



Winnipeg Regional Health Authority  
Office régional de la santé de Winnipeg  
Caring for Health À l'écoute de notre santé

490 Hargrave  
Winnipeg, Manitoba  
R3A 0X7 CANADA

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May 1, 2012

Jason Carter  
Manitoba Cycling Association  
145 Pacific Ave  
Winnipeg, MB R3B 2Z6

Dear Mr. Carter,

Thank you for your inquiry about bicycle handlebar injuries and their prevention. I share your concern regarding the potential for injury among young cyclists, in particular those participating in competitive events where prevention measures could easily be reinforced by officials and coaches and communicated to parents.

Handlebar injuries among child and adult cyclists have been described in the medical literature for many years, and continue to be reported.<sup>i,ii</sup> Very serious internal injuries can result from the end of the handlebar impacting the abdomen - similar to a blunt spear – and include injuries to the abdominal wall, liver, spleen, pancreas, gallbladder, and aorta. Most cases require urgent investigation, and some require surgical consultation, operative treatment, and intensive care unit admission. Some cases have been fatal. An important feature to communicate to parents is that in many cases there is a delayed recognition of the severity of injury and therefore delays in seeking medical care.

In terms of prevention measures, a number of recommendations have been suggested in the medical and injury prevention literature.<sup>iii,iv,v</sup>

- Remove “bar ends” or “climbing horns” from mountain bike handlebars
- Ensure hand grips are in place
- Damaged hand grips should be replaced
- Select handlebar grips with a wide end
- Ensure end caps are in place (this will reduce the risk of a laceration/puncture but does not eliminate the risk of abdominal injury)
- All handlebar injuries should be considered potentially serious; if a child experiences a handlebar injury seek medical attention
- Parents should be aware that symptoms of handlebar injury may be delayed for a number of hours

Please contact me if you have further questions or concerns,

Sincerely,

Lynne Warda  
Associate Professor, Department of Pediatrics and Child Health  
Injury Prevention and Child Health  
Winnipeg Regional Health Authority

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<sup>i</sup> Winston, F. K., Shaw, K. N., Kreshak, A. A., Schwarz, D. F., Gallagher, P. R., & Cnaan, A. (1998). Hidden spears: Handlebars as injury hazards to children. *Pediatrics*, 102(3 I), 596-601.

<sup>ii</sup> Alkan, M., Iskit, S.H., Soyupak, S., Tuncer, R., Okur, H., Keskin, E., Zorludemir, U. Severe abdominal trauma involving bicycle handlebars in children (2012) *Pediatric Emergency Care*, 28 (4), pp. 357-360.

<sup>iii</sup> Petition HP01-1, Petition for Bicycle handlebar Performance Standard. Consumer Product Safety Commission, Washington, DC. Nov 5, 2002. <http://www.cpsc.gov/library/foia/foia03/brief/barendspt2.pdf>.

<sup>iv</sup> Carmont, M. R. (2008). Mountain biking injuries: A review. *British Medical Bulletin*, 85(1), 101-112.

<sup>v</sup> Bicycle handlebar injuries more serious than you think. Posted August 10, 2011. <http://www.hasbrochildrenshospital.org/wtn/Page.asp?PageID=WTN000086>