

Northern Burn Care Operational Delivery Network

Referral Information Pack



Northern Burn Care ODN Burns Referral Pack

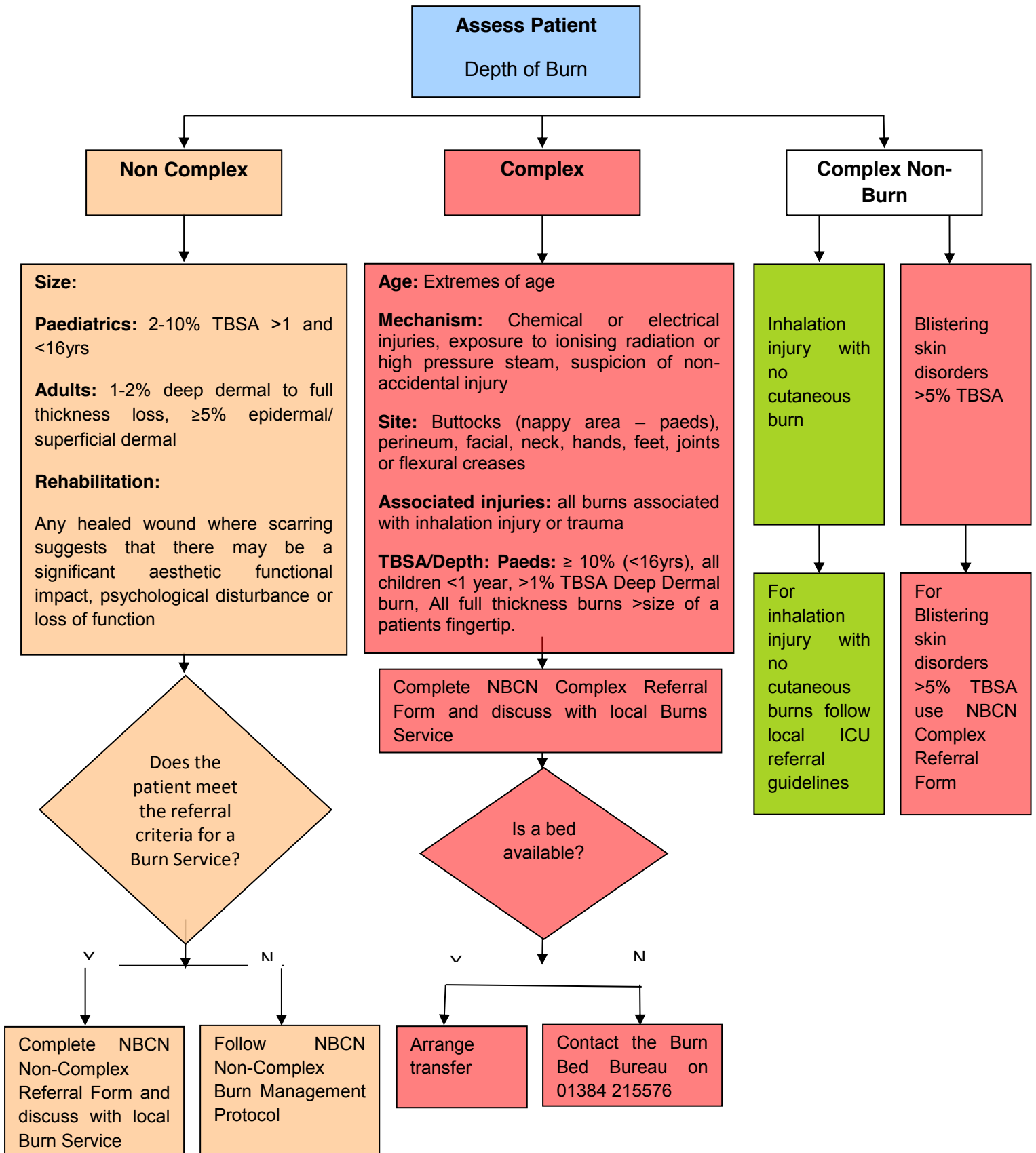
Pack includes:

1. NBCODN Burns services Contact information
2. Burns Referral Flow chart.
3. Paediatric Burns Referral Criteria and Guidelines
4. Adult Burns Referral Criteria and Guidelines
5. Non-complex Burns Referral Form
6. Complex Burns Referral Form

