



Summer Safety: Product Injury Patterns for Children

Kids In Danger
July 2018



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Executive Summary

Summer is a time for children to explore the outdoors and enjoy warm-weather activities. Many children's products that are used in the summer help children reach important developmental milestones: cycling, swimming, jumping, balancing and more. However, many of those products can also have hazards that are commonly unknown to consumers. This report investigates the consumer products that accompany common summer activities. The report analyzes data from 2014 to 2017, compiling recent injuries and statistics associated with summertime children's products.

Findings:

- According to CPSC data, injuries to children ages 14 and under are most likely to happen in the summer months.
- Playground activities have been the leading cause of consumer product-related injuries that occur outside of the home for children ages 1-9 for the last 10 years in a row.
- Trampolines are now the second highest cause of consumer-product related injury occurring outside the home for children ages 0-4. For children ages 5-9, trampolines are the third highest cause of injury occurring outside the home, behind bicycles and playground equipment.
- Bicycle-related injuries to children ages 0-9 have decreased by 25% between 2014 and 2017.
- Swimming-related injuries have increased by 23% for children ages 0-9. Drowning is the leading cause of accidental death to children ages 1-4 and the second leading cause of accidental death to children ages 5-9, behind motor-vehicle accidents.

KID recommends:

- Routinely check the [CPSC](#) website for recall notices.
- If you own a product that is recalled, stop using it.
- Always provide the appropriate supervision and protective gear depending on the activity and your child's developmental stage.
- Report any problems with products to [SaferProducts.gov](#).

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Bicycles and Accessories

Injury Statistics

In America, bike riding is a favorite summertime activity for all ages. Since 2012, the number of cyclists/bike riders saw a big leap, increasing from around 51 million riders to slightly more than 66 million riders in 2017¹. According to a 2016 report, bicycling is the second most popular outdoor activity among youth in America².

Estimated number of injuries per year by age

	2014	2015	2016	2017
Ages 0-4	22,783	20,089	17,958	17,824
Ages 5-9	78,900	70,907	62,274	58,750

**Estimated injury statistics provided by NEISS*

Every year, 26,000 children are seen in emergency departments for traumatic brain injuries (TBI) related to bicycle-riding³. The National Electronic Injury Surveillance System (NEISS) estimates that in 2017 bicycles caused over 76,000 injuries to children between the ages of 0-9.

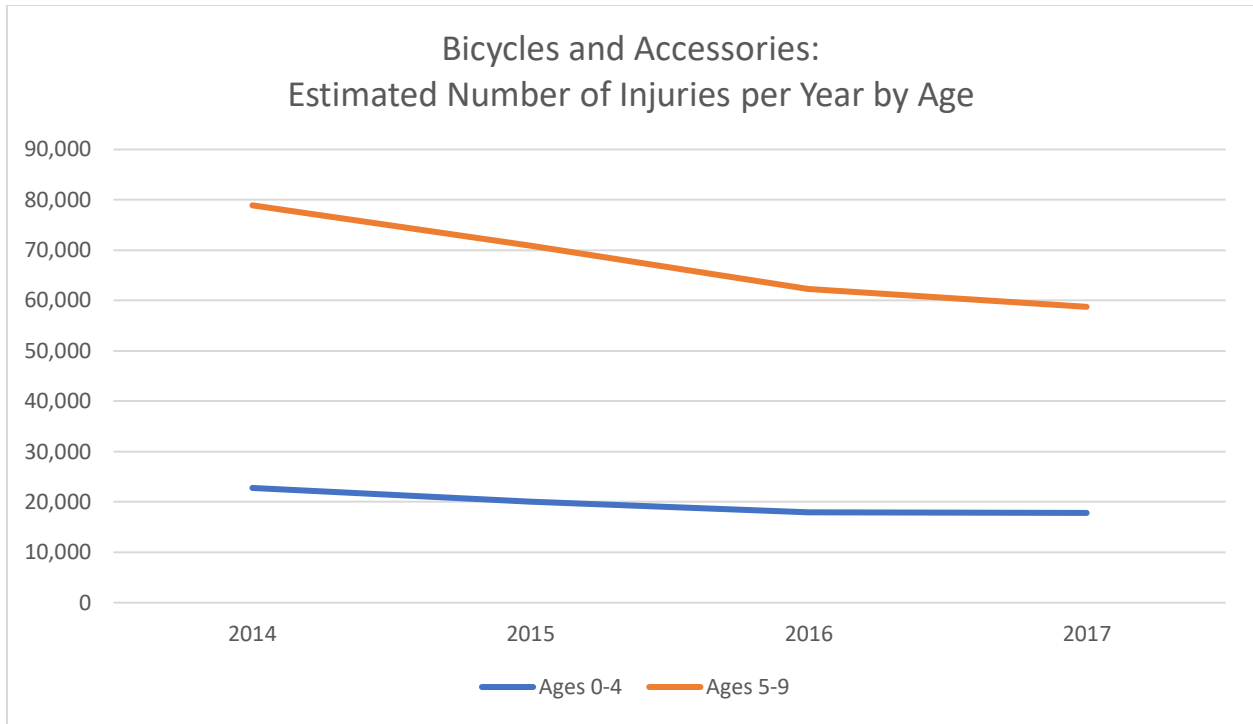
In 2017, 17,824 children between ages 0 and 4 were involved in bicycle accidents resulting in injury. For that same year, 58,750 children ages 5-9 were in bicycle-related accidents. According to NEISS data for children in both age groups, bicycle-related injuries to children ages 0-9 have decreased by over 25,000 injuries between 2014 and 2017, that's a 22% decline for the 0-4 age group, and a 26% decline for the 5-9 age group.

