



# Childhood Unintentional Injuries in San Diego County

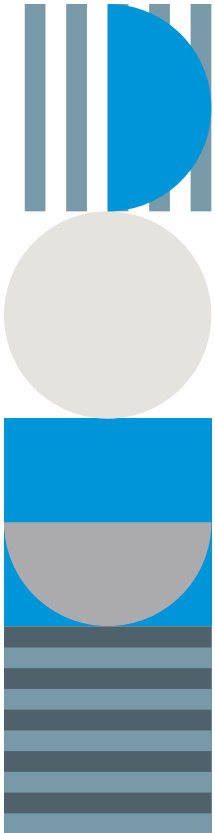
A report to the community

**SAFE  
K:DS**  
SAN DIEGO

February 2022

Safe Kids San Diego is led by  
Rady Children's<sup>®</sup>

The logo graphic consists of a teal-colored shape resembling a stylized kite or a cluster of triangles. It features a large, dark teal triangle at the top right, with several smaller, lighter teal triangles arranged in a curved path below it, suggesting movement or a trail.



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A report to the community

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**Safe Kids San Diego** | February 2022

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## **ACKNOWLEDGEMENTS**

Safe Kids San Diego gratefully acknowledges the contributions of the following agencies who helped make this report possible:

- Safe Kids San Diego
- Rady Children’s Hospital - Trauma Department
- County of San Diego Health and Human Services, Public Health Services and Community Health Statistics
- County of San Diego Emergency Medical Services Public Safety Group and San Diego County Fire

## **LIVE WELL SAN DIEGO**

*Live Well San Diego* encompasses community engagement on all levels. It starts with individuals and families who are leading efforts to be healthy, safe and thriving. It grows through County-community partnerships that convene working groups, conduct program activities and leverage shared resources. Together, these vital partnerships improve the health, safety and well-being of San Diego County residents. For more information please visit, <https://www.livewellsd.org/>



**LIVE WELL  
SAN DIEGO**



## *To San Diego County,*

February 2022

Every three years, Safe Kids San Diego reports on the unintentional injury trends affecting children in San Diego County. This report was last published in 2018. As this report was being written, San Diego County, along with the rest of the world, has been experiencing a global pandemic. SARs COV -2 became a global crisis resulting in closing borders, restricted travel, shuttering of businesses, the laying off millions of workers and closing of schools.

The California policy to lockdown households created economic, physical, mental, and social pressures on families. When school districts across the county closed and sent children home in March 2020, families were faced with becoming teachers to their children. The closing of daycares and preschools meant parents had no options but to stay home with their children. Injury prevention professionals were even more concerned about what the impact would be on children as families became overwhelmed. As such, this report and the data provided are influenced by a different social context. Injuries that commonly occur when children are in school and on playgrounds happened less often. While household dangers including window falls, poisons and drugs, and burns resulted in hospitalizations and sometimes fatalities.

To continue to reach families and children with ongoing safety information, Safe Kids San Diego and the Injury Prevention Team at Rady Children's Hospital created virtual programming options which are the focus of this report. We are grateful to San Diego County's public health services and emergency medical services. These divisions made possible this evidence-informed report and its goals to prioritize and develop programs and campaigns that will make a difference in the lives of children throughout San Diego County.

As we live in an era where SARs COV-2 and its many variants will continue to reshape our lives, it is important to know that this report, along with the work of Safe Kids San Diego, can make a difference for families. We, the leaders of Safe Kids San Diego, invite you to participate in our efforts toward creating an environment that reduces the risk of injury in children and encourages bringing safety to activities that contribute to healthy lifestyles.

Sincerely,

**Lorrie Lynn**

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## INTRODUCTION

Safe Kids San Diego is a coalition of community organizations, hospitals, first responders, safety organizations and citizens devoted to providing advocacy, public awareness, and education to prevent and reduce unintentional injuries and fatalities to children 0-14 years of age.

