period of 16hrs]

Management of Thermal Burns in Adults and Children

Confirm it is isolated thermal injury
(otherwise follow ATLS Primary Survey principles - ABCs)

Remove wet dressings and clothing (but keep patient warm)

Apply cling film to burn (reduces pain but burn remains visible*)

* Consider photograph (Medical Illust. or ED camera) if appropriate consent given

Weight: measure or estimate (and record overleaf)

Analgesia

Children: Consider nasal Diamorphine +/- oral NSAID
and apply Ametop or EMLA for IV access

Adults: IV Morphine +/- oral NSAID

Estimate % burn area (excluding simple erythema) using Lund and Browder chart (overleaf). If >10% burn then apply Parkland formula to calculate burns fluid replacement requirements for first 24hrs

[Initial estimate only. Thereafter adjust IVI to achieve urine flow $\geq 2\text{ml/kg/hr}$ (Children) or $\geq 1\text{ml/hr}$ (Adults). Urinary catheterisation may be necessary]

Burns Fluid Replacement in first 24hrs

[Adults / children: Hartmann's* or Ringer's Lactate* or 0.9% saline]
(* NB from Paediatric practice - Because of calcium content not suitable for use with ceftriaxone)

$4\text{ml} \times \text{Wt} \text{ (kg)} \times \text{burn} \text{ (\%)} = \text{_____} = \mathbf{a}$ (total ml in 24hrs)

$\mathbf{a} / 2 = \text{_____} = \mathbf{b}$ (ml / period)

\mathbf{b} minus any 'resus' boluses (mls) given since burn = _____ = \mathbf{c}

8hr minus hrs since burn = _____ = \mathbf{d} (time remaining in 1st period)

$\mathbf{c} / \mathbf{d} = \text{_____} = \text{ml/hr}$ in remainder of 1st period (8hrs)

$\mathbf{b} / 16 = \text{_____} = \text{ml/hr}$ in 2nd period (16hrs[†])

[[†] In children 4.5% albumin should be used as burn replacement fluid for this period of 16hrs]

Plus

Normal Daily Maintenance Fluids IV

If oral replacement not appropriate

[Children: 0.45% Saline / 5% Dextrose (NB Not used as bolus fluid!)]

• 4ml/kg/hr for first 10kg _____

• 2ml/kg/hr for second 10kg _____

• 1ml/kg/hr for remaining weight _____

Total: _____ ml/hr