¹ <https://www.statista.com/statistics/227415/number-of-cyclists-and-bike-riders-usa/>

² <https://outdoorindustry.org/resource/infographic-cycling/>

³ https://www.safekids.org/sites/default/files/documents/skw_bike_fact_sheet_2016.pdf





*Estimated injury statistics provided by NEISS

Product Recalls

On November 7, 2017 [Norco Bicycles recalled their Children's Bicycles](#). According to CPSC, the bicycle cranks can bend and break during use. As a result, the recalled bicycles could pose a fall hazard to the user.



On January 21, 2016 [Chillafish recalled Children's Balance Bikes](#).

There were over 20,000 units recalled. According to CPSC, the overinflated bike tires can cause the wheel rims to crack and send pieces of the plastic rim flying. These pieces of plastic can pose a laceration hazard to the user or others in close contact of the bike.



Safety Measures and Recommendations

Helmets reduce the risk of head injury by at least 45 percent, brain injury by 33 percent, facial injury by 27 percent and fatal injury by 29 percent⁴. The CPSC recommends that both adults and children wear properly fitted, CPSC approved bicycle helmets. Nearly 70 percent of all fatal bicycle crashes involve head injuries. When buying a helmet look for the label that reads “Complies with U.S. CPSC Safety Standards for Bicycle Helmets”⁵.

Before riding, check that the bikes are roadworthy. Tires should be checked and pumped every season, and as needed after that. Additionally, check that the seat and handlebars are tight, and that the brakes are working. Wearing reflective and fluorescent clothing, adorning the bicycle with reflectors, and using active flashing devices will help increase visibility and reduce the risk of collision with automobiles. Low to the ground tricycles and riding toys can be made safer with the addition of a tall flag to make sure vehicles can see the rider.

⁴ https://www.safekids.org/sites/default/files/documents/skw_bike_fact_sheet_2016.pdf