Safe Kids San Diego is part of Safe Kids Worldwide which was founded by Dr. Martin Eichelberger and Dr. C. Everett Koop at the Children's National Medical Center in Washington, D.C. The San Diego Safe Kids campaign was born out of the San Diego Safety Council which began in 1987. In 1992, Rady Children's Hospital-San Diego became the lead agency, and the coalition became Safe Kids San Diego. The coalition currently includes the following organizations:

- Scripps Memorial Hospital Lo Jolla
- University of California San Diego Medical Center
- San Diego Unified School District
- Pacific Safety Center
- Pool Safe
- San Diego Parks and Recreation
- Bike Coalition of San Diego
- Be SMART
- Burn Institute
- American Lung Association
- Make it a Safe Home
- American Medical Response
- California Paramedic Foundation
- AAA Southern California
- San Diego Fire and Rescue
- San Diego Aquatics Council
- Prevent Drowning Foundation
- Children's Initiative

These organizations and other partners have continued to support the work of keeping children safe and healthy. This report and the work of the coalition have been influenced by the pandemic which began in March 2020. While getting out into the public to raise awareness has been challenging, the Safe Kids coalition utilized social media to share messages about keeping children safe, especially at home. They also provided virtual car seat education to expectant parents. By the winter of 2021, limited community events were launched. Safe Kids San Diego coalition has partnered with community organizations like the Kiwanis Club of San Diego which in 2020-2021 developed Ride Safe Community Car Seat Inspection program and in 2021-2022 the Home Safety for at-risk children workshop. Safe Kids was also able to garner support from the Child Obesity Initiative for a Pedestrian Safety and Health program at Balboa Elementary School in San Diego.



## REPORT ORGANIZATION

The backdrop to this triennial report is the COVID-19 pandemic. A focus on home safety and bicycle and pedestrian safety became essential. With stay-at-home orders, families were contained in their homes, unintentional injuries in the home, like window falls led to hospitalizations in greater numbers than expected. As families began to go outside, Rady Children's Hospital experienced an increase in ATV crashes and, unexpectedly, an increase in drownings, primarily in backyard pools. Safe Kids and Rady Children's Hospital trauma manager extended beyond social media to television segments and in a newspaper that reaches across the border.

The context of the pandemic will weave throughout this report. There will also be updates on programs that were implemented and sharing of new interventions.

Children develop at different rates, but generalities about their physical, cognitive, and behavioral development can be made at different ages. Based on the seminal report, **Raising Safe Kids: One Stage at a Time** (2009), Safe Kids laid out the relationship between child development and unintentional injury. Although dated, much remains the same and still proves useful in guiding the discussion of keeping children safe throughout the stages of development. Based on the research from that report the Safe Kids San Diego report follows the stages breakdowns: infancy (0-12 months), early childhood (1-4 years), middle childhood (5-9) and early adolescence (10-14).

The report does not describe injuries that are caused by intentional mechanisms such as homicide, suicide and assault. However, it should be noted that current California law states that intent cannot be verified in overconsumption of over the counter or prescription medication, therefore they are deemed unintentional poisonings.

In addition to injury data, the report includes prevention strategies, tips for parents and caregivers, projects that grew out of data driven issues and stories of advocates whose children experienced unintentional injuries.

