United States
Consumer Product Safety Commission

Toy-Related Deaths and Injuries Calendar Year 2023

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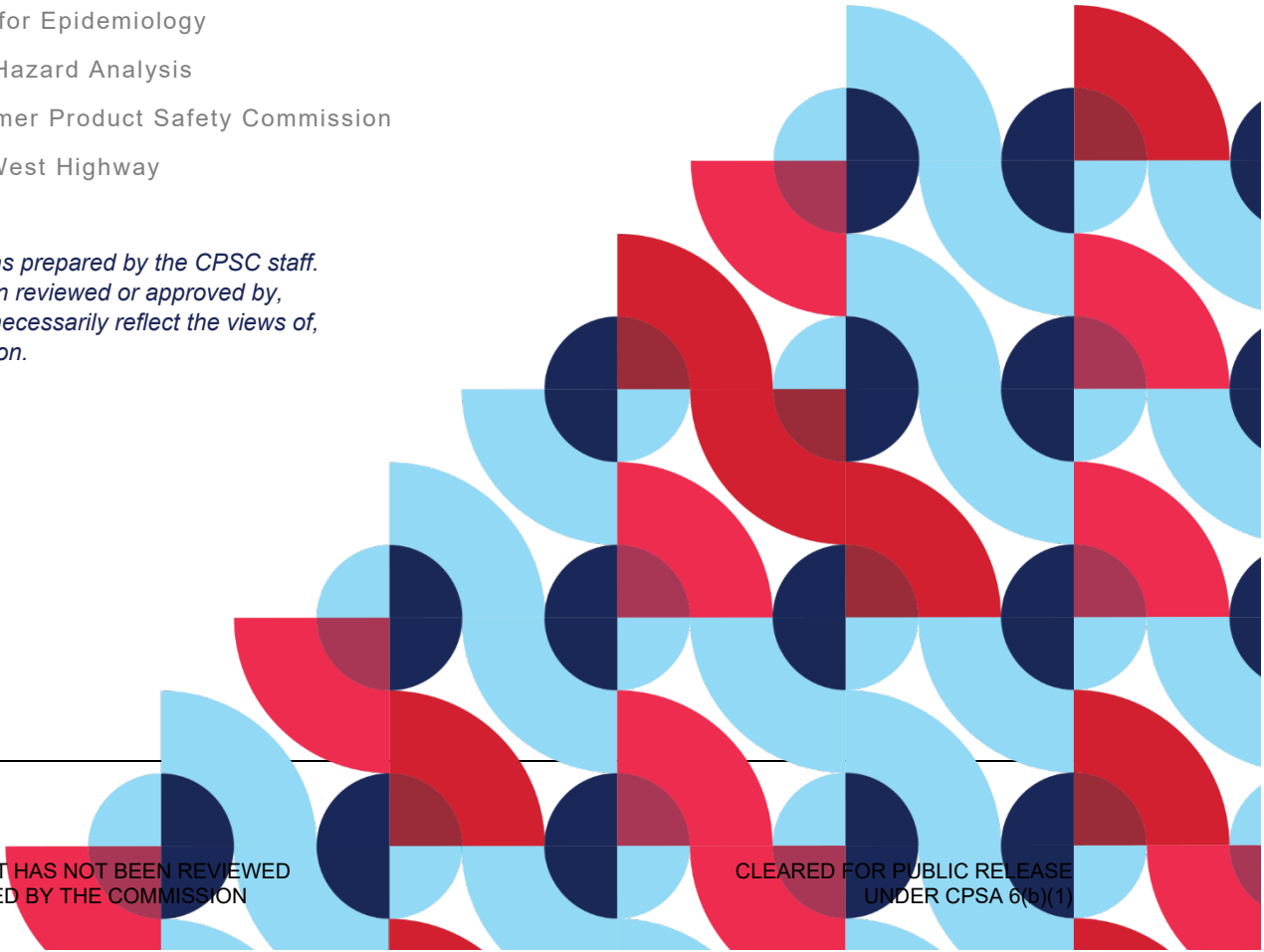

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Executive Summary

In this report, U.S. Consumer Product Safety Commission (CPSC) staff present the latest available statistics on deaths and emergency department (ED)-treated injuries associated with toys. This report provides updated summary information on toy-related fatalities for the years 2021 and 2022, along with detailed information on known toy-related fatalities for 2023.

CPSC staff bases fatality counts on reports obtained from the CPSC database known as the Consumer Product Safety Risk Management System (CPSRMS). In addition, staff presents the estimated ED-treated injuries associated with toys for the 2023 calendar year, based on the National Electronic Injury Surveillance System (NEISS). Injury rates per 100,000 people are also provided, based on population data from the U.S. Census Bureau[1]. In Appendix A, staff presents historical, estimated toy-related, ED-treated injuries from 2016 to 2023, along with the coefficients of variation for the injury estimates. Appendix B lists the NEISS product codes used to generate this report. For toy-related deaths and injuries, it is important to note that although a toy was associated with many of the incidents, the toy was not necessarily the cause of the death or injury. Additionally, due to delays in death certificate reporting, fatality information is not yet complete, especially for 2022 and 2023.

CPSC staff received reports of 40 total toy-related deaths that occurred among children 14 years of age or younger for the years 2021 through 2023. The toys most commonly involved in the fatalities over the three-year period included flotation toys, bouncy balls, and other types of balls. From 2016 – 2023, an estimated 1.8 million toy-related injuries for all ages were treated in U.S. hospital emergency departments, an average of 226,300 injuries per year. Although the total estimated ED-treated toy-related injuries for all ages have seen an increase over the past three years (from 2021 through 2023), after an overall decline from 2016 through 2020, staff observed no statistically significant linear trend over the 2016 through 2023 period for the toy-related injury estimates.

