Kitesurfing — playing with water or with fire?

"Despite its image as a dangerous sport, serious kitesurfing accidents seem uncommon"

Kitesurfing is a relatively new water sport that converts wind energy into vertical and horizontal force using a large controllable kite. In optimal conditions, speeds of up to 65 km/h and heights of 20 m are reached.[1,2] Impact at these speeds or from this height can lead to severe injuries or death,[1] and such accidents have reinforced the image of kitesurfing as a highly dangerous and even reckless sport. Nonetheless, kitesurfing is rapidly gaining popularity and is among the fastest growing water sports worldwide.[1]

To quantify frequency, injury profiles and severity of kitesurfing-related trauma, we reviewed all patients presenting to the emergency department of the Royal Perth Hospital, Western Australia, with traumatic injuries received while kitesurfing between January 2000 and March 2014. Injury severity was graded using the Injury Severity Score (ISS).[3] There were 56 presentations (47 men and nine women), with patient ages ranging from 18 to 69 years (mean ± SD, 34.1 ± 11.7). Forty-three patients were regarded as having minor trauma (ISS, 1–8), 12 moderate trauma (ISS, 9–15) and one major trauma (ISS ≥ 16). The lower extremities, upper extremities and spine (13/56) were the most frequently injured body regions (Box). Soft tissue injuries and fractures were the most common injury type. Internal organ injuries involved a renal laceration, a hepatic laceration and an injury to the posterior tibial artery following an open fracture. Neurological injuries involved brachial plexus injuries in two patients, and spinal injuries associated with spinal fractures in two patients. No paraplegias were observed. Of the 56 patients, 27 were hospitalised. Injury mechanisms included loss of kite control (25/56), mainly from unexpected gusts of wind (16/25) and failed jumps (5/25) resulting in falls from a height; injury from equipment, mainly sharp or blunt trauma from kiteboards (16/56); and impact against objects (eg, rocks, sandbanks) (5/56). One accident resulted from failure to detach after using the safety leash.

The low frequency of kitesurfing trauma that we found (about four cases annually) is consistent with previous studies that reported five and three trauma cases in periods of 1 year and 7 months, respectively.[2,4] Injury rates of between 5.9 and 12.2 injuries per 1000 kitesurfing hours have been estimated in non-competitive kitesurfing, which is comparable to recreational skiing and lower than many popular contact sports.[1] We found the lower extremities were most at risk, as in previous studies.[1,5] Lower extremity and spinal fractures are the most common injuries in falls from a height;[2] a common injury mechanism in kitesurfing. Head and facial injuries were slightly less frequent in our study than in an earlier study.[5] This variability is likely attributable to the small sample sizes in both studies.

Despite its image as a dangerous sport, serious kitesurfing accidents seem uncommon. Severe injuries and deaths mostly result from unexpected gusts of wind causing impact against solid objects or falls from a height. Inability to release from the kite using the safety systems may also play a role.[1,2,5] A detailed study into injury mechanisms in kitesurfing may identify areas for prevention strategies and minimise injuries and fatalities in this rapidly growing water sport.

Injury types and affected body regions in kitesurfing-related trauma (*n* = 56)

	Body region						
Injury type	Head/face	Thorax	Abdomen	Spine	Upper extremity	Lower extremity	Total
Soft tissue injury	5	3	0	4	15	15	33
Fracture	1	2	0	7	8	13	31
Internal organ injury	0	0	2	0	0	1	3
Neurological injury	0	0	0	2	2	0	4
Total	*6*	*5*	*2*	*13*	*25*	*27*	

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Corrections

Missing details in book review: In the book review "*Instructive medical humour*", published in the 18 January 2016 issue of the Journal (*Med J Aust* 2016; 204: 39), details about the book reviewed were inadvertently omitted. These are: "Rot, sperm that untie a knot and other medical tales from the back o' Bourke and beyond. Max Kamien. Melbourne: Platinum Rat Productions, 2015 (254 pp, ill., $25.00). ISBN: 978-0-646-93937-7. Available from: http://maxkamien.wix.com/barcoo-rot." The corrected article is available at https://mja.com.au/doi/10.5694/mja15.01078. ■

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Incorrect author name: In the article "*Socio-demographic and structural barriers to being tested for chlamydia in general practice*", published in the 15 February 2016 issue of the Journal (*Med J Aust* 2016; 204: 112), the name of the fourth author was incorrectly given. The correct name is: "Meredith Temple-Smith". The corrected article is available at https://mja.com.au/doi/10.5694/mja15.00933. ■

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