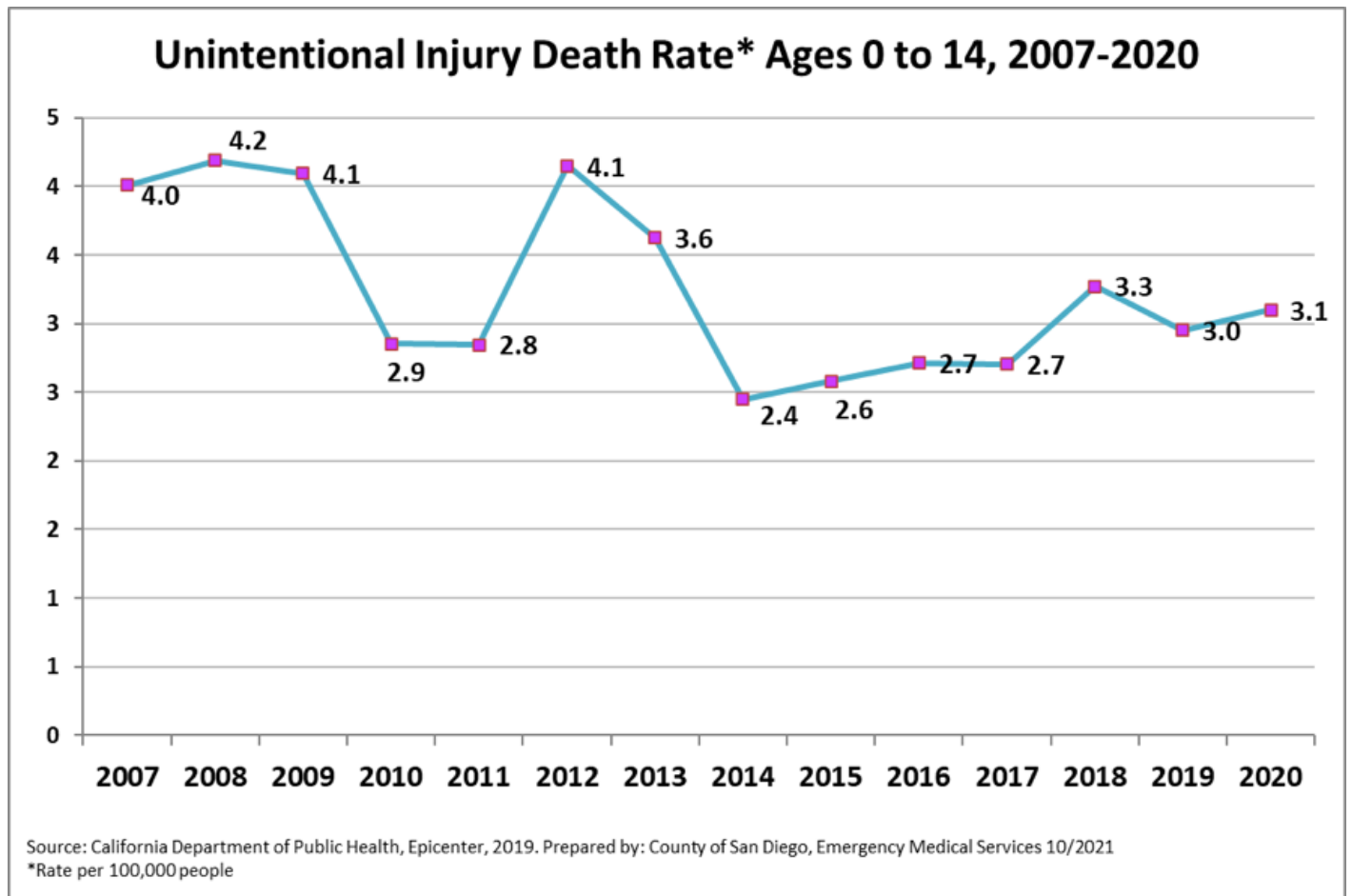
The Safe Kids coalition suggests that you use this information to assist in your efforts to support prevention activities in your home and community. By focusing on injuries that affect the greatest number of victims or pose the greatest risk to a specific population group, as well as injuries that have the greatest medical and societal impact, resources can be allocated to appropriate prevention efforts.



## UNINTENTIONAL INJURY DEATH TRENDS

Over time, the rate of both unintentional injury death among children 0-14 has fluctuated. The change from International Classification of Disease (ICD)-9 to ICD-10 in 2014 has established a new baseline. There is also more specificity in each of the categories which makes the mode of injury clearer.

One surprising highlight is that this is the first report where poisoning is one of the leading causes of unintentional death across age groups. Also, drugs/poisonings were the second leading cause for hospitalizations. Going forward, more research can reveal why this category has risen and Safe Kids will develop strategies to address this issue.





Leading Causes of Injury  
**FATALITIES**

**Leading Causes of Unintentional Injury Death by Age Group,  
San Diego County, 2011-2020**

Top Five Causes of Unintentional Injury Death by Age Group in San Diego County, 2011 - 2020					
Rank	Age Group				Total
	<1 Year	1-4 Years	5-9 Years	10-14 Years	
<b>1</b>	Suffocation (33)	Drowning/ Submersion (36)	Motor Vehicle (12)	Motor Vehicle (16)	Drowning/ Submersion (53)
<b>2</b>	Drowning/ Submersion (6)	Suffocation (8)	Drowning/ Submersion (8)	Pedestrian (8)	Suffocation (43)
<b>3</b>	Fall (<5)	Pedestrian (7)	Pedestrian (6)	Burn (<5)	Motor Vehicle (37)
<b>4</b>	Natural/ Environmental (<5)	Motor Vehicle (7)	Poisoning (<5)	Drowning/ Submersion (<5)	Pedestrian (21)
<b>5</b>	Motor Vehicle (<5)	Struck by Object (<5)	Burn (<5)	Bicycle (<5)	Poisoning (7)

Source: California Department of Public Health, Epicenter, 2011 - 2020. Prepared by: County of San Diego, Emergency Medical Services 12/2021