For calendar year 2023, CPSC staff received reports of 10 toy-related deaths that occurred among children 14 years of age or younger. Two fatalities involved choking on a bouncy ball, another two deaths involved choking on a crayon, and an additional two were due to drowning while using a flotation toy. One report noted a set of twins died due to asphyxia from a wooden toy chest. One fatality was due to a motor vehicle collision with an unpowered scooter. The remaining fatality was the result of ingesting an unknown number of water beads. The children ranged in age from seven months to six years.

An estimated 231,700 toy-related injuries for all ages were treated in U.S. hospital emergency departments in 2023, and males accounted for 57 percent of the injuries. Of the estimated 231,700 toy-related injuries, 72 percent were sustained by children 14 years of age or younger; 67 percent were sustained by children 12 years of age or younger; and 36 percent were

[1]The 2023 population data used throughout this report was downloaded from the U.S. Census Bureau: https://www2.census.gov/programs-surveys/popest/datasets/2020-2022/national/asrh/nc-est2022-alldata-r-file08.csv.

sustained by children 4 years of age or younger.[2] 45 percent of the estimated injuries were to the head and face area, the most commonly affected area of the body; 21 percent of all injuries were classified as lacerations, the diagnosis associated with the largest number of estimated toy-related injuries. 92 percent of the ED-treated, toy-related injury victims were treated and released. Nonmotorized scooters were associated with the largest number of estimated toy-related injuries among the specifically identified toys, accounting for 23 percent of the estimated injuries.

[2]All toys intended for use by children 12 years of age and under must be third-party tested and certified in a Children's Product Certificate as compliant with the federal toy safety standard enacted by Congress, and to other applicable requirements as well. Additional age breaks are provided in this report to describe hazards to older and younger children, as were provided in prior reports.

Toy-Related Deaths[3]

Tables 1 and 2 summarize fatalities for children 14 years of age or younger that were associated with a toy, as reported to CPSC staff. Fatality information is presented separately for children 12 years of age or younger, and children 13 or 14 years of age[4]. The Directorate for Health Sciences (HS) provided the assessments of the scope of toy-related deaths that are reflected in the data presented here. HS staff considered fatalities to be in scope of this report if a toy was present and—based on statements by investigators, police, family members, or medical examiners—the toy may have played a contributing role in the death. Fatalities that occurred outside of the United States are excluded from this report.

Table 1 presents the reported deaths for the years 2021 through 2023 associated with toys for children 14 years of age or younger. A description of the toy types (and associated hazards) involved with more than one death that occurred from 2021 to 2023 are displayed. The information for other types of toys associated with only one fatality across the 3 years is summarized in the final row of the table.

Due to delays in death certificate reporting, fatality information is not yet complete, especially for 2022 and 2023. At the time of data extraction for this report, death certificate reporting was estimated to be at least 88 percent complete for years 2021 and earlier.[5] The data presented in this report for 2021 and 2022 have been updated since the previous annual report to include thirteen new fatality reports CPSC staff received – three fatalities that occurred in 2021 and ten fatalities that occurred in 2022. Thus, the data differ from the reported fatality tabulations detailed in the previous report for the calendar years 2021 and 2022.[6] The thirteen newly reported fatalities from 2021 and 2022 included choking on an unknown type of toy, choking on a plastic toy, ingesting a bouncy ball, choking on two toy balls used as projectiles for a toy gun, choking on a miniature billiards ball, strangulation while wearing a costume cape that wrapped around the back axle of an ATV while in motion, aspiration of a plastic construction toy, and six reports involving drowning while using a flotation toy.[7] The children ranged in age from 5 months to 10 years.

[3]These fatalities do not represent a sample of known probability of selection and, instead, should be considered a minimum.
[4]Toy-related deaths among children 12 years of age or younger are presented separately to be consistent with the age definition of a “children’s product” in the Consumer Product Safety Improvement Act of 2008 (CPSIA), 15 U.S.C. § 2052 (a)(2).
[5]Staff measures the reporting percent as the number of months for each state where at least one death certificate was received, divided by 600 (50 states multiplied by 12 months).
[6]Bragg, S. "Toy-Related Deaths and Injuries, Calendar Year 2022," CPSC, November 2023
[7]An additional product code (3279 - Flotation toys [excluding official life-saving devices]) is included in the analyses for this year’s report, including an additional 3 deaths for 2021 and 3 deaths for 2022.

Table 1: Reported Toy-Related Deaths Among Children 14 Years of Age or Younger, 2021–2023

Type of Toy (Hazard)	2021[8]		2022[9]		2023	
	Children 12 Years of Age or Younger	Children 13 and 14 Years of Age	Children 12 Years of Age or Younger	Children 13 and 14 Years of Age	Children 12 Years of Age or Younger	Children 13 and 14 Years of Age
TOTAL	**9**		**21**		**10**	
Sub Total	**9**	**0**	**21**	**0**	**10**	**0**
Flotation toy (Drowning)	3	0	3	0	2	0
Bouncy ball (Choking, ingestion)	1	0	3	0	2	0
Ball, other (Choking, blunt force trauma to head)	0	0	4	0	0	0
Plastic toy (Aspiration, choking)	1	0	2	0	0	0
Stuffed animal (Positional asphyxia)	2	0	1	0	0	0
Balloon (Asphyxia, choking)	1	0	1	0	0	0
Crayon (Choking)	0	0	0	0	2	0
Nonmotorized scooter (Motor vehicle collision)	0	0	1	0	1	0
Toy chest (Asphyxia)	0	0	0	0	2	0
Other toys with a single reported fatality* (Choking, drowning, fall, ingestion, motor vehicle collision, strangulation)	1	0	6	0	1	0

Source: CPSRMS and NEISS. Data were extracted in March 2024.
*This category includes the following toys: four-wheel powered riding toy, costume cape, mini billiard ball, rotating toy, toy magnet, tricycle, water beads, and an unknown toy.

[8]Three new toy-related deaths were reported to CPSC due to the addition of flotation toys, increasing the number of reported deaths to 9 in 2021 (from the 6 presented in the previous report).
[9]Ten new toy-related deaths were reported to CPSC, including three from the addition of flotation toys, increasing the number of reported deaths to 21 in 2022 (from the 11 presented in the previous report).