⁵ <http://www.cpsc.gov/onsafety/2013/05/bicycle-safety-its-no-accident/>



Swimming and Water Accessories

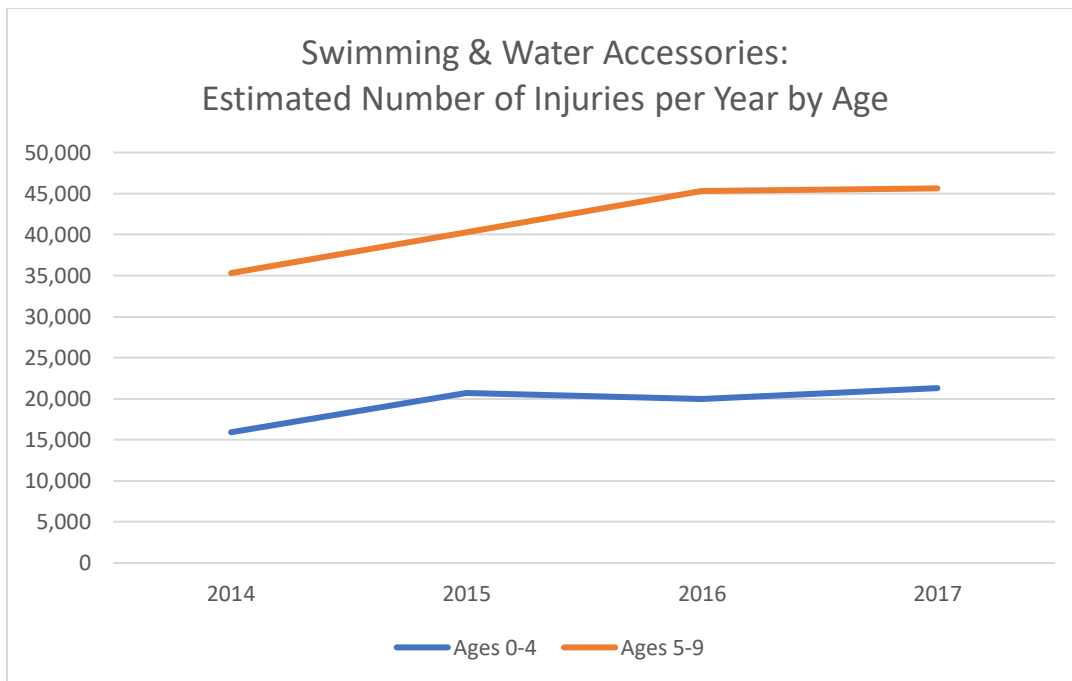
Injury Statistics

Swimming pools can offer a sense of ease and relaxation on warm summer days, but if left unsupervised swimming can quickly lead to injuries or death. [According to the U.S. Centers for Disease Control And Prevention](#), drowning is the leading cause of accidental death among children ages 1-4 and the second leading cause of accidental death among children ages 5-9, second only to motor-vehicle accidents (2016).

Estimated number of injuries per year by age

	2014	2015	2016	2017
Ages 0-4	15,929	20,729	19,965	21,304
Ages 5-9	35,316	40,242	45,325	45,630

**Estimated injury statistics provided by NEISS*



**Estimated injury statistics provided by NEISS*

In a 2016 the CPSC released a statement identifying childhood drownings as “a public health crisis” and “100 percent preventable”. Each year, nationwide, about 300 children 5 years and younger die from drowning in a swimming pool. Aside from those fatalities, over 2,000 children in that same age group are treated in emergency rooms for submersion injuries⁶. According to the most recent data from NEISS, swimming-related injuries treated in emergency departments for this age group increased by over 6,000 injuries (a 25% increase) since 2014.

Product Recalls

In February 2017, [S.R. Smith recalled Helix Pool Slides](#). According to the CPSC, a child is at risk of falling off the side of the slide before reaching the pool, posing risk of serious fall injuries. S.R Smith received 15 injury reports in regard to the slide, including one 4-year old girl whose injury resulted in a concussion. Other reports included damaged teeth, cuts to the chin that required stitches, bruising and scrapes.



In September 2010, [Coleman recalled their inflatable rubber river tubes](#). There were over 20,500 units recalled. The recall was due to a skin irritation hazard after 24 consumers reported skin irritation after coming in contact with the tube.



Safety Measures and Recommendations

Former CPSC chairman Elliot Kaye recommends simple water safety steps, such as teaching children how to swim, having four-sided fencing, learning CPR, and maintaining constant supervision of children around water. Be present, alert, and aware of your children as they swim. Equally important, be watchful of smaller children near swimming pools who may attempt to enter the pool without proper guidance or protection. Enclose the pool area with a fence, gate, or child resistant ladder to prevent access to the pool. Learn how to conduct CPR for children and adults and ensure that both you and your child know water safety rules as well as how to swim. Visit the CPSC’s [Pool Safely](#) website for more safety tips and take the [Pool Safely Pledge](#). You can also refer to this [Pool Safety Checklist](#) next time you and your family are headed toward the swimming pool.