Leading Causes of Injury

# HOSPITALIZATIONS

## Leading Causes of Unintentional Injury Hospitalization by Age Group, San Diego County, 2019

Top Five Causes of Unintentional Injury Hospitalization by Age Group in San Diego County, 2019					
Rank	Age Group				Total
	<1 Year	1-4 Years	5-9 Years	10-14 Years	
1	Fall (37)	Fall (113)	Fall (213)	Fall (130)	Fall (493)
2	Foreign Body (19)	Drug/Poisoning (49)	Struck by Object (25)	Struck by Object (31)	Drug/Poisoning (78)
3	Suffocation (10)	Burn (43)	Bites/Stings/ Environmental (21)	Motor Vehicle (27)	Foreign Body (77)
4	Drug/Poisoning (9)	Foreign Body (35)	Motor Vehicle (12)	Bicycle (18)	Struck by Object (78)
5	Burn (8)	Bites/Stings/ Environmental (20)	Foreign Body (12)	Bites/Stings/ Environmental (18)	Bites/Stings/ Environmental (59)

Source: California Department of Public Health, Injury and Violence Prevention Branch, 2019. Tables prepared by County of San Diego, Emergency Medical Services.



Leading Causes of Injury

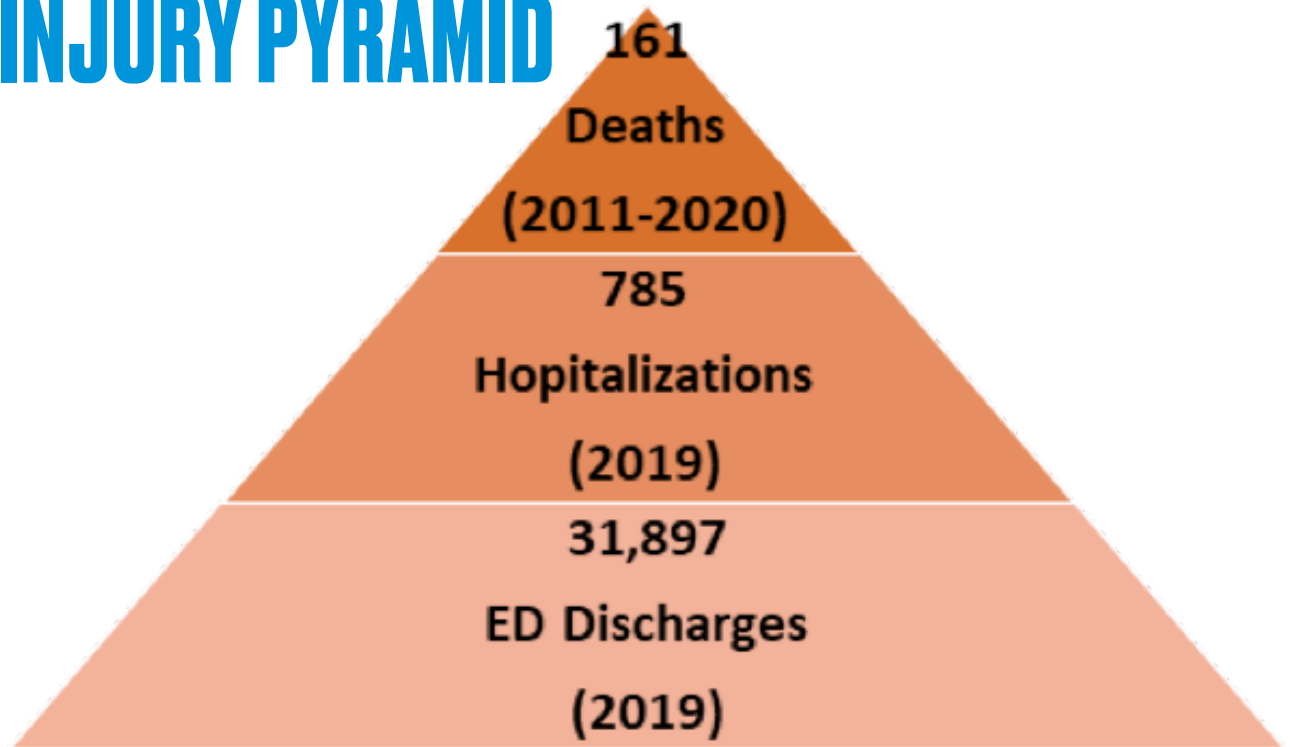
# EMERGENCY DEPARTMENT DISCHARGE

## Leading Causes of Unintentional Injury Emergency Department Discharge by Age Group, San Diego County, 2019

Top Five Causes of Unintentional Injury Emergency Department Discharges by Age Group in San Diego County, 2019					
Rank	Age Group				Total
	<1 Year	1 - 4 Years	5 - 9 Years	10 - 14 Years	
<b>1</b>	Fall (1,229)	Fall (6,229)	Fall (4,997)	Fall (4,672)	Fall (17,127)
<b>2</b>	Struck by Object (249)	Struck by Object (2,551)	Struck by Object (2,399)	Struck by Object (3,223)	Struck by Object (8,422)
<b>3</b>	Foreign Body (126)	Bites/Stings/ Environmental (845)	Bites/Stings/ Environmental (788)	Overexertion (1,473)	Overexertion (2,535)
<b>4</b>	Motor Vehicle (87)	Foreign Body (811)	Motor Vehicle (509)	Motor Vehicle (610)	Bites/Stings/ Environmental (2,292)
<b>5</b>	Bites/Stings/ Environmental (51)	Overexertion (548)	Overexertion (488)	Bites/Stings/ Environmental (608)	Motor Vehicle (1,521)

Source: California Department of Public Health, Injury and Violence Prevention Branch, 2019. Tables prepared by County of San Diego, Emergency Medical Services.

# THE INJURY PYRAMID



While mortality data are an important injury indicator, they represent just a small fraction of the impact of injury on populations. For every death due to unintentional injury, many more result in hospitalization, emergency department (ED) treatment, primary care treatment, or treatment not requiring formal medical care.

Unfortunately, primary care and informal medical care treatment for injuries is difficult to quantify. However, the injury pyramid (direction) describes the total number of unintentional injury-related deaths, hospitalizations and ED discharges for children ages 0-14 years in San Diego County.



## INJURY PREVENTION TIPS

# **INFANTS** (Birth to 1 year)

Children in this age group are developing both physically and mentally. Children typically begin to walk around 1 year old which is a trigger for social and developmental milestones. Children in this age group move from total dependence to the semblance of independence. Often, adult caregivers mistake their child's mobility and curiosity for independence. Still children of this age have not yet developed the ability to solve problems or judge if a situation is safe or unsafe. The increase in mobility without the ability to judge safety places this group of children at increased risk of injury.