Table 2 details the fatalities associated with toys for children 14 years of age or younger in 2023 that were reported to the CPSC. The toy types and associated hazards involved in these reported fatalities are presented in descending order of frequency.

Table 2: Reported Toy-Related Deaths Among Children 14 Years of Age or Younger, 2023

Type of Toy (Hazard)	Children 12 Years of Age or Younger	Children 13 and 14 Years of Age
TOTAL	**10**	
Sub Total	**10**	**0**
Bouncy ball (Choking)	2	0
Crayon (Choking)	2	0
Flotation toy (Drowning)	2	0
Toy chest (Asphyxia)	2	0
Nonmotorized scooter (Motor vehicle collision)	1	0
Water beads (Ingestion)	1	0

Source: CPSRMS and NEISS. Data were extracted in March 2024.

Of the 10 toy-related fatalities in 2023, 4 were male and 6 were female. Six victims were known to be white, 1 was known to be Asian, 1 was Black/African American, and 1 was American Indian/Alaska Native. The children ranged in age from 7 months to 6 years. The scenario-specific details of these incidents are presented below.

Bouncy ball

- A 4-year-old white male choked to death on a 1-inch bouncy ball. The victim's parents and emergency responders attempted CPR without success. The victim was unresponsive and blue in the face during CPR. The bouncy ball was eventually removed from the victim's throat. The victim was transported to a local hospital and died the following day.

- A 1-year-old Asian male choked on a rubber bouncy ball. The child's mother attempted to remove the ball but was unable to open the victim's mouth. Emergency responders initiated resuscitation measures and transported the victim to the hospital, where he was later pronounced deceased.

Crayon

- A 7-month-old white female presented in the hospital in cardiac arrest after choking on a crayon.

- An 8-month-old white female, who was born with a cleft lip and palate, died from asphyxiation after choking on a partial crayon that had at some point broken. The victim initially began spitting up and gasping for air, and then lost consciousness and stopped breathing. Although on-scene emergency responders did not initially see the crayon lodged in the victim's throat due to the vomit and the victim's nasoalveolar molding, they were finally able to see and remove the partial crayon. The victim was transported to a local hospital, but never regained consciousness and was declared deceased shortly thereafter.

Flotation toy

- A two-year-old American Indian/Alaska Native female drowned in a relative's above-ground pool after being left alone and unsupervised sitting on a pool float. The victim's mother pulled the child from the pool after finding her floating face-down and performed CPR until first responders arrived. Emergency crews found the victim unresponsive and pulseless. They continued CPR while transporting the victim to a hospital where she was pronounced deceased.

- A four-year-old Black/African American male was at an in-ground pool playing, when he entered the water at 5-feet with flotation rings on. Multiple children and adults were in the pool but didn't notice the victim was having difficulties in the water. A bystander pulled the victim out and initiated CPR, and emergency assistance was called. The child was taken to a hospital where he was pronounced dead. His cause of death was drowning.

Toy chest

Four-year-old male and female white twins were found unresponsive in their bedroom inside a wooden toy chest. The chest lid had been closed on-top of them. Emergency responders pronounced the victims dead on-scene. The medical examiner's report stated that the cause of death was asphyxia for both victims, and the manner of death was accidental. The family stated the children were known to play hide and seek in the chest, but the children had never been known to close the lid on the chest.

Nonmotorized scooter

A six-year-old female was hit and killed while riding a nonmotorized scooter by a tractor-trailer driver while she was in the crosswalk. The child was taken to the hospital, where she died from her injuries.

Water beads

A 10-month-old white female was discovered unresponsive after consuming at least one water bead. The exact date of ingestion is unknown, but the child experienced symptoms the day before her death. The medical examiner determined that the child died from complications after a water bead expanded and caused a small intestine obstruction.

Estimated Toy-Related Injuries[10]

In 2023, an estimated 231,700 toy-related injuries for all ages were treated in U.S. hospital emergency departments, and males accounted for 57 percent of the injuries. Most of the victims (92 percent) were treated and released from the hospital; 6 percent of the victims were admitted to the hospital or transferred to another hospital. The remaining 2 percent were held for observation, left without being seen by a doctor, or died in the emergency department.

Table 3 presents the estimated toy-related, ED-treated injuries in 2023, for different age groups. Of the estimated 231,700 total toy-related injuries, 72 percent were sustained by children 14 years of age or younger; 67 percent were sustained by children 12 years of age or younger; and 36 percent were sustained by children 4 years of age or younger.

Table 3: Toy-Related ED-Treated Injury Estimates for Different Age Groups, 2023

Age Groups	All Ages	14 years of Age or Younger	12 Years of Age or Younger	4 Years of Age or Younger
Injury Estimates	231,700	167,500	154,700	83,800
Injuries per 100,000 People	69	284	306	454

Source: NEISS. Estimates are rounded to the nearest 100. Population estimates are from the U.S. Census Bureau.

Table 4 and Table 5 provide breakdowns by gender and ethnicity/race, respectively, for the estimated toy-related, ED-treated injuries in 2023 for the different age groups.

[10]The source of these data is NEISS, which is based on a statistical sample of hospital ED-treated injuries. For a description of which cases are included in NEISS, how they are coded, and an alphabetical listing of products with current product codes, please see the NEISS Coding Manual at: https://www.cpsc.gov/s3fs-public/January-2024-NEISS-CPSC-only-Coding-Manual.pdf?VersionId=bEaz2iKYDAlz8KA60KEKKrLrXZW3kLOj. Toy-related injury estimates among children 12 years of age or younger are presented separately to be consistent with the age definition of a “children’s product” in the Consumer Product Safety Improvement Act of 2008 (CPSIA), 15 U.S.C. § 2052 (a)(2).