Contact details for NBCN Burns Services

Name of Burns Service	Adults / Paeds	Address	Telephone
Newcastle Burns Centre	Adult	RVI, Newcastle,	0191 282 5637
Newcastle burns Centre	Paeds	Great North Children's Hospital	0191 282 6011
James Cook Burns Facility	Adults	James Cook Hospital, Middlesborough.	01642 854 535
Pinderfields Hospital Burns Centre	Adults	Pinderfields Hospital, Mid Yorks NHS Trust	01924 541 702
Pinderfields Hospital Burns Unit	Paeds	Pinderfields Hospital, Mid Yorks NHS Trust	01924 541 931
Sheffield Burns Unit	Adults	Northern General Hospital, Sheffield,	01142 714 129
Sheffield Children's Hospital Burns Unit	Paeds	Sheffield Children's NHS Foundation Trust, western Bank, Sheffield	01142 260694
Wythenshawe burns unit	Adults	Wythenshawe Hospital, University Hospitals of South Manchester, Manchester.	0161 291 6313
Manchester children's Hospital Burns Centre	Paeds	Central Manchester Children's Hospital,	0161 701 8123
Whiston Hospital Burns Centre	Adults	St Helens and Knowlesley NHS Foundation Trust, Liverpool	0151 430 1540
Alderhey Burns Centre	Paeds	Alderhey Children's NHS Foundation, Liverpool	0151 282 2578
Preston Burns Facility	Adults	Lancashire Teaching Hospitals NHS Foundation Trust, Preston,	01772 522 244

NBCN Burn Referral Flowchart – February 2016



PAEDIATRIC BURN REFERRAL CRITERIA AND GUIDELINES – June 2016 v1.2

NON-COMPLEX BURN

*** Complete and Send/Fax NBCN Non-Complex Burn Referral Form ***

Size: 2-10% TBSA >1 and <16 years old

Wound healing: Any wound unhealed at 7 days

MUST GIVE

IV Resuscitation Fluids: All children with burns $\geq 10\%$ TBSA will receive fluid according to the Parkland Formula:-

3 ml/kg/% burn over 24 hrs from time of injury

Give $\frac{1}{2}$ in the 1st 8 hrs & $\frac{1}{2}$ in the 2nd 16 hours given as Hartmann's solution.

AND IV Maintenance Fluids: 100ml/kg over 24hrs from time of injury for 1st 10kg, plus 50ml/kg over 24hrs for 2nd 10kg, plus 20ml/kg over 24hrs for each additional kg.

Give as 0.45% Sodium Chloride and 5% Glucose solution or a suitable local alternative

Suspected Inhalation Injury: If there is a suspected inhalation injury, give oxygen (15 litres via non- re-breathe mask and bag) and seek anaesthetic review

For cases that do not meet the criteria for referral:

Review all burns at 48 hours to monitor for change

Continue local care and give advice to observe for signs of infection. Refer on if unhealed at 7 days

Discharge when wound healed, with written advice to moisturise and protect from sun until healed skin loses pink colour

Analgesia: Ensure adequate analgesia is given prior to intervention/transfer.

Catheterisation: All children with burns $\geq 15\%$ TBSA and/or burns to genitalia should have an appropriate size urinary catheter sited.

Infection: *Toxic Shock Syndrome / Burn Sepsis Syndrome*

Observe for 2 of the following;

- Temperature $>38^{\circ}\text{C}$
- General malaise
- Rash
- Hypotension
- Diarrhoea and vomiting
- Not eating or drinking
- Tachycardia / tachypnoea

COMPLEX BURN

*** Complete and Send/Fax NBCN Complex Burn Referral Form *Total Body Surface Area (TBSA)/Depth:**

$\geq 10\%$ (<16 years)

$>1\%$ TBSA Deep Dermal burn (all children <1 year)

All Full Thickness burns $>$ size of a patients finger tip

Any depth and size of the following;

Mechanism: All burns associated with chemical or electrical injuries, exposure to ionising radiation or high pressure steam, or suspicion of non-accidental injury

Site: Buttocks, nappy area, perineum, facial, neck, hands, feet, joints or flexural creases

All circumferential burns

Existing Conditions: Burn wound infection, significant congenital or medical conditions that may influence patient care or burn wound healing.