⁶ <https://www.cpsc.gov/s3fs-public/359.pdf>

Trampolines

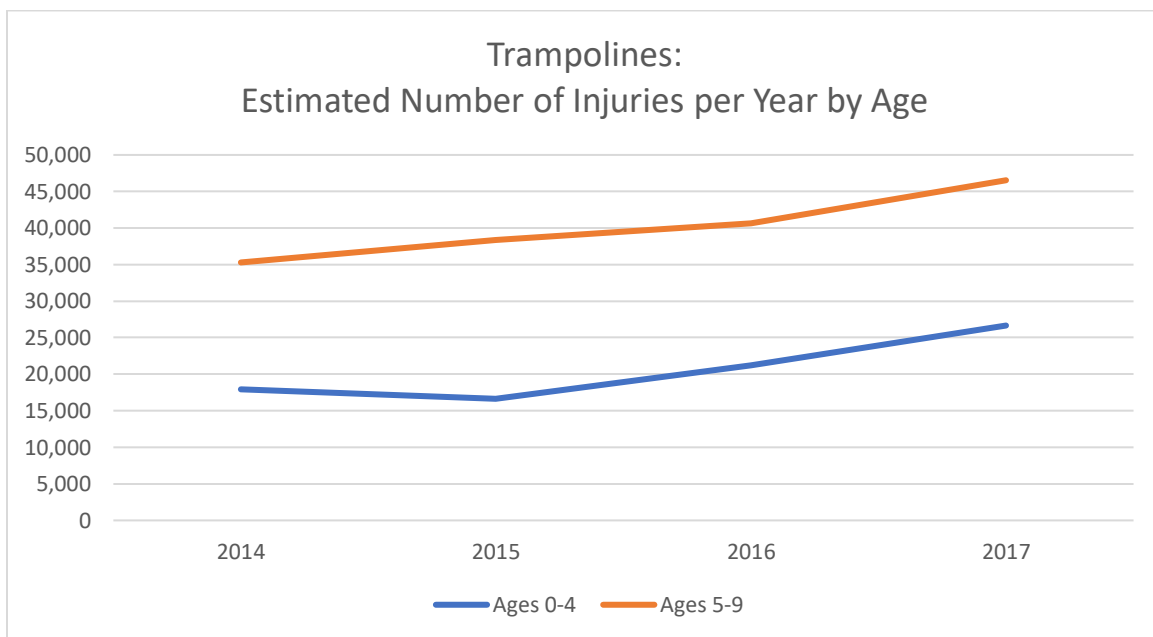
Injury Statistics

Jumping on trampolines offers that unique feeling of butterflies in the stomach as you're literally reaching new heights, for young children this could be a new and exciting experience. However, trampolines are involved in many serious injuries each year. Injuries to children ages 0-9 by trampolines have increased since 2014. Trampolines are responsible for the second highest injury rates among children ages 0-4 compared to all other outdoor activities. In 2017, over 26,000 children ages 0-4 visited the emergency room with trampoline-related injuries. That number has increased by over 10,000 incidents since 2008, according to KID's previous [Summer Safety Report](#).

Estimated number of injuries per year by age

	2014	2015	2016	2017
Ages 0-4	17,976	16,636	21,253	26,658
Ages 5-9	35,291	38,327	40,659	46,536

**Estimated injury statistics provided by NEISS*



**Estimated injury statistics provided by NEISS*



In 2015, there were nearly 295,000 trampoline injuries to both children and adults that required medical treatment, including more than 102,000 visits to the emergency room. Still, 90% of injuries that occur on trampolines are sustained by children, specifically to children ages 5 to 14. More than 75% of injuries on trampolines occur when two or more children use the trampoline at the same time⁷. The American Academy of Pediatrics discourages the recreational use of home trampolines due to this increased rate of injury⁸.

Product Recalls

In November 2012 over 23,000 units of the [Sportspower Trampolines were recalled](#) due to an injury hazard. According to CPSC, the metal legs of the trampoline can move out of position and puncture the jumping area, posing risks of injury that include deep, penetrating puncture wounds, cuts and bruises to children and adults on the trampoline.