## SUFFOCATION

Suffocation remains the most common cause death for infants. In 2019, suffocation was the third leading cause for injury resulting in hospitalization. Some of the reasons are that brain chemistry does not register a lack of oxygen as it does for older children. And children do not begin to roll or have adequate head control until three months. From 2010 to 2020, 32 infants died from suffocation. In 2018, there were no hospitalizations for suffocation, in 2019 there were 10 children under 1 year of age who were hospitalized.

In response to this persistent preventable issue, the safe Kids San Diego Safe Sleep Taskforce created and implemented a train-the-trainer workshop. The physician-led workshop was shared with three major hospital systems in San Diego including, University of California San Diego Hospital, Scripps Memorial Hospital - La Jolla and SHARP-Mary Birch Hospital for Women and Newborns. It was also shared at the Tri-city perinatal symposium and with the YMCA Childcare Resource Service.



An important outcome of these workshops was to empower nurses by providing evidence-based information along with consistent language nurses could provide caregivers about how to keep the new baby's sleeping environment safe. Participants in the workshops expressed that they experienced an increase in knowledge and an increased comfort with strategies to share with parents.

The ABCs of safe sleep is a simple and practical guide to keep children safe every time a caregiver lays their infant down to sleep at night and during nap times.

**A = Alone** - without other people, pillows, blankets, or stuffed animals

**B = Back** - on their back not on their stomach or side

**C = Crib** - In their own crib on a firm mattress and not on an adult bed, couch, or other soft surface

It has been the goal of Safe Kids to bring this information directly to the community. Moving forward, Safe Kids has identified a strategy to bring the workshop and resources to a set of federally qualified health centers. And, to make the information available to emergency response teams based on Cribs for Kids, a national public safety initiative. Both strategies have been influenced by the pandemic. Both community clinics and first responders are fighting the pandemic on the front lines every day.

Safe sleep remains a critical concern across San Diego. And as the data show, infants are being affected more often when other stressors are influencing family dynamics. The message of ABCs of safe sleep is simple and easy for caretakers to understand and implement.



## DROWNING

For this age group, drowning is the second cause of unintentional death. During the pandemic and lockdown, most children experienced drowning in a residential backyard pool. Children under age 1 are extremely curious, especially around water. However, children of this age have disproportionately large heads and lack the strength to lift it upright if they find themselves bent over an object. They can drown in less than two inches of water if they are lying face down. It is extremely important to keep hold of your infant when in the bath and to be within arm's reach around all water, including kiddie pools.