FLUID GUIDELINES

$<10\%$ encouraged to have oral fluids unless NBM

$\geq 10\%$ cannula, resus fluids and maintenance

Contact Burn Unit for advice re:

NBM, sedation, analgesia, catheterization in burns 10% - 15% and future fluids

MEETS CRITERIA FOR REFERRAL – CALL LOCAL BURN SERVICE

Newcastle: 0191 2826011/ 0191 2829009

Manchester: 0161 701 8100

Sheffield: 0114 2260694

Liverpool: 0151 252 5400

Wakefield: 01924 541931

NON-COMPLEX BURN

*** Complete and Fax NBCN Non-Complex Burn Referral Form ***

Size: 1-2% deep dermal to full thickness loss
 ≥ 5% epidermal/superficial dermal

COMPLEX BURN

Complete and Fax NBCN Complex Burn Referral Form Total Body Surface Area (TBSA)/Depth:

- ≥15% (above 16 years)
- >10% (65 years and over)
- >2% deep dermal / full thickness

Any depth and size of the following;

Mechanism: All burns associated with chemical or electrical injuries, exposure to ionising radiation or high pressure steam, or suspicion of non-accidental injury

Site: Buttocks, perineum, facial, neck, feet, joints or flexural creases

All circumferential burns and deep dermal/full thickness to hands

COMPLEX NON-BURN

Progressive Non-Burn Skin Loss >5%: Blistering skin disorders e.g. Toxic Epidermal Necrolysis, Staphylococcal Scalded Skin Syndrome, and Stevens - Johnson syndrome

Inhalation injury with no cutaneous burn should follow local ICU referral guidelines

REFERRAL NOT NECESSARY

Unless indicated by complexity

Erythema <5% Superficial <2%

FLUID GUIDELINES

≥ 15% TBSA – IV fluid resuscitation according to Parkland Formula (age 16-65 years old)

≥ 10% TBSA if multiple comorbidities - IV fluid resuscitation according to Parkland Formula (>65 years old)

Contact Burn Unit for advice re: NBM, sedation, analgesia and future fluids

MEETS CRITERIA FOR REFERRAL.....

CALL LOCAL ADULT BURN SERVICE

IV Access: All adults with burns ≥15% should have **two** well secured IV cannulae

IV Resuscitation Fluids: All adults with burns ≥15% TBSA will receive fluid according to the Parkland Formula:-

3 ml/kg/% burn over 24 hrs from time of injury

Give ½ in the 1st 8 hrs & ½ in the 2nd 16 hours given as Hartmann's solution

Analgesia: Ensure adequate analgesia is given prior to intervention/transfer. Consider use of IV opiate/Entonox

Catheterisation: All adults with burns ≥15% TBSA should have an appropriate size catheter. Consider catheter if burn ≥10% TBSA in patients 65 years or older. Consider for burns to perineal/genital area

Suspected Inhalation Injury: If there is a suspected inhalation injury, give oxygen and seek anaesthetic review

Infection:
 Observe for signs of infection

- Temperature >38°C
- Tachycardia/Tachpnoea
- Hypotension
- Increased pain
- Offensive/increased exudate
- General malaise

For cases that do not meet the criteria for referral:

Review all burns at 48 hours to monitor for change

Continue local care and give advice to observe signs for infection. Refer to Burns Service if wound unhealed at 14 days

Northern Burn Care Network Complex Burn Referral Form

Burn Information:

Date of burn: ... / ... / Time of burn: : Cause of burn:

.....

.....

% TBSA (Please complete a Lund and Browder chart and attach)

Cooling? Yes / No **By whom?** Witness / Paramedic / Fire Service / ED **Was Cooling delayed?** Yes / No

Details:.....

Patient Details: (please attach addressograph)

NHS No: Date of birth: ... / ... /
Forename:
Surname:
Gender: M / F Tel No:
Address:
.....
Postcode:
Interpreter: Yes / No
Language:

Next of kin:

Name of N.O.K:
Accompanied by:
Relationship: Tel No:

Family/carer aware of attendance & Transfer - Y / N

Referral information:

Date: ... / ... / ... Time: ...: ... Referrer:
Referring Organisation:
Department: ED / ICU / MIU / WIC / other:
Grade:

GP Details:

GP Name:
Tel No: GP Practice/Address:

PMSH

Smokes: /day Alcohol: units/day
Drug abuse: Yes / No Details:
Allergies: Yes / No Details:
Tetanus Status: Mobility:
Learning Disabilities: Yes / No. Details:
Mental Health Requirements: Yes / No. Details:
Co-morbidities: Yes / No Details:
Any other relevant information:

Airway/Breathing:

Patient Airway	Yes	No
C. spine injury	Yes	No
Immobilised	Yes	No
Inhalation injury suspected	Yes	No
Soot in nose/throat	Yes	No
Hoarse voice	Yes	No
Stridor/noisy breathing	Yes	No
Anaesthetic assessment	Yes	No
Intubated at	Yes	No

Please use and UNCUT tube

Laryngoscopy grade I II III IV
Size ETTmm cuffed / uncuffed
Fixed at teeth/nose cm

Safeguarding / Risks

Safeguarding concerns: Yes / No Risk concerns: Yes / No
Details:
Action taken:

Observations prior to intubation:

FIO2% SaO2%
RR: / Min GCS prior to intubation: / 15

Circulation

HR: bpm B/P: / CRT: Peripheral/core temp: Deg

Patient Weight: Kg actual/estimated Fluid resuscitation commenced? Yes / No
Urinary Catheter: Yes / No (children with burns <15% may not need catheterisation, please discuss with Burns Unit and do not delay transfer unnecessarily)
Balloon inflated: ml size:

Two large IV cannula to be inserted away from the burn

Venous Access 1: central/peripheral size: Site:
Venous Access 2: central/peripheral size: Site:

Environment and Wound Management:
 Patient kept warm prior to and during transfer: Yes / No
 Apply cling film to all open areas, discuss dressing with burns service.
 Irrigate chemical (except phosphorus) burns copiously
 Wash small complex burns to facilitate assessment if appropriate
 Circumferential Burns: Discuss with burn service prior to transfer
 Escharotomies needed? Yes / No
 Where:
 Escharotomies carried out prior to transfer: Yes / No

Please complete a Lund & Browder Chart and attach to this form

Resuscitation Fluids

Adults over 15% and Children over 10% TBSA require fluid resuscitation with Hartmann's Fluid, urinary catheter & NG tube

3 ml x a (TBSA%) x b (weight) = c (total volume for 24 hours)
 3 ml x a (TBSA) x b = c
 Total volume for 24 hrs c / 2 = 1st period volume (divide by remaining hours to 8hrs post injury)
 = 2nd period volume (divide by 16 hours)
 1st period from **time of injury** to 8 hours post injury - infusion rate = ml/hr
 2nd period from 8 hours post injury to 24 hours post injury - infusion rate = ml/hr

Please check calculations and discuss 'CATCH UP' fluid with accepting Burn Unit
 Consider discussing fluid requirements of Paediatric and elderly patients with Burns Services at point of referral
 We expect the patient to be transferred to the Burn Unit within 8 hours
Note: Children also require 100% maintenance (0.45% NaCl + 5% dextrose) alongside resuscitation fluids

Burn Time	Hour 1	Hour 2	Hour 3	Hour 4	Hour 5	Hour 6	Hour 7	Hour 8
Hartmann's (mls)								
Other fluids (mls)								
Oral fluids (mls)								
Urine output (mls) (aim 30-50 ml/hr)								

Results			Medication Given			
Bloods		ABG	Time	Drug	Route	Dose
Hb		pH				
WCC		PO2 kPa/mmHg				
Platelets		PCO2 kPa/mmHg				
Sickledex		HCO3				
Na+		BE				
K+		Lactate				
Urea		CoHb%				
Creatinine		Glucose				
Albumin		CK				
ECG		X-Ray (trauma series)				