Table 4: Toy-Related ED-Treated Injury Estimates for Different Age Groups by Victims' Gender, 2023

Gender	All Ages		14 years of Age or Younger		12 Years of Age or Younger		4 Years of Age or Younger	
	Estimated Injuries (% of Total Estimates‡)	% of U.S. Population	Estimated Injuries (% of Total Estimates‡)	% of U.S. Population	Estimated Injuries (% of Total Estimates‡)	% of U.S. Population	Estimated Injuries (% of Total Estimates‡)	% of U.S. Population
Male	131,100 (57)	50	100,500 (60)	51	91,800 (59)	51	53,400 (64)	51
Female	97,700 (42)	50	66,900 (40)	49	62,800 (41)	49	30,400 (36)	49
Gender Diverse and Intersex	N/A**		N/A**		-		-	

Source: NEISS. Estimates are rounded to the nearest 100. Population estimates are from the U.S. Census Bureau.
‡Percentages are calculated from the unrounded injury estimates and then rounded to the nearest integer.
**Estimates are unstable as the number of cases is less than 20.

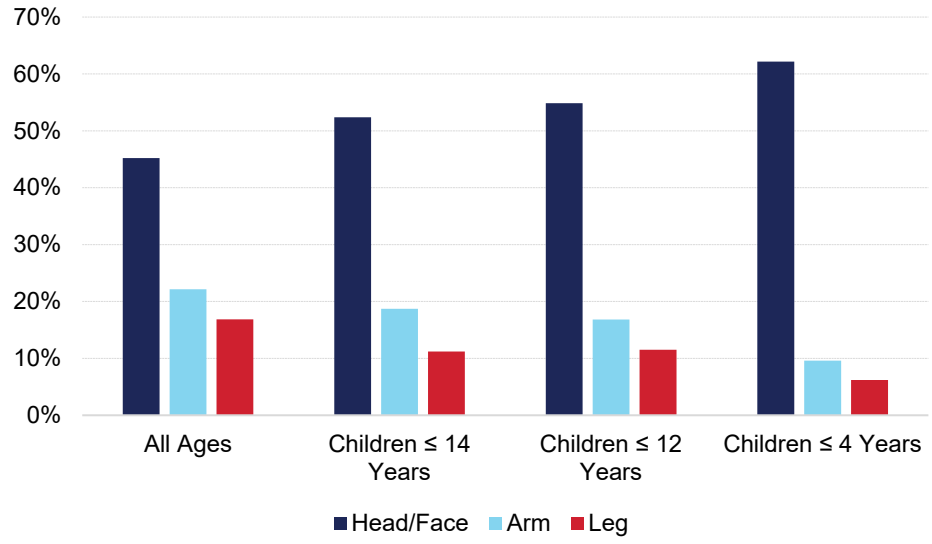
Table 5: Toy-Related ED-Treated Injury Estimates for Different Age Groups by Victims' Ethnicity and Race*, 2023

Ethnicity	Race	All Ages		14 years of Age or Younger		12 Years of Age or Younger		4 Years of Age or Younger	
		% of Est. Inj.‡	% of U.S. Population	% of Est. Inj.‡	% of U.S. Population	% of Est. Inj.‡	% of U.S. Population	% of Est. Inj.‡	% of U.S. Population
Hispanic Origin		**13.9**	**19.3**	**17.5**	**26.2**	**19.0**	**26.2**	**17.4**	**26.8**
	White	8.3	16.8	9.9	21.7	10.6	21.6	11.8	21.8
	Black/African American	0.4	1.0	0.5	1.7	0.6	1.8	0.8	2.0
	Asian	0.1	0.2	0.1	0.4	0.2	0.4	0.2	0.4
	American Indian/Alaska Native	<0.1	0.6	-	1.0	-	1.0	-	1.1
	Native Hawaiian/Pacific Islander	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1	0.1
	Other[δ]	5.1	0.6	7.0	1.3	7.6	1.3	4.6	1.4
Non-Hispanic Origin		**86.1**	**80.7**	**82.5**	**73.8**	**81.0**	**73.8**	**82.6**	**73.2**
	White	63.8	58.5	63.0	48.1	59.7	48.0	65.0	46.8
	Black/African American	17.8	12.6	14.4	14.0	15.8	14.0	12.4	14.5
	Asian	1.4	6.2	1.5	5.7	1.6	5.8	2.0	5.7
	American Indian/Alaska Native	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.7
	Native Hawaiian/Pacific Islander	0.1	0.2	<0.1	0.2	<0.1	0.2	<0.1	0.2
	Other[δ]	2.3	2.4	2.8	5.0	3.1	5.1	2.3	5.3
All		**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
	White	72.1	75.3	72.8	69.8	70.3	69.6	76.8	68.6
	Black/African American	18.2	13.7	14.9	15.7	16.3	15.8	13.2	16.4
	Asian	1.5	6.4	1.6	6.1	1.8	6.2	2.2	6.1
	American Indian/Alaska Native	0.7	1.3	0.7	1.7	0.8	1.8	0.9	1.8
	Native Hawaiian/Pacific Islander	0.1	0.3	<0.1	0.4	0.1	0.4	<0.1	0.4
	Other[δ]	7.4	3.1	9.8	6.3	10.7	6.3	6.9	6.6

Source: NEISS. Population estimates are from the U.S. Census Bureau
*Excludes any incidents where either Race was "Not Stated" or Ethnicity was "Not Stated", which composed 33 percent of the total estimated injuries.
‡Percentages are calculated from the unrounded injury estimates and then rounded to the nearest integer.
[δ]This category includes those of races not otherwise listed, including those of two or more races, whereas the corresponding Census data accounts for only the latter.

Figure 1 presents the distribution of the 2023 annual estimated toy-related ED-treated injuries by the specific parts of the body most frequently injured for different age groups.[11,12] As shown in Figure 1, the head/face region was the part of the body associated with the largest number of estimated toy-related injuries in 2023 for all four age groups specified, followed by arms and then legs.