Safety Measures and Recommendations

The AAP's current stance is that trampolines should only be used for supervised indoor athletic training programs, and that recreational use at home should be avoided. If you or someone you know chooses to use a trampoline recreationally, only allow use by one person at a time. During use, avoid somersaults or flips, which have been known to lead to cervical spine injuries when done on a trampoline.

Additionally, the Mayo Clinic suggests the following precautions if choosing to use a trampoline: the trampoline should be set up at ground level with safety net and padded springs. They also recommend parents limit the use of trampolines to special occasions⁹.

⁷ <https://orthoinfo.aaos.org/en/staying-healthy/trampoline-injury-prevention>

⁸ <http://pediatrics.aappublications.org/content/130/4/774>

⁹ <https://www.mayoclinic.org/healthy-lifestyle/childrens-health/expert-answers/trampoline-exercise/fdq-20058001>

Playground Equipment

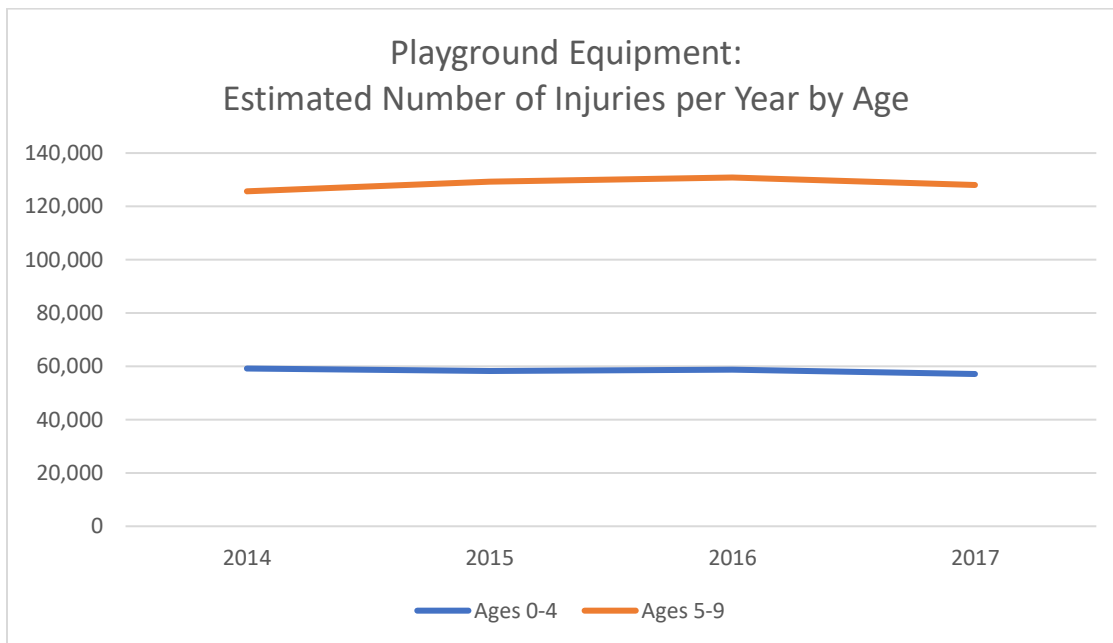
Injury Statistics

Summer months are full of visits to the playground, where children feel free to run and play without reservations. However, over 200,000 children are treated for playground-related injuries in the emergency room each year in the United States ¹⁰.

Estimated number of injuries per year by age

	2014	2015	2016	2017
Ages 0-4	59,186	58,354	58,650	57,119
Ages 5-9	125,659	129,157	130,845	128,069

**Estimated injury statistics provided by NEISS*



**Estimated injury statistics provided by NEISS*

¹⁰ <https://www.cdc.gov/safekid/playground/index.html>



For children ages 1-9, playground equipment is the leading cause of consumer-product related injuries that occur outside of the home (NEISS). According to the CDC, a third of playground-related injuries occur at public playgrounds and over half of the sustained injuries are fractures and contusions/abrasions. A recent study by the CDC found that emergency departments still see more than 20,000 children ages 14 and younger for playground-related traumatic brain injuries each year¹¹.

Product Recalls

In September 2015, the [Rainbow Play System recalled the trapeze rings on their playground units](#). Over 121,000 pairs of the rings were recalled. Rainbow received more than 100 reports of the rings cracking or breaking including 15 with reports of injuries consisting of bumps, bruises, lacerations, concussion and one broken finger.



