

## Report to the Boards of Health

Jennifer Morse, MD, MPH, FAAFP, Medical Director

*Mid-Michigan District Health Department, Wednesday, October 23, 2024*  
*Central Michigan District Health Department, Wednesday, October 23, 2024*  
*District Health Department 10, Friday, October 25, 2024*



### ***The Public Health of Halloween***

---

Halloween is a favorite holiday for many people in the United States. There are some risks that come along with it. In 2011, there was a survey about Halloween and safety of nearly 1,000 parents and caregivers of children 12 and under in the United States. Most (79%) said they had talked to their child about Halloween safety and 75% said they would not let their child go trick-or-treating without an adult with them. Most (75%) also said they keep safety in mind when they choose a costume however 40% of parents allowed at least one unsafe item to be used, such as a mask, long, baggy or loose clothing, and/or a sword, cane, stick or another sharp object. Most parents did not ensure safety features with their child's costume, such as flame-resistant material, non-toxic makeup, or reflective tape or stripping. Only a third (37%) required their child use a flashlight when going out.

Most parents (77%) had at least one specific concern about Halloween risks. These concerns included being hit by a vehicle (31%), poisoning from tampered or spoiled treats (24%), abductions (15%), falls (4%), burns (1%), broken bones (1%), or other fears. In reality, pedestrian accidents and death are likely the biggest risk, with more than twice as many children killed in pedestrian incidents on Halloween between 4:00 pm and 10:00 pm than the same times on other days of the year. A study done in the UK found that accidents on Halloween also caused higher numbers of non-fatal injuries and more severe injuries than other days of the year. The fear that treats will be tampered with or poisoned persists, even though there is no proof this has ever been a real or significant problem.

There are other risks associated with Halloween. One study found an estimated 20,579 pumpkin-related knife injuries over a 10-year period required emergency department (ED) care. The most typical age group were 10- to 19-year-olds, followed by children und 10-years old. Most injuries happened on a Saturday or Sunday, and the peak incidence of injury was on October 30th. While this is only around 2,000 injuries per year, there are only those severe enough to require ED treatment, and likely there were many more less severe injuries.

A review of health insurance claims for injuries between 2003 and 2014 for more than 150 million US individuals found that Halloween, when compared to Columbus Day as a control, found there was an increase in the risk of accidental falls, self-inflicted injuries, and injuries inflicted by others on Halloween, notably among young males. They did not find increases in poisonings, choking, drowning, and vehicle accidents. Since this is looking only at insurance claims, this would only identify things severe enough to need medical care. However, this does suggest that accidents, like trips and falls, as well as fights may be risks for injury on Halloween.

A study done in Canada looked at patients that had a heart attack from October 15 to November 15 between 1989 to 2018. There was a higher risk of heart attack on the day following Halloween, and this was more likely in men and people that had no history of heart disease. It is thought that overindulging on high fat, high sugar foods and potentially excess alcohol, causes many changes in the body leading to the increased risk. As eating sweets and drinking usually happen late in the evening of Halloween, the risks would happen the next day. The day of Halloween was associated with a lower risk of heart attack.

Some worry there would be an increased risk of child abduction and sexual abuse on Halloween and several states, municipalities, and parole departments in US have adopted policies banning known sex offenders from Halloween activities based on this assumption. A review of victim data was done from 1997 through 2005 in the National Incident-Based Reporting System (NIBRS) data sets and during this 9-year period, no significant increases

were seen in the risk for nonfamilial child sexual abuse on or just prior to Halloween. The period studied started before any areas would have adopted Halloween sex offender policies and any policies that may have been adopted over the 9-year period didn't appear to affect the overall sex offense rate.

A review of data from the National Electronic Injury Surveillance System (NEISS) All Injury Program (AIP) for the years 2005 through 2017 reviewed ED visits due to assaults and found that at Halloween, there was an increase in ED visits for injuries due to fights and intimate partner violence. There were decreases in visits for injuries due to robberies and other types of assaults. Of note, they did not find an increase in women presenting to the ED for sexual assault.

However, a review of sexual assault cases reported in Ottawa, Canada in 2013 found that sexual assault occurred more often at holidays, including Halloween, at mass gatherings, and during university orientation week. Victims of sexual assault at mass gatherings tended to be younger, were more likely to have consumed alcohol or drugs, were more likely to suspect they had been drugged, and only knew their assailant 30% of the time.