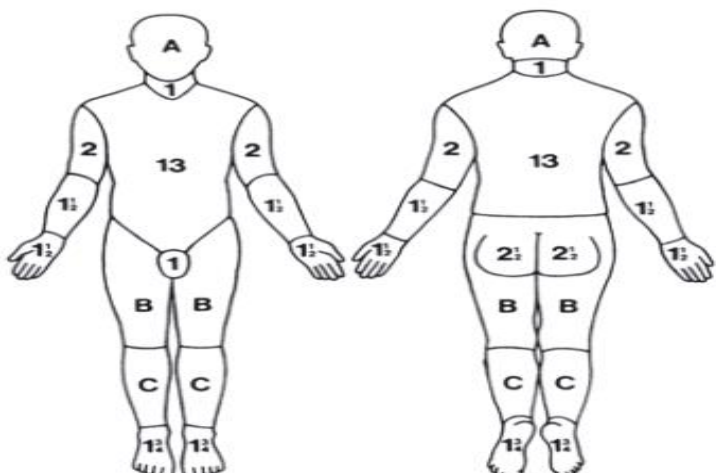
Pre transfer Checklist
Airway - safe/secured
NGT in situ for transit
Tubes/lines secured
Poisons Centre contacted and details attached
Analgesia adequate
Infusions for transit
Jewellery/Watch removed
Notes/x-rays/investigations/photographs
Burn unit contacted with time of departure

Other relevant information
Burns Bed Bureau Contact:
01384 679 036

Paediatric retrieval teams
 North East - 0191 282 3017
 EMBRACE Y&H - 0845 147 2472
 North West Transport Service (NWTS) - 08000 84 83 82

Please complete legibly
Form completed by: **Signed:**
Designation/Grade: **Contact number/direct line:**

Northern Burn Care Network Non-Complex Burn Referral Form

<p>Patient Details: NHS No: Name: Date of Birth:/...../..... Gender: M / F Address: Postcode: Tel No: Is an interpreter required? Yes / No Language:</p>	<p>Referral Information: (please specify) Date:/...../..... Time: : Department: ED / Ward / Other: Referrer Name: Grade:</p>																																												
<p>Next of Kin Details: Patient accompanied by: Relationship: Is the next of kin aware? Yes / No</p>	<p>GP Details: Tel No: GP Name: GP Practice/Address:</p>																																												
<p>Burn Information: Date of burn: / / Time: : Cause of burn: Location of burn: Is it over a joint? Yes / No First aid given/cooling: Yes / No Is yes, how long for: What type: Was the first aid delayed? Yes / No Size of burn: % TBSA: / Cm Burn Depth: Epidermal Superficial Dermal Deep Dermal Full Thickness</p>	<p>PMSH: Smokes: / day Alcohol:units/day Drug Abuse: Yes / No Allergies: Yes / No Tetanus status: Mobility: Learning Disabilities: Yes / No Specify:</p>																																												
<p>Wound Management: wash with soap and water and apply cling film (<i>not to face</i>) for immediate transfer only, otherwise apply appropriate dressing.</p>	<p>Safeguarding / Risk: Concerns: Yes / No. Details: Action Taken: Yes / No Details:</p>																																												
<p>Circulation/Observations: Temp:Deg HR: B/P:RR: SaO2: %</p>	<p>Burn % Chart</p> <ul style="list-style-type: none"> Calculate burn % ignoring simple erythema Any burn greater than 10% in children or 15% in adults requires a complex referral form. 																																												
<p>Medication Given:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Time</th> <th style="width: 25%;">Drug</th> <th style="width: 25%;">Route</th> <th style="width: 35%;">Dose</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	Time	Drug	Route	Dose													<div style="text-align: center;">  </div> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 25%;">Area</th> <th style="width: 10%;">Age 0</th> <th style="width: 10%;">1</th> <th style="width: 10%;">5</th> <th style="width: 10%;">10</th> <th style="width: 10%;">15</th> <th style="width: 15%;">Adult</th> </tr> </thead> <tbody> <tr> <td>A = ½ of head</td> <td>9 ½</td> <td>8 ½</td> <td>6 ½</td> <td>5 ½</td> <td>4 ½</td> <td>3 ½</td> </tr> <tr> <td>B = ½ one thigh</td> <td>2 ¾</td> <td>3 ¾</td> <td>4</td> <td>4 ½</td> <td>4 ½</td> <td>4 ¾</td> </tr> <tr> <td>C = ½ of one lower leg</td> <td>2 ½</td> <td>2 ½</td> <td>2 ¾</td> <td>3</td> <td>3 ¾</td> <td>3 ½</td> </tr> </tbody> </table>	Area	Age 0	1	5	10	15	Adult	A = ½ of head	9 ½	8 ½	6 ½	5 ½	4 ½	3 ½	B = ½ one thigh	2 ¾	3 ¾	4	4 ½	4 ½	4 ¾	C = ½ of one lower leg	2 ½	2 ½	2 ¾	3	3 ¾	3 ½
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