

# Despite decrease in recent years, rate of sledding-related injuries still concerning

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Sledding is a popular winter activity in communities across the country, but it may not be as risk-free as many people think. A new study conducted by researchers at the Center for Injury Research and Policy at Nationwide Children's Hospital found that 220,488 patients were treated in U.S. emergency departments for injuries related to sledding from 2008 through 2017. Nearly 70% of these patients were children age 19 years and younger. Compared to adults, children were almost seven times as likely to be treated in an emergency department for a sledding-related injury.

The study, published in *Clinical Journal of Sports Medicine*, found that the majority of patients were injured as the result of a collision (63%). Collision injuries occurred when the patient made contact with an object in the environment (47%), when they hit the ground (16%), or when they ran into another person (10%) or sled (7%).

"Collision is particularly concerning because of the outcomes," said Rebecca McAdams, MA, MPH, co-author of this study and senior research associate in the Center for Injury Research and Policy at

Nationwide Children's. "We found that patients who were injured from a collision were more likely to injure their head, be diagnosed with a concussion or closed-head injury (CHI), and were more than twice as likely to be hospitalized than patients injured by all other mechanisms."

Head injuries are a serious concern during sledding. The head was the most frequently injured body part for both children and adults. In fact, nearly 82% of children treated for a sledding-related injury sustained an injury to the head. The type of sled can also impact the risk of head injury. Children injured while riding snow tubes and disks had a greater risk of sustaining a concussion or CHI than children who were riding sleds or toboggans. Researchers recommend wearing a helmet while sledding to reduce the risk and severity of [head injuries](#).

While less frequent (3% of all cases), injuries occurring as a result of the sled being pulled by a motorized vehicle such as a car, ATV or snowmobile resulted in more serious injuries that required hospitalization (14%) and have even resulted in death. This practice should be avoided.

The good news is that the rate of sledding-related injuries treated in U.S. hospital emergency rooms among both children and adults decreased during the ten-year study period. However, despite this decrease, 13,228 patients were still treated for sledding-related injuries in the most recent year of the study.

"While we were happy to see that the number of sledding-related injuries have gone down in recent years, the fact that these injuries are still happening at this rate means we need to do a better job getting the information out about the potential dangers associated with sledding and what families can do to prevent the injuries from occurring so this can remain a fun family activity," said Lara McKenzie, Ph.D., MA, senior author of the study

and principal investigator in the Center for Injury Research and Policy at Nationwide Children's.

Researchers recommend that parents and caregivers help children stay safer while sledding by following these tips:

- **Wear a helmet:** Make it a rule that everyone has to wear a helmet if they are going to sled. Properly fitted snow sport helmets or bicycle helmets are best.
- **Pick your sled:** Sleds that can be steered and have braking features may allow for more control than flat sheets, snow discs, tubes and toboggans. Also make sure to follow manufacturer guidelines for the number of passengers a sled can safely hold.
- **Check the environment:** A safe sledding environment should:
  - be free of obstacles (e.g., trees, rocks, light posts, walls, etc.).
  - have plenty of space at the end of the hill to allow the sled to safely slow down (avoid driveways or hills that end in a street, drop off, parking lot, or a body of water like a river or pond).
  - be free of motorized vehicles like ATVs, snowmobiles, cars, etc. Use of these types of vehicles to pull a sled can lead to serious [injury](#) and even death.
- **Follow the rules:** Always ride the sled while seated with your feet facing the bottom of the hill. Only ride during daylight hours. Teach [children](#) to roll off the sled if it is going too fast or is going to crash so they can avoid collisions.
- **Stay for the fun:** Having an adult present to check the environment for hazards and make sure kids are following safety guidelines while sledding can prevent injuries. Data for this study were obtained from the National Electronic Injury Surveillance System (NEISS), which is operated by the U.S. Consumer Product Safety Commission. The NEISS database provides information on consumer product-related and sports- and recreation-related injuries treated in hospital emergency departments across the country.

**More information:** Kris H.C. Evans et al. Sledding-Related Injuries Among Children and Adults Treated in US Emergency Departments From 2008 to 2017, *Clinical Journal of Sport Medicine* (2020). [DOI: 10.1097/JSM.0000000000000864](#)

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