Halloween is very popular with young adults, especially college students. Studies have found that Halloween is one of the heaviest drinking events for college students throughout the school year. Halloween parties at colleges are not limited to just October 31<sup>st</sup>, and often happen over several days or on the surrounding weekends, known as "Halloweekend". Studies have found that excessive alcohol use continues during these carry-over times.

Dressing in costume on Halloween is popular, particularly on university campuses, and studies of commercially available Halloween costumes have found that women's costumes were significantly more revealing than men's costumes. In the studies, men rated costumed women higher on sexually objectifying traits. Studies of adult women's costume packaging have found that the imaging or ads on the packages hypersexualize the model based on the nature of costume and the poses of the model. Ads directed toward female adolescents showed similar results. While they didn't find this overall for child models, girl child models were more likely than male child models to be sexualized in the ads.

Finally, Halloween is the start of the 9-week period of holiday weight gain lasting until New Years that will contribute to more the half of the yearly weight gain most people experience. This weight gain has also been seen in children, and childhood obesity is an ever-growing problem. Of interest, one study found children were just as likely to choose toys as compared to sweets when trick or treating.

### **Recommendations:**

1. Pedestrian accidents are one of the biggest risks on Halloween. Young children should trick-or-treat with an adult, follow [Halloween safety tips](#), and add reflective features to costumes.
2. Alcohol and drug use is high on and around Halloween, especially at colleges and universities, contributing to many other accidents and injuries. Help promote safe use habits.
3. Try to focus away from food on Halloween. Consider other events or alternatives to candy. Help children ration their candy intake or consider donating a portion of candy to our troops at Operation Shoebox <https://operationshoebox.com/2023/11/11/candy-donations/>.
  - a. More healthy Halloween ideas: <https://chear.ucsd.edu/blog/4-tips-to-avoid-overeating-the-halloween-candy>, <https://www.heart.org/en/healthy-living/healthy-eating/eat-smart/nutrition-basics/how-to-have-a-healthy-halloween>

## Sources

- Mickalide, A. D., K. M. Rosenthal, and M. P. Donahue. "Halloween Safety: A National Survey of Parents' Knowledge, Attitudes, and Behaviors." Washington: Safe Kids Worldwide (2011). <https://www.safekids.org/research-report/halloween-safety-national-survey-parents-knowledge-attitudes-and-behaviors-october>
- Best, Joel. "Halloween Sadism: the evidence." Department of Sociology and Criminal Justice. <http://udspace.udel.edu/handle/19716/726>, accessed March 8 (2008): 2019.
- Hsu, Li-Min, et al. "Pediatric traffic injuries on Halloween in the United Kingdom: prevalence and injury severity." *International journal of environmental research and public health* 18.17 (2021): 9093.
- Johnson, Charles A., et al. "Pumpkin carving knife injuries: National incidence and trends of hand injury." *The American Journal of Emergency Medicine* 60 (2022): 83-87.
- Zhang, Hanxin, and Atif Khan. "Risk of preventable injuries associated with Halloween." *Public health* 189 (2020): 94-96.
- Auger, Nathalie, Marianne Bilodeau-Bertrand, and Brian J. Potter. "Halloween and myocardial infarction: A case-crossover study." *Archives of cardiovascular diseases* 115.1 (2022): 57-59.
- Khurana, Bharti, Jaya Prakash, and Randall T. Loder. "Holiday effect on injuries sustained by assault victims seen in US emergency departments." *Emergency radiology* 30.2 (2023): 133-142.
- Sampsel, Kari, et al. "Characteristics associated with sexual assaults at mass gatherings." *Emergency medicine journal* 33.2 (2016): 139-143.
- Fitzke, Reagan E., et al. "High Spirits? Exploring "Halloweekend" Alcohol and Cannabis Use Among Heavy-Drinking College Students." *Journal of Studies on Alcohol and Drugs* 84.4 (2023): 520-529.
- Lennon, Sharron J., Zhiying Zheng, and Aziz Fatnassi. "Women's revealing Halloween costumes: other-objectification and sexualization." *Fashion and Textiles* 3 (2016): 1-19.
- Sherman, Aurora M., Haley Allemand, and Shayla Prickett. "Hypersexualization and sexualization in advertisements for Halloween costumes." *Sex Roles* 83 (2020): 254-266.
- Zorbas, C., Reeve, E., Naughton, S. et al. The Relationship Between Feasting Periods and Weight Gain: a Systematic Scoping Review. *Curr Obes Rep* 9, 39–62 (2020). <https://doi-org.proxy2.cl.msu.edu/10.1007/s13679-020-00370-5>