

BURNS FIRST AID IN CHILDREN – THE WEIRD AND THE WONDERFUL

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ANZBA defines adequate first aid for acute burns as twenty minutes of cold running water within the first three hours of a burn injury.¹ Despite first aid campaigns, inappropriate and inadequate first aid treatment for burns continues to occur.²

Following ethics approval, we performed a retrospective analysis of the first aid received by 4368 children who presented to the Burns Unit at The Children's Hospital at Westmead between January 2008 and December 2012.

Results:

ADEQUACY OF FIRST AID	Number of children	% of total children
	4368	
Adequate	2866	65.6%
Inadequate, inappropriate or no first aid	1358	31.1%
Not documented	144	3.3%

Table 1: Approximately one third (31.1%) of children received inadequate, inappropriate or no first aid.

Cold compresses/ice/other		
Cool compresses/wet wraps	414	9.5%
Ice	227	5.2%
Other	39	0.9%
Total	680	15.6%

Table 2: Inadequate and inappropriate first aid included cold compresses or wet wraps in 414 (9.5%) and ice in 227 (5.2%).

Creams/gels/ointments	
Burn Aid*	238
Antiseptic/antibiotic	98
Cream/gel/ointment (other)	52
Plant based cream/gel/ointment	52
Nappy cream	5
Petroleum based ointment	4
Steroid cream	4
Animal based cream/gel/ointment	2
Total	455 10.4%

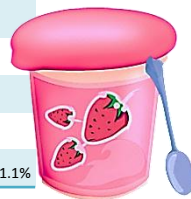
Table 3: Products prescribed by General Practitioners, Ambulance Officers or obtained from pharmacies, such as silver sulfadiazine cream, antiseptics and antibiotic ointments, were often used (n=455, 10.4%).

Bathroom products	
Toothpaste	67
Talc powder	2
After shave	1
Total	70 1.6%

Table 4: Of the 70 (1.6%) children who received bathroom products, toothpaste was the most common product.

Foods	
Dairy products (e.g. yoghurt)	22
Egg	6
Fruit and vegetables	5
Honey	5
Spices/salt/sugar	4
Soy sauce	3
Drinks (non-water)	2
Flour	2
Total	49 1.1%

Table 5: Of the 49 (1.1%) children had food applied, dairy products, such as yoghurt, were the most common.



Oils	
Plant oils	14
Oil (other)	4
Animal oils	1
Total	19 0.4%

Table 6: Of the 19 (0.4%) children who received oils, plant oil, such as tea tree oil, were the most frequent.

Alternative medicine	
Chinese medicine	12
'Witch Doctor'	1
Total	13 0.3%

Table 7: Alternative treatment from a Chinese Medicine or a 'Witch Doctor' was used in 13 (0.3%) of children.

Conclusion:

Twenty minutes of cool running water has been proven to be the most effective in reducing progression of burn depth and time to re-epithelisation.³ Unfortunately, products such as ice and toothpaste, which may have adverse effects, continue to be used on acute burns.⁴ Whilst most children in our study eventually received appropriate first aid, a third did not. There remains a need to educate health practitioners and the wider community regarding appropriate burns first aid.

References:

1. Australian and New Zealand Burns Association. Emergency management of severe burns manual. 8th ed. Sydney, Australia; The Education Committee of the Australian and New Zealand Burns Association, Ltd; 2008.
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3. Barlett N, Yuan J, Holland AJA, Harvey JG, Martin H, La Hei ER, et al. Optimal duration of cooling for an acute scald contact burn injury in a porcine model. J Burn Care Res 2008. 29(5):828-834.
4. Cattle L, Pearn J, McMillan JR, Kimble RM. A review of first aid treatments for burn injuries. Burns 2009. 35:768-775.