Figure 1: Distribution of Toy-Related Injury Estimates by Body Regions Injured, 2023

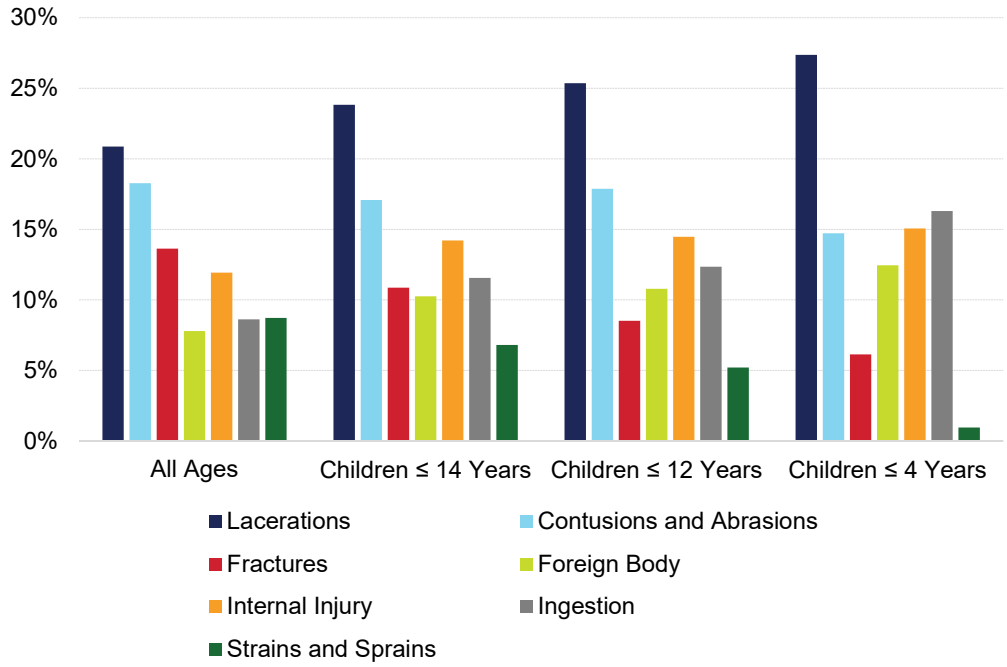


Source: NEISS
Head/Face regions include NEISS codes for head, eyelid, eye area, nose, forehead, eyeball, mouth, and ear. Arm includes upper arm, elbow, lower arm, shoulder, wrist, hand, and finger. Leg includes upper leg, knee, lower leg, ankle, foot, and toe.

Figure 2 shows the distribution of the annual estimated toy-related ED-treated injuries by the type of injuries diagnosed most frequently for the different age groups.[13] For all four age groups, lacerations was the diagnosis associated with the largest number of estimated toy-related injuries in 2023. Contusions/abrasions and fractures ranked second and third for the All Ages group. For both the groups Children 14 years of Age or Younger and Children 12 years of Age or Younger, contusions/abrasions and internal injury ranked second and third. For Children 4 years of Age or Younger, ingestion and internal injury ranked second and third.

[11]In October 2018, CPSC upgraded the NEISS system. As a result of this upgrade, an emergency-department visit is allowed to contain up to two codes for the body part injured and the diagnosis. In 2023, about 20 percent of the estimated toy-related injuries in NEISS had two codes filled in for body part injured and diagnosis.
[12]If either of the two codes listed a specific body part, staff classified that body part as being injured in the incident for the data analysis purpose.
[13]If either of the two codes listed a specific diagnosis (type of injury), staff classified that diagnosis as being the type of injury for the data analysis purpose.

Figure 2: Distribution of Toy-Related Injury Estimates by Type of Injuries, 2023



Source: NEISS

Table 6 presents the toy categories that were associated with the largest number of injuries in 2023. Nonmotorized scooters was the specifically identified toy category that accounted for the most injuries among all age groups, excluding the 4 Years of Age or Younger group.

Table 6: Toy Categories Associated with the Largest Number of Estimated ED-Treated Injuries for Different Age Groups, 2023

Toy Category	Estimated Injuries (% of Group Estimates‡)			
	All Ages	14 Years of Age or Younger	12 Years of Age or Younger	4 Years of Age or Younger
Nonmotorized Scooters	53,000 (23)	35,700 (21)	27,400 (18)	5,500 (7)
Toys, Not Specified	47,400 (20)	33,200 (20)	32,800 (21)	24,200 (29)
Balls, Other or Not Specified	20,800 (9)	14,400 (9)	13,200 (9)	3,900 (5)
Toys, Not Elsewhere Classified	14,800 (6)	13,100 (8)	12,700 (8)	7,900 (9)
Toy Vehicles (Excluding Riding Toys)	10,700 (5)	7,600 (5)	7,600 (5)	5,800 (7)

Source: NEISS. Estimates are rounded to the nearest 100.
‡Percentages are calculated from the unrounded injury estimates and then rounded to the nearest integer.

In 2020, a NEISS special study was initiated that further investigated all injuries associated with products coded as 5022 (Scooters, Powered) and 5024 (Scooters, Unspecified). See Appendix B for details on the special study. Based on the results from this study, staff was able to allocate to the nonmotorized scooter category a proportion of all injuries that were either miscoded as powered scooters or coded as unspecified-if-powered scooters. Hence, the estimates for nonmotorized scooters in 2020 through 2023 are based on the code for nonmotorized scooters as well as a proportion of the miscoded/unspecified scooters, as informed by the results of the special study. Nonmotorized scooters continued to be the specifically identified category of toys associated with the most injuries among all ages.

