

## Paediatric treadmill injuries: an increasing problem

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**TO THE EDITOR:** A previous report from our institutions identified a steady increase in the prevalence of paediatric treadmill friction burn injuries, from three in 2001 to 17 in 2006.<sup>1</sup> We sought to determine whether there was any change in this trend during the past 2 years.

Children younger than 16 years with treadmill-related injuries were identified from prospectively collected data from burns and trauma databases maintained by the trauma research nurses at two paediatric tertiary trauma centres in Sydney (the Children's Hospital at Westmead and Sydney Children's Hospital) between January 2007 and December 2008. Sixty-five children sustained treadmill-related injuries (17 in 2007 and 48 in 2008); 43 were boys. The mean age at the time of the injury was 3.7 years (range, 9 months to 14 years). Friction burns ranged from less than 1% to 7% of total body surface area, and most patients sustained a total body surface area burn of 1% or less (58 patients). The most common site of injury was fingers and/or hand (49), followed by forearm or upper arm (6), and torso (5). In most cases, a limb or part of a limb was trapped between the rear roller and the treadmill belt. Fourteen patients required surgery, including 13 who underwent a skin grafting procedure. Most injuries occurred while the treadmill was in use by others, with the children approaching unnoticed from behind (46). In nine cases, the injury happened when the patients themselves, at a mean age of 7.8 years (range, 2–12 years), were using the treadmill.

The substantial increase in prevalence of treadmill injuries in children during the past 2 years may be related to increased sales of treadmills as the community becomes more conscious of obesity. The data also reflect other Australian studies that show that children younger than 5 years are at greatest risk, accounting for 90% of paediatric treadmill injuries during the period January 2004 to June 2007.<sup>2</sup>

Despite the risk of injury, particularly for children, there appears to be no current national regulations governing the supply of treadmills or advice that should be given to customers at the point of sale. The New South Wales Government introduced legis-

lation in June 2009 mandating prominent permanent warning labels to be affixed to all new treadmills — the Fair Trading Amendment (Treadmills) Regulation 2008 (NSW). The NSW Office of Fair Trading, with assistance from the NSW Severe Burn Injury Service and Kidsafe NSW, has developed an alert poster (copies of which may be downloaded or ordered from their website) for display at childcare centres, playgroups and places where domestic treadmills are sold.<sup>3</sup> The Australian Competition and Consumer Commission recently published a safety alert brochure on domestic treadmills, which contains a safety checklist.<sup>4</sup> Although helpful, the brochure does not include previous recommendations such as caution with headset use (ie, decreased awareness of children near the treadmill), and the use of mirrors or alternative positioning to ensure children approaching the treadmill can be seen.<sup>1</sup>

As most injuries occur within the first 6 months of purchase of the treadmill,<sup>5</sup> educating parents seems to be most important around the time of purchase. Design modifications could also reduce the risk of entrapment of a digit or hand.<sup>2</sup> It is likely that, without better application of current injury prevention strategies, the prevalence of these injuries will continue to increase.

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1 Wong A, Maze D, La Hei E, et al. Pediatric treadmill injuries: a public health issue. *J Pediatr Surg* 2007; 42: 2086-2089.

2 Jeremijenko L, Mott J, Wallis B, et al. Paediatric treadmill friction injuries. *J Paediatr Child Health* 2009; 45: 310-312.

3 New South Wales Government, Department of Commerce, Office of Fair Trading. Treadmills and kids don't mix! Sydney: NSW Office of Fair Trading, 2009. [http://www.fairtrading.nsw.gov.au/Consumers/Product\\_and\\_service\\_safety/General\\_products/Treadmills.html](http://www.fairtrading.nsw.gov.au/Consumers/Product_and_service_safety/General_products/Treadmills.html) (accessed Aug 2009).

4 Australian Competition and Consumer Commission. Domestic treadmills, safety alert. Canberra: Commonwealth of Australia, 2008. <http://www.accc.gov.au/content/item.phtml?itemId=848069&nodeId=ccfa7c9328246bc4cc37cdc70aa84c81&fn=Domestic%20treadmills> (accessed Aug 2009).

5 Han T, Han K, Kim J, et al. Pediatric hand injury induced by treadmill. *Burns* 2005; 31: 906-909. □