

The Injury a Bicycle Helmet Won't Prevent

A child who falls off a bicycle in an apparently harmless spill may be “speared” by the handlebars, according to a study that appeared in *Pediatrics*. This is the first study to closely examine injuries children receive from handlebars.

During a two-year period, doctors evaluated 107 patients under the age of 18 who were brought to the Children’s Hospital of Philadelphia Pediatric Emergency Department and Level 1 Trauma Center with serious bicycle-related injuries. While the majority had been harmed when their bikes collided with moving vehicles, a number were injured simply from falling off. Many of these were hurt from hitting the handlebar. All these children were riding at a low speed when they lost control of their bikes and fell.

The majority of the children who were hurt had serious abdominal injuries, including damaged kidneys and lacerated spleens and livers. Other handlebar-related injuries included a punctured lung and impaled thigh.

Typically, during this type of fall, the bike’s front wheel rotates, twisting the end of the handlebar toward the child as he or she falls forward onto its end.


“Because abdominal injuries can be hidden, they may be missed by the diagnosing physician,” said Dr. Flaura Winston, the article’s lead author. It may be hours before the symptoms become apparent, she explained.

According to Dr. Winston, handlebar-related injuries could be avoided if manufacturers would modify bicycles by curving handlebar ends away from the rider, padding the ends, and limiting the



rotation of the handlebars. This may not be possible with stunt bicycles, so parents should consider not allowing young, inexperienced bicyclists to use such bikes.

What Can Parents Do?

- Make sure the child’s bicycle is the right size and type for the child’s development and skill level.
- Don’t let young children ride stunt bicycles.
- Make sure handlebar grips are in good condition.
- Maintain children’s bicycles to minimize mechanical failures. 

Reference: *Hidden Spears: Handlebars As Injury Hazards to Children*, F.K. Winston, K. Shaw, A.A. Kreshack, D.F. Schwartz, P.R. Gallagher, A. Cnaan. *Pediatrics*, September 1998.