*The following recommendations can keep you water-wise and your child safe:*

- Learn CPR
- Empty all buckets immediately after use
- Empty all kiddie pools immediately after use
- If you have a backyard pool, build a barrier around the pool with a locking door
- Place a door alarm on your back door if your home serves as a barrier to the backyard pool
- Never leave an infant in a bathtub alone without adult supervision
- Consult your health care provider about how to safely bathe your infant
- Secure bathroom door, cabinets, toilet lid and faucet handle with child locks







## FALLS

Falls remain the leading cause of hospitalization in all age groups. Falls are also the third leading cause of unintentional death for infants. In 2019, 37 infants were hospitalized because of a fall and 1,129 visited the Emergency Department.

For children birth to age 1, most falls are from one level to another including falling from windows. Other causes of injury include falling down steps or placing the rear facing car seat on a counter or any soft surface.

Children at this age are just beginning to pull up to stand, so it is important to secure furniture to the walls to avoid furniture tip overs. Although immensely popular with caretakers, baby walkers are strongly discouraged by pediatricians. Nationally, the use of baby walkers results in about 2,000 children between the ages of 1 to 15 months admitted to hospitals each year. According to research, around 90 percent of walker-related injuries are to the head and neck, and concussions occur in more than 25 percent of cases.



A better alternative is a stationary play center or bouncer. These provide stimulation while keeping the child from danger.

*Below are some tips to prevent falls for this age group:*

- Place a baby gate at the top and bottom of all stairs
- Never leave your baby on a bed or couch unsupervised, they will soon learn to roll
- Do not place a bed or couch near a window
- Secure all furniture and televisions to the wall
- Only open windows four inches and use a dowel in the window track or a window stopper to prevent further opening
- Avoid placing toys and other appealing objects on tall objects within sight of the child
- Never place your child on a table or grocery cart in their removable car seat
- Avoid baby walkers



## POISONING

In the most recent Safe Kids report, drugs /poisonings were not a category of concern. With this report, drugs/poisoning is the fourth leading cause of hospitalization for children less than one year old. Although unusual in the data, it may owe its growth to the pandemic. There is much speculation as to how infants would get exposed to drugs/poisons, according to the National Poison Data System, between March 1, 2020, and June 30, 2020, there was a 10 percent increase in exposures to household cleaners in children 0-5 years old when compared to 2019. The top exposures were to liquid laundry detergent packets, bleaches, all-purpose cleaners, drain cleaners and oven cleaners.

As with all medications and household poisons, it is important to keep them in a locked cabinet, especially since more cleaning products are in the home since the beginning of the pandemic. Be sure to learn the way to mix chemicals to avoid creating dangerous chemical compounds and gases.

It is best if medications and cleaning supplies can be up off the floor level and locked away. This includes purses, backpacks, and bags as they often also have medications and could have THC edibles. It is also important that infants receive the proper dosage of medication for their weight. Make sure you understand the dosage prescribed before leaving the doctor's office by repeating the instructions back to the provider to be sure you understand.

## BURNS AND SCALDS

Although the number of infants experiencing burns has not changed very much since the last report, burns for infants dropped from the 2nd cause for hospitalization to the 5th cause of hospitalization for 2019. Children at this age have very delicate skin and have not yet developed temperature regulatory systems. Most of the children who sustain burn injuries at this age are unintentionally burned in bath water and spills from hot beverages.

*The following strategies will help keep infants safe:*

- Turn down the water heater to 120 degrees Fahrenheit (48.8 degrees Celsius).
- Always test bath water with the inside of your forearm to make sure the water is cool enough prior to placing your child in the water
- Place your infant away from the faucets handles so the child cannot accidentally turn them on
- Use a travel mug with the lid firmly secured when drinking hot fluids around the house
- Secure child or prevent child from entering the kitchen (for example place a safety gate at the entrance) when handling hot items
- Remove all open flames or lighters from reach (like medications and household cleaners, place these items up and locked away)

## MOTOR VEHICLE SAFETY

### Child Passenger Safety

In San Diego, the fatalities for infants through motor vehicle crashes is not common, however, where the higher number show up are in emergency room discharges. Advances in child passenger car seat (car seat) technology, improved legislation, and childcare education, the rate of death and severe injury to infants due to motor vehicle crashes has been reduced.

