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21 TRAMPOLINE INJURY PREVENTION – CAN 'FALL-OFF' AND 'FALL-ONTO' INJURIES BE ELIMINATED WITH GOOD PRODUCT DESIGN?

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Background Injuries from trampoline related accidents place a heavy burden on society directly through suffering among children and adolescents and indirectly via the costs associated with hospital admissions and emergency department presentations. In Australia, trampoline injuries represent approximately 25% of all childhood play equipment related injuries. Of these injuries the 'fall-off' trampoline (25%) and 'fall-onto' the trampoline (60-80%) represent the most frequent and serious injuries.

Objectives The objective of this study was to verify whether good engineering design leads to a reduction in 'fall-off' and 'fall-onto' trampoline injuries.

Methods A survey of trampoline injuries was undertaken by contacting users of trampolines where the trampolines had been specifically designed to eliminate 'fall-off' and 'fall-onto' injuries.

Results The results from 3817 users of trampolines that had been engineered to eliminate 'fall-off' and 'fall-onto' injuries were compared with published 'traditional' trampoline injury data. A significantly lower proportion of injuries were noted from trampolines that had been engineered with soft-edges and effective enclosures for both 'fall-off' and 'fall-onto'.

Significance This research confirms that with appropriate engineering design interventions both the frequency and severity of trampoline injuries can be significantly reduced.