As recently as May 2018, [Play and Park Structures recalled a slide](#) due to entrapment hazards. A gap between the rails near the entrance way to the slide poses an entrapment hazard to young children.



Safety Measures and Recommendations

Improper protective surfaces at the base of the playground equipment pose a hazard. Playground surfaces should have at least 12 inches of mulch, wood chips, sand, or pea gravel. Mats made of safety-tested rubber-like material are also acceptable. This surface should also extend at least 6 feet in all directions from the play equipment. Be aware of overcrowded play areas. Play areas should be at least 30 inches high and spaced at least 9 feet apart. Uneven surfaces or tree stumps, sharp edges such as loose nails or bolt ends, and platforms without guardrails can also pose tripping hazards. To read more about these recommendations, visit the CPSC's [playground safety guide](#), which explains more ways to ensure children's overall safety while at playgrounds this summer. Also, the CDC has developed a safety guide of [playground safety tips](#) for parents.

¹¹ <https://www.cdc.gov/safecild/playground/index.html>

Barbeques and Holidays

Injury Statistics

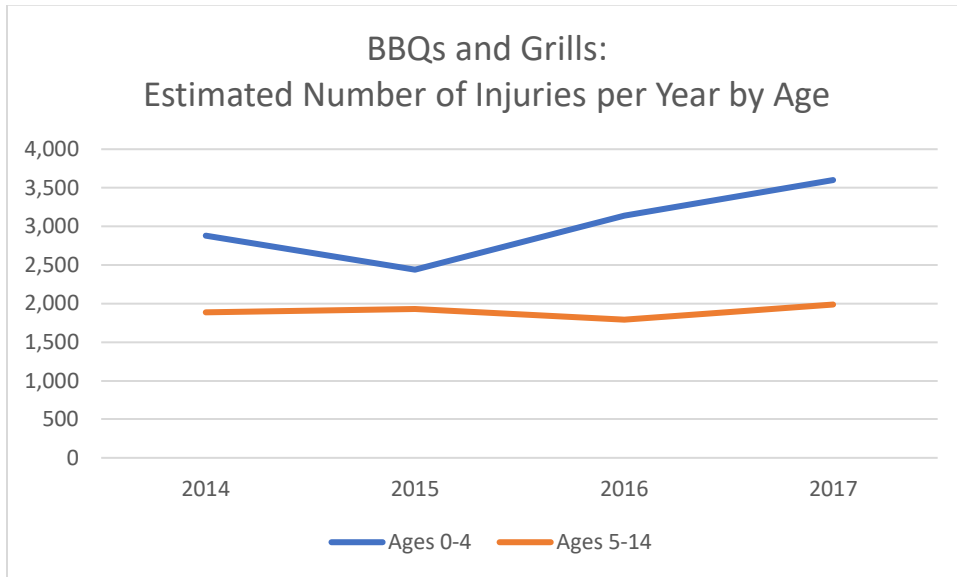
Nothing says summer like backyard barbeques. Whether you're celebrating a graduation or a holiday (or maybe you don't need an occasion to host a barbecue!), there are important safety tips to keep in mind to ensure that everyone stays safe and has a good time.

Estimated number of injuries per year by age

Product	Ages	2014	2015	2016	2017
BBQ grills, stoves, equipment	Ages 0-4	2,877	2,439	3,143	3,600
	Ages 5-14	1,887	1,932	1,791	1,987
Fireworks	Ages 0-4	1,374	719	1,206	1,029
	Ages 5-14	2,434	2,159	2,316	2,987