During the California lockdown, families expecting babies sought out resources that could help to properly secure car seats and to understand the many features their car seat included. Safe Kids San Diego/ Transportation Safety team provided virtual education sessions that gave parents comfort and piece-of-mind.

In California, since January 1, 2017, all children 2 years of age and under must remain rear facing in their car seat. Although children can face forward starting at 3 years of age. Safe Kids recommend that children stay rear facing until the child reaches the maximum weight or height of the seat. To speak with a certified technician and get guidance about your car seat, visit <https://driventosafety.org/> to schedule a car seat inspection.

### Prevention of Heat Related Illness (*hyperthermia*) - Hot Cars

Hot car deaths are a potential danger in every state. Research shows that vehicles become dangerously hot quickly, even when the outside temperature is mild. With an outside temperature of 72 degrees Fahrenheit, the internal vehicle temperature can increase 10 degrees in 10 minutes. In an average year, the number of hot car deaths, nationally, for children 3 and under is 38. In 2019, there was a high of 53 hot car deaths. It is theorized that the pandemic lockdown reduced the number of families traveling in their cars. In 2020 and 2021 hot car deaths reduced to 25 and 23 respectively. Most of these situations are unintentional, and typically occur when one caregiver is transporting a child to day care, when it is not their typical routine. For more information, visit <https://noheatstroke.org>.

#### **To prevent this tragedy, we recommend that everyone ACT:**

- **Avoid:** never leave your child alone in a vehicle.
- **Create:** Reminders to prevent accidentally leaving your child in the car. Although some cars and car seats have technology to remind us about the child in the backseat, most of us rely on mechanical methods. Place something you need (backpack, briefcase, mobile phone) securely in the back seat. When you retrieve the item you need, you will also remove the child from the car.
- **Take Action:** Call 911 and the police if you see a child unattended in a car.



## INJURY PREVENTION TIPS **EARLY CHILDHOOD** (1-4 years)

Children in this age group are developing both physically and mentally. Children typically begin to walk around 1 year old which is a trigger for social and developmental milestones. Children in this age group move from total dependence to the semblance of independence. Often adult caregivers mistake their child's mobility and curiosity for independence. Still children of this age have not yet developed the ability to solve problems or judge if a situation is safe or unsafe. The increase in mobility without the ability to judge safety places this group of children at increased risk of injury.



## **WATER SAFETY AND DROWNING PREVENTION**

Drowning is the leading cause of unintentional injury death for children in this age group. Most of these deaths occur in swimming pools. During the pandemic, when families were in lockdown, most children who experienced a drowning incident were in backyard swimming pools. This group of children are highly mobile, very curious, and confident. Four-year-old children make up the largest proportion of victims.

Although highly mobile, children in this age group still have heads that are large and heavy. When bending down over the water they do not have the strength to pull themselves upright. It is critical that they are supervised when around any water including bathtubs, kiddie pools, the ocean, rivers, lakes and swimming pools. Children at this age are not likely to have mastered the coordination and strength to swim.



With schools shifted to virtual education, the Safe Kids Water Safety taskforce developed the Water Smart Lesson. This lesson targeting Kindergarten through 2nd grade students presented an interactive water safety experience that children could complete at home with their caretakers. The Water Smart Lesson was piloted through five elementary schools reaching more than 400 students. It included a parent survey as a follow-up. Through this survey, parents were asked if they had incorporated any of the strategies about water safety. Most identified they had changed one thing.

### ***The following recommendations can help decrease the risk of drowning for children:***

- If your child is missing, check the pool!
- Create a barrier around water; place doorknob covers to bathroom doors and faucet handles, place latches on toilets
- If you have a pool, install a 5-foot mesh fence with a self-latching gate with a gate alarm around the perimeter of the pool
- If your home creates the 4th wall of the fence, place a door alarm on the door exiting the home
- Empty all buckets and kiddie pools immediately after use
- Learn CPR and rescue techniques
- Provide direct, arms reach supervision whenever children are near water
- Use a Coast Guard approved life jacket on children in or near water, pools, ocean, boat docks and boats



## FALLS



Falls are the leading cause of hospitalizations for children in this age group. This age group will just be learning to walk and will stumble and fall as a part of that process. Steps can be taken to avoid most of the serious injuries due to falls. Most children can go up the stairs early on, but most cannot go down the stairs safely until they are 2-3 years old. Most children enjoy climbing so it is best to secure furniture to the walls to prevent tip overs and falling.

During the pandemic lockdown, window falls increased dramatically to 55 in 11 months. Typically, Rady Children's Hospital trauma department sees three fall victims a month. Thirty-eight percent of all trauma cases were falls with 42 percent of the total victims being children 1-3 years old. In March and April 2020, Rady Children's Hospital trauma department saw 12 victims of second story window falls.

***Among the reasons for falls, as provided by caretakers were:***

- Child was unsupervised in another room
- Adult distracted but in the same room
- Couch/bed/toys in front of window
- No window safety mechanisms

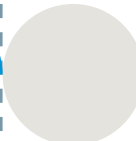
Getting safety messages out to a broad range of the public required media. Interviews provided details about the issue and details of environmental controls to address and reduce the trend increase in children falling out of second story windows. Watch the story at <https://www.kusi.com/rady-childrens-hospital-sees-an-increase-in-children-falling-out-of-second-story-windows/>.

It is important to remember that this age group is very curious and highly mobile but lacks judgement about avoiding unsafe situations.

***Below are some recommendations to make your child's surrounding safer from falls:***

- Keep eyes on and ears open to your child's whereabouts
- Place gates at the top and bottom of stairs
- Put corner protectors on all sharp edges
- Secure all furniture to the wall
- Avoid placing furniture near windows

Open windows to a maximum of four inches and place a window lock or dowl in the track to prevent from opening any wider. Move anything from under the windows to prevent children from leaning and falling.



## OVERDOSE/POISONINGS

Children at this age continue to explore their environments in many ways, including their mouths. This includes potentially poisonous items. During the early pandemic, the second leading cause of hospitalization for children 1- 4 years old was drugs/poisoning. This is the first time this category has ranked high enough to register as a major concern. There is much speculation as to how children in this age group would get exposed to drugs/poisons. According to the National Poison Data System, between March 1, 2020, and June 30, 2020, there was a 10 percent increase in exposures to household cleaners in children 0-5 years old when compared to 2019. The top exposures were to liquid laundry detergent packets, bleaches, all-purpose cleaners, drain cleaners and oven cleaners.

It is important to note that children of this age do not learn from the mistake of consuming something that makes them sick as an adult would. During the pandemic lockdown, the concern with cleaning and the distractions within homes seem to have created a perfect storm for injuries to children.

### ***Some recommendations for keeping potential poisons from children:***

- Secure all cleaning supplies, including detergent, in a locked cabinet
- Medication and medication that looks like candy needs to be locked, up and away from children
- Place bags, purses, backpacks up and locked away
- Double check all dosage and frequency of prescription medications for children by repeating to the provider before leaving the office

## BURNS AND SCALDS

In 2019, burns were the third leading cause of hospitalization. This type of injury remains a substantial risk as children of this age have thin delicate skin and are susceptible to scalds. This age group reaches for objects and does not have a concept of fire and heat. Unfortunately, most burns occur in the kitchen with an adult present.



### ***Caregivers can help to keep toddlers safe from burns by following a few simple steps:***

- Create a kid free zone in specific areas of the kitchen. For example, use a mat in front of the oven and stove to keep children outside of the hot zone
- Turn all pan handles toward the back of the stove
- If the microwave is on the counter, put a child lock on the door
- Put a child lock on the oven and covers over the stove knobs
- Ensure your child is seated far away from the oven or stove when you are handling hot items



## CHILD PASSENGER SAFETY

Motor vehicle injuries remain one of the leading causes of fatality for children 1-4 years old. Despite improved car seat technology and the availability of education and installation by certified child passenger technicians, the injury trend continues.

In California, a child must remain in a rear-facing car seat until 2 years old. The American Academy of Pediatrics recommends that children remain rear facing until they reach the maximum height or weight of the seat. This is based on research that demonstrates that rear facing offers safer support for the head, neck and back. Also, this recommendation may result in a child sitting rear facing beyond 2 years old.

Although keeping children rear facing for as long as possible is recommended, most parents begin with "rear facing only" seat that has a lower weight and height limit. When a child outgrows that seat, caretakers should choose a new convertible car seat.

There are many resources to help caretakers choose car seats. For guidance on car seats and transitions, visit the National Highway Traffic Safety Administration website <https://www.nhtsa.gov/equipment/car-seats-and-booster-seats>. Another resource is to meet with a certified car seat technician. Find one by contacting your local Safe Kids, <https://www.safekids.org/coalition/safe-kids-san-diego>

Once forward facing, the child of this age should remain