Forewarned is forearmed: Protect your children from surprising hot weather injuries this summer

It is known that hot weather adversely affects health and raises mortality rates. This has been reported globally by the World Health Organisation, and locally in Australia. In addition to death, adverse effects of health that have been reported are heat rash, oedema, syncope, cramps, exhaustion and heatstroke. These are systemic health events and are easily measureable through the analysis of large databases and provide a tsunami of evidence. However, our small single site study shows that there are ripple effects also associated with hot weather, which have hitherto gone unreported.

Hot weather causes contact burns and sunburn as well as heat exhaustion. In Western Australia, hot weather is common between October and March. These high temperatures mean that surfaces exposed to the sun's rays get very hot; such as play equipment, hot pavements and sand. Young children often are often barefoot, and their skin is thin and sensitive. This combination makes young children prone to contact burns that cause blistering and pain, requiring medical treatment in the emergency department or hospital outpatient clinic. Additionally, sunburn can be severe enough to require admission, with blistered skin which needs several days of dressing changes. Any skin that has been breached, whether by blisters from contact burns, sunburn or otherwise is at risk of local infection, and must be treated with clean dressing changes using an antibacterial dressing, and monitored until healed.

In the three year period from January 1st 2011 to December 31st 2013 there were fifty four children who presented to Princess Margaret Hospital for Children in Perth, Western Australia with contact burn, sunburn or heat exhaustion. In contrast to the well documented evidence that systemic health events prevail as the major health concern associated with hot weather, in this group these accounted for just 15% of presentations - leaving a whopping 85% of presentation as contact burns and sunburn. The children who had sustained a contact burn were just 14 months old, on average, and those with sunburn six and a half years old.

The CSIRO in conjunction with BOM have recently devised a definition for heatwave and a method to calculate heatwave. This is based on solar exposure and a measurement called the excessive heat factor based on a three day prediction specific to geographical area and related to the previous temperatures over 30 days. The study found that for every unit rise in solar exposure there were 18% more sunburns, 14% more contact burns and 16% more heat exhaustion presentations. For every unit rise in excess heat there were 11% more sunburns, 26% more contact burns and 9% more heat exhaustion presentations. Therefore, our children are at increasing risk of burn injury for each small increase in temperature.

So next time you are at the playground or beach with your child or grandchild – remember to teach your children to slip, slop, slap… but also stop, think and touch before placing your toddler on that

slide!

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Heatwave and risk of heat-related burn injury in children in Western Australia.
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