Table 7 displays the annual estimated ED-treated injuries associated with nonmotorized scooters and the percentages of injury estimates for different age groups from 2019 to 2023. The estimates for 2022 have been updated since the publication of the previous report. Four cases from the 2022 special study were determined to have been nonmotorized scooters rather than either motorized or unspecified-if-motorized scooters, as originally coded. However, the revision could not be made in a timely manner before the annual report was published. Staff found no statistically significant linear trend in the injury estimates between 2019 and 2023.[14]

Table 7: Nonmotorized Scooter-Related ED-Treated Injury Estimates for Different Age Groups, 2019–2023

Calendar Year	Estimated Injuries (% of Group Estimates‡) Associated with "Nonmotorized Scooter"			
	All Ages	14 Years of Age or Younger	12 Years of Age or Younger	4 Years of Age or Younger
2019	45,400 (20)	35,600 (22)	32,800 (21)	4,700 (6)
2020	42,400 (21)	37,000 (25)	34,700 (24)	5,600 (7)
2021	44,600 (21)	37,700 (24)	32,000 (22)	6,200 (8)
2022*	42,000 (19)	33,300 (21)	24,800 (17)	6,600 (8)
2023	53,000 (23)	35,700 (21)	27,400 (18)	5,500 (7)

Source: NEISS. Estimates are rounded to the nearest 100.
‡Percentages are calculated from the unrounded injury estimates and then rounded to the nearest integer.
*All estimates in this row were revised since the previous report that was published in 2023.

Toys that are identified but cannot be placed under already established toy product codes are likely to be coded under the product code "Toys, Not Elsewhere Classified." Table 8 displays the estimated ED-treated injuries associated with this product code and the percentages of injury estimates for different age groups from 2019 to 2023. Staff found a statistically significant increasing trend in the injury estimates for all the age groups.[15]

[14]The lowest p-value (probability of occurrence by chance) for the age groups was 0.29. For methodology on trend analysis, see T. Schroeder, "Trend Analysis of NEISS Data," CPSC, 2000.
[15]The p-values for the All Ages, 14 Years of Age or Younger, 12 Years of Age or Younger, and 4 Years of Age or Younger groups were 0.02, 0.01, 0.01, and 0.01, respectively.

Staff also examined all NEISS injury case narratives for 2023 under the product code "Toys, Not Elsewhere Classified" to determine the most common types of toys included. Water beads was the most frequently identified toy coded under this product code for 2023. Of the total 14,800 estimated injuries for 2023 for the All Ages group, approximately 6,000 injuries (41 percent) involved the use of a water bead. Other types of toys classified under this product code include liquid bubbles for blowing, hula hoops, and piñatas.

Table 8: ED-Treated Injury Estimates Associated with "Toys, Not Elsewhere Classified" for Different Age Groups, 2019–2023

Calendar Year	Estimated Injuries (% of Group Estimates‡) Associated with "Toys, Not Elsewhere Classified"			
	All Ages	14 Years of Age or Younger	12 Years of Age or Younger	4 Years of Age or Younger
2019	6,100 (3)	4,600 (3)	4,400 (3)	2,100 (3)
2020	7,000 (3)	5,900 (4)	5,800 (4)	3,200 (4)
2021	8,400 (4)	7,300 (5)	7,200 (5)	4,500 (6)
2022	10,800 (5)	9,200 (6)	9,000 (6)	5,000 (6)
2023	14,800 (6)	13,100 (8)	12,700 (8)	7,900 (9)

Source: NEISS. Estimates are rounded to the nearest 100.
‡Percentages are calculated from the unrounded injury estimates and then rounded to the nearest integer.

The product code "Toys, Not Specified" is used to classify injuries that were associated with a toy that was not specifically identified in the NEISS injury narrative. Table 9 presents the annual estimated ED-treated injuries associated with this product code and the percentages of injury estimates for different age groups from 2019 to 2023. Staff observed no statistically significant linear trend in the estimated injuries between 2019 and 2023.[16]

Table 9: ED-Treated Injury Estimates Associated with "Toys, Not Specified" for Different Age Groups, 2019–2023

Calendar Year	Estimated Injuries (% of Group Estimates‡) Associated with "Toys, Not Specified"			
	All Ages	14 Years of Age or Younger	12 Years of Age or Younger	4 Years of Age or Younger
2019	52,300 (23)	32,600 (20)	31,900 (20)	23,600 (30)
2020	50,200 (25)	33,100 (22)	32,900 (22)	24,200 (31)
2021	44,100 (21)	28,000 (18)	27,800 (19)	21,000 (27)
2022	46,300 (21)	32,500 (20)	31,800 (21)	23,000 (29)
2023	47,400 (20)	33,200 (20)	32,800 (21)	24,200 (29)

Source: NEISS. Estimates are rounded to the nearest 100.
‡Percentages are calculated from the unrounded injury estimates and then rounded to the nearest integer.

[16]The lowest p-value for the age groups was 0.20.

Appendix A

Estimated Number of Toy-Related Injuries from 2016 through 2023

Table 10, Figure 3, and Figure 4 display the annual ED-treated injury estimates and rates associated with toys from 2016 through 2023. The total estimated ED-treated toy-related injuries for all ages have seen an increase over the past three years (from 2021 through 2023), after an overall decline from 2016 through 2020. Nevertheless, staff observed no statistically significant linear trend over the 2016 through 2023 period for the injury estimates.[17]

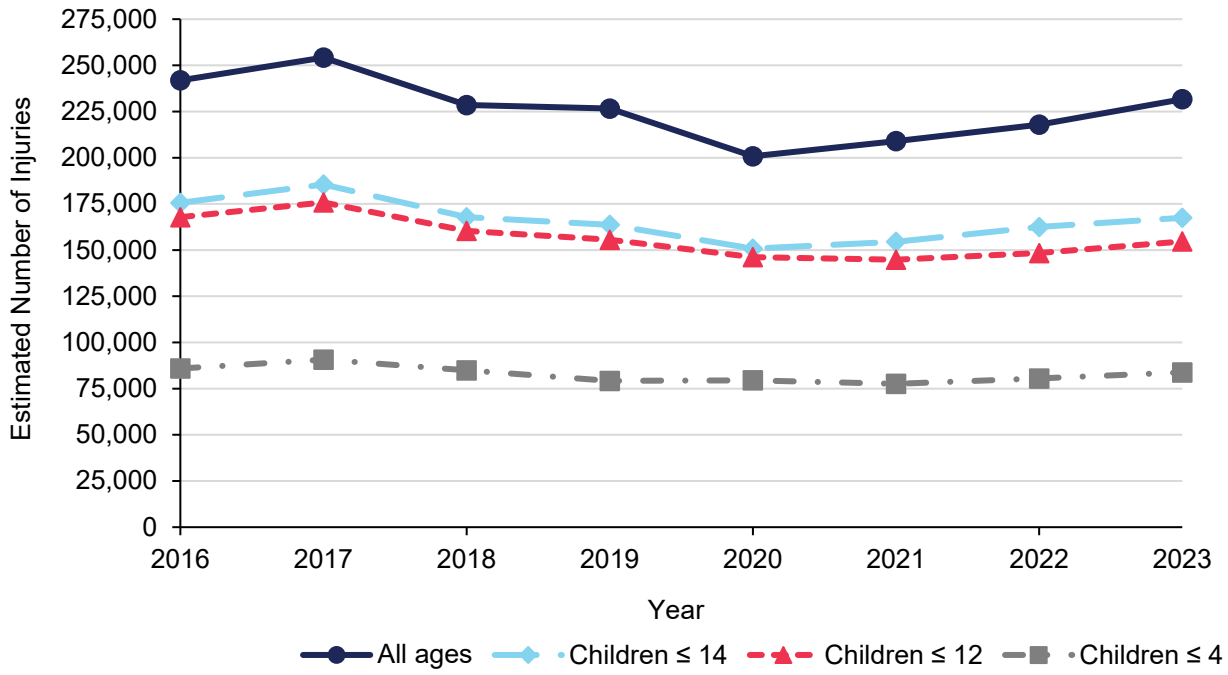
[17]The lowest p-value for the age groups was 0.15.

Table 10: Toy-Related ED-Treated Injury Estimates for Different Age Groups, 2016–2023

Calendar Year	All Ages			14 Years of Age or Younger			12 Years of Age or Younger			4 Years of Age or Younger		
	Injury Estimate	CV*	Injuries per 100,000 People	Injury Estimate	CV*	Injuries per 100,000 People	Injury Estimate	CV*	Injuries per 100,000 People	Injury Estimate	CV*	Injuries per 100,000 People
2016	241,900	0.0951	75	175,600	0.1138	288	167,800	0.1163	318	85,900	0.1320	431
2017	254,200	0.0928	78	185,500	0.1104	304	175,800	0.1114	334	90,700	0.1319	456
2018	228,500	0.1063	70	167,800	0.1350	276	160,400	0.1337	306	84,900	0.1406	430
2019	226,600	0.1178	69	163,700	0.1456	270	155,600	0.1461	298	79,200	0.1521	405
2020	200,800	0.1182	61	150,800	0.1370	249	146,200	0.1381	282	79,500	0.1493	417
2021	209,000	0.1143	63	154,500	0.1387	258	144,800	0.1425	283	77,600	0.1638	415
2022	217,900	0.1195	65	162,500	0.1443	273	148,400	0.1467	292	80,500	0.1753	434
2023	231,700	0.1198	69	167,500	0.1503	284	154,700	0.1544	306	83,800	0.1607	454

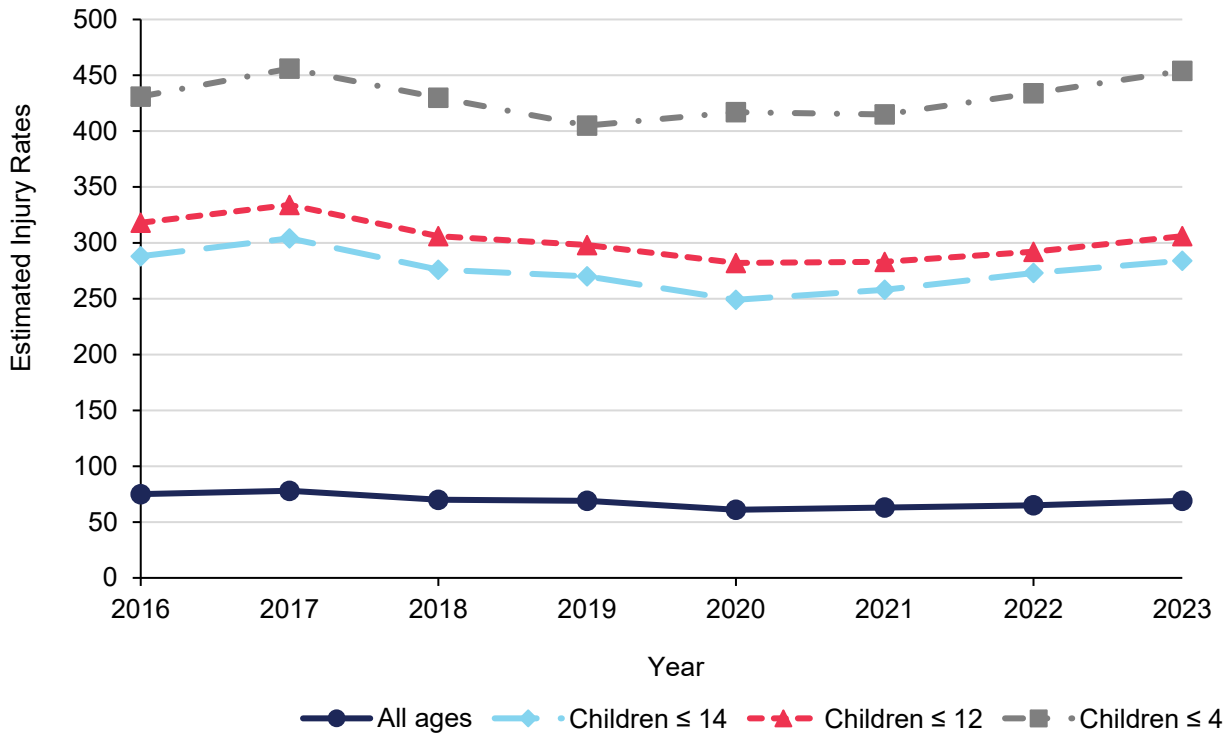
Source: NEISS. Estimates are rounded to the nearest 100. Population estimates from 2016 – 2019 are from https://www2.census.gov/programs-surveys/popest/datasets/2010-2019/national/asrh. Population estimates from 2020 – 2023 are from https://www2.census.gov/programs-surveys/popest/datasets/2020-2022/national/asrh
These data include an additional product code (3279 - Flotation toys [excluding official life-saving devices]) not counted in previous reports; injury estimates, coefficients of variation (CVs), and injury rates have been updated for all years presented above and therefore may differ from past reports.
*CV is a measure of the dispersion of the data as a ratio of the standard deviation to the injury estimate. The higher the CV, the larger the dispersion is. The population estimates are assumed to be constant, and therefore the CVs for the estimated injuries per 100,000 people are equivalent to the CVs for the injury estimates.

Figure 3: Toy-Related ED-Treated Injury Estimates for Different Age Groups, 2016–2023



Source: NEISS
These data include an additional product code (3279 - Flotation toys [excluding official life-saving devices]) not counted in previous reports; injury estimates have been updated for all years presented above and therefore may differ from past reports.

Figure 4: Toy-Related ED-Treated Injury Rates (per 100,000 People) for Different Age Groups, 2016–2023



Source: NEISS. Population estimates from 2016 – 2019 are from https://www2.census.gov/programs-surveys/popest/datasets/2010-2019/national/asrh. Population estimates from 2020 – 2023 are from https://www2.census.gov/programs-surveys/popest/datasets/2020-2022/national/asrh
These data include an additional product code (3279 - Flotation toys [excluding official life-saving devices]) not counted in previous reports; injury rates have been updated for all years presented above and therefore may differ from past reports.

Appendix B

NEISS Product Codes for Toys

Product Code	Toy Type
1301	Tricycles (Children's)
1309	Kites or Kite String
1310	Pogo Sticks
1314	Rocketry Sets
1319	Metal or Plastic Molding Sets
1322	Children's Play Tents, Play Tunnels, or Other Enclosures
1325	Inflatable Toys (Excluding Balls and Balloons)
1326	Blocks, Stacking Toys, or Pull Toys
1327	Non-Wheeled Riding Toys, Unpowered
1328	Wagons (Children's)
1329	Scooters, Unpowered (pre-2020)
1330	Powered Riding Toys
1338	Toy Bows or Arrows
1342	Costumes or Masks
1344	Toy Musical Instruments
1345	Building Sets
1346	Clacker Balls
1347	Balloons (Toy)
1349	Stilts
1350	Squeeze or Squeaker Toys
1352	Slingshots or Sling-Propelled Toys
1353	Toy Boxes or Chests
1354	Marbles
1362	Wood-burning Kits
1365	Water Toys (Excluding Squeeze/Squeaker Toys and Inner Tubes or Similar Floating Equipment)
1376	Molding Compounds
1381	Toys, Not Elsewhere Classified
1389	Other Toy Weapons (Non-projectile)
1390	Toy Guns, Not Specified
1392	Toy Sports Equipment
1393	Chemistry Sets or Science Kits
1394	Dolls, Plush Toys, and Action Figures
1395	Toys, Not Specified
1398	Wheeled Riding Toys, Unpowered (Excluding Bicycles and Tricycles)
1399	Toy Guns with Projectiles
1550	Infant and Toddler Play Centers (Excluding Jumpers, Bouncers, and Exercisers)

Product Code	Toy Type
3279	Flotation toys (excluding official life-saving devices)
5001	Other Toy Weapons (Projectile)
5005	Riding Toys (Excluding Bicycles and Tricycles), Not Specified
5006	Other Toy Guns
5007	Toy Weapons, Not Specified
5010	Crayons Or Chalk (Excluding Billiard or Pool Chalk)
5013	Toy Make-Up Kits or Cosmetics (Excluding Mirrors)
5015	Toy Caps, Cap Toys, or Cap Guns
5016	Balls, Other or Not Specified
5017	Flying Discs and Boomerangs
5018	Doll Houses and Other Play Scenes
5019	Games or Game Parts (Excluding Marbles and Computer Games)
5020	Pretend Electronics, Tools, Housewares, and Appliances
5021	Toy Vehicles (Excluding Riding Toys)
5023	Scooters, Unpowered (2020 and later)
5024	Scooters, Unspecified (2020 and later)

NEISS 2020 Special Study

Prior to 2020, the NEISS product code 1329 (Scooters, Unpowered) was used to capture injuries related to unpowered (i.e., nonmotorized) riding scooters as well as unknown-if-powered scooters. While it was understood and accepted that some proportion of the injuries associated with this code was not unpowered riding scooters, historically, it had been used to identify the unpowered riding scooter toys in the annual Toy reports.

In 2020, two new NEISS product codes, 5023 (Scooters, Unpowered) and 5024 (Scooters, Unspecified), were implemented by the Division of Data Systems in the Directorate for Epidemiology (EPDS) to replace product code 1329. This allows staff to distinguish between the known unpowered scooters and unknown-if-powered scooters. During the same time, EPDS also launched a special study to follow up on all NEISS injuries that were related to product code 5022 (Scooters, Powered) and 5024 (Scooters, Unspecified). While the purpose of the special study was to gain more in-depth knowledge about injuries related to powered or e-scooters, the study also identified the proportion of injuries that were actually related to powered scooters, unpowered scooters, and other types of scooters. The study has continued each year since 2020. Based on these results, EPHA staff was able to proportionally allocate the entire set of injuries under code 5024 (Scooters Unspecified) to unpowered/nonmotorized riding scooter toys for this analysis. In addition, the special study also identified any miscoded injury cases—such as an injury case originally coded under 5022 (Scooters, Powered) that was found to be an unpowered scooter during the follow-up interview with the patient. As such, the estimated injuries related to nonmotorized scooter toys in this annual report for 2020 through 2023 are based on both the product code 5023 for unpowered scooters as well as a proportion

of the unspecified scooters and the miscoded powered scooters, as informed by the results of the special study.