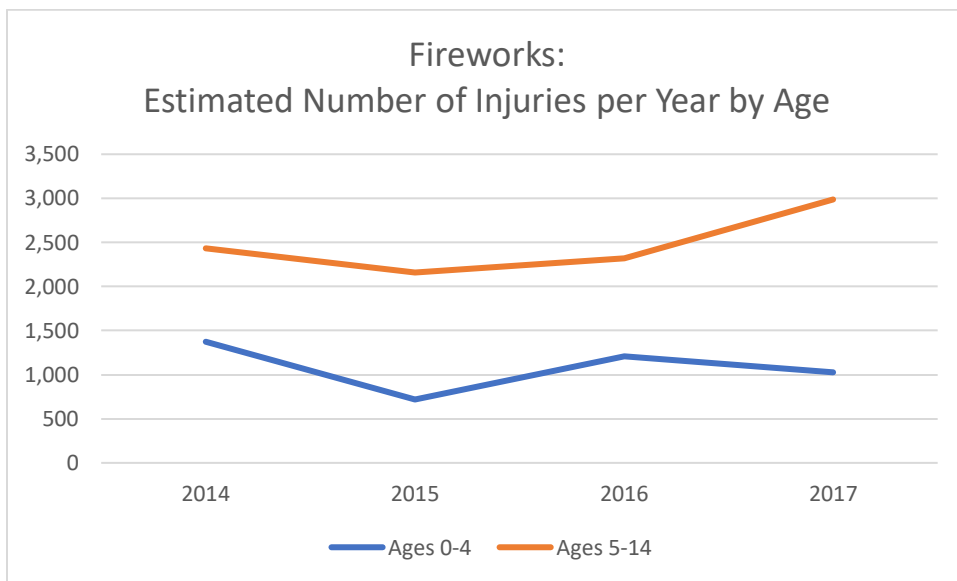
**Estimated injury statistics provided by NEISS*

BBQ grills & stoves were responsible for 5,587 injuries to children ages 0-14 in 2017. NEISS reports an overall rise in emergency room treated injuries which resulted from BBQ grills & stoves across age groups since 2014.



**Estimated injury statistics provided by NEISS*

Fireworks continue to be a hazard for children of all ages. In 2017, a reported 4,016 children ages 0-14 went to the emergency room with firework-related injuries.



**Estimated injury statistics provided by NEISS*



Product Recalls

In 2018, [Matrix Fireworks recalled their Surprise Fountain Fireworks](#) due to explosion and burn hazards. The product was labeled as a fountain but operated similarly to an M-80, which are illegal. The firework also produced an audible effect, violating the federal regulatory standard for this product.



In 2017, [Wholesale Fireworks recalled their fireworks](#) due to a violation of the federal standards as well as for explosion and burn hazards. According to the CPSC, the fireworks were overloaded with pyrotechnics intended to produce an audible effect, violating the federal regulatory standards for this product. Overloaded fireworks can result in a greater than expected explosion, posing burn and explosion hazards to consumers.



[Saber Grills recalled their grills and liquid propane regulators](#) in 2017. Over 18,000 grills were recalled due to burn hazards. Saber Grills received 35 reports of regulators malfunctioning, including three reports of singed arms and two reports of burned or singed hair.



In August of 2017, 2,000 units of [Fred's Charcoal Grills were recalled](#) due to fire hazard. The paint on the exterior of the grill can ignite, posing risk of fire and burn hazards to the user.



Safety Measures and Recommendations

Fireworks. Exercise caution if you choose to use legal fireworks this summer. The CPSC urges consumers to keep the following safety tips in mind when operating fireworks: Have an adult supervise firework activities, keep a bucket of water or garden hose nearby as a precaution, and douse fireworks in water once they have completed their burning. Avoid placing any part of your body near an ignited firework, nor should young children be allowed to play with or ignite fireworks. Avoid attempting to re-light or

pick up fireworks that haven't ignited fully, nor should you carry fireworks in your pocket or shoot them off in metal or glass containers¹².

Grills. Whether you choose charcoal or gas grills, keep the following tips in mind for safety: Talk to your child about outside grill safety and burn hazards. Also, check for gas leaks in propane grills. Do this by checking the air tubes that lead to the burner for any blockage, cracking, or leakage. If you detect a leak, immediately turn off the gas at the tank. Do not attempt to light the grill until the leak is fixed. Avoid placing your charcoal grill indoors, as burning charcoal produces deadly carbon monoxide.

¹² <https://www.cpsc.gov/Newsroom/News-Releases/2011/Celebrating-July-4th-Safely-Fireworks-Big-and-Small-Can-Pose-Risks-CPSC-Urges-Caution-with-Every-Use/>



Wagons & Other Ride-on Toys

Injury Statistics

Common ride-on toys that pose risk of injury are wagons, scooters, skateboards, and hoverboards. In 2008, the number of children ages 0-9 who suffered injuries related to wagons and other ride-on toys totaled 43,239 (NEISS). In 2017, the number of children ages 0-9 who experienced ride-on toy related injuries has increased by more than 3,000 injuries (NEISS).

Precautions, such as wearing a helmet, can be taken avoid fall injury. Other motor-powered ride-on toys require additional precautions. For example, hoverboards have gained increased attention in the last few years due to manufacturing errors that have resulted in fires and burn injuries. The subsection on hoverboards below details more information of hoverboard hazards, recalls and safety measures.

Estimated number of injuries per year by age

	2014	2015	2016	2017
Ages 0-4	16,035	17,881	--	17,130
Ages 5-9	27,824	28,448	28,254	29,435

**Estimated injury statistics provided by NEISS*

Recalls

Wagons, Scooters, and Skateboards

In March 2018, about 2,000 units of the [Radio Flyer Wagon were recalled](#) due to injury hazards. Due to improper wiring, the motor in the wagon could be activated unintentionally.



In May 2017, [Pulse Performance Products recalled Krusher Scooters](#) due to a fall hazard. There have been 15 reports of the down tube breaking resulting in falls and two reports of scrapes from falls.



Safety Recommendations

Wagons, Scooters, and Skateboards

Check the age and weight recommendations by reading the label on the toy before riding. Wear a helmet when riding any ride-on toy to avoid head injuries, which are the most common type of injury from skateboards and scooters. Ensure riding is done away from streets and is supervised by an adult. Finally, check product recalls at [CPSC](http://www.cpsc.gov) and report incidents at [Saferproducts.gov](http://www.saferproducts.gov)

Hoverboards

According to the CPSC, more than 250 hoverboard incidents related to fires or overheating have occurred since 2015¹³. In March 2017, a 2-year-old girl and a 10-year-old girl died in a house fire ignited by a hoverboard in Harrisburg, Pennsylvania¹⁴.

According to a CPSC estimate, there have been 13 burn injuries, three smoke inhalation injuries, and more than \$4 million in property damage caused by hoverboard injuries.

Recalls

There have been 21 different types of hoverboards recalled in the years 2016 and 2017 alone. Each of those 21 recalls were due to a fire or explosion hazard. Some of the brands include iRover, Drone Nerds, Go Wheels, Sonic Smart, Tech Drift, iHoverspeed, Smart Balance, and more. Search [CPSC.gov](http://www.cpsc.gov) to check if you or someone you know is using a recalled hoverboard.



Safety Recommendations

If your hoverboard was purchased after January 2016 and carries the UL 2272 standard mark, it has been tested to be safe from overheating and fire risks. Hoverboards meeting UL standards is not the same as the unit being tested to UL 2272. Only UL 2272 ensures the components will work together without risk of fire.

¹³ <https://www.cpsc.gov/Safety-Education/Safety-Education-Centers/hoverboards>

¹⁴ <https://www.cnn.com/2017/03/14/health/pennsylvania-hoverboard-fire-kills-child/index.html>

You still need to wear protective gear and use safely to avoid other injuries from falls or collisions. Helmets should meet ASTM F1492 skateboard helmet standards.

Avoid riding hoverboards or any ride-on toy that does not meet federal safety standards. For those hoverboards that do meet safety standards and are considered safe to use, keep the following [safety tips](#) in mind when choosing to ride a hoverboard:

- Never charge your hoverboard overnight or leave it charging unattended.
- Use only chargers supplied with the hoverboard.
- Keep away from flammable objects while charging.
- Have working smoke alarms, including in areas where hoverboards are in use.
- Wear a helmet when using a hoverboard.
- Maintain adult supervision while hoverboards are in use.

To check to see if you or someone you know is using a recalled hoverboard, visit [CPSC.gov](#). Also remember to report incidents involving overheating, smoking, or fire to [SaferProducts.gov](#).

Conclusion: Having Safe Summer Fun

It's hard to find a fun outdoor activity that doesn't come along with some sort of adverse risk or hazard. Remember, understanding and appreciating those risks can decrease a child's chances of injury. Continuously check the [CPSC](#) website for updates on product recalls. Report any hazards or incidents you may experience to [Saferproducts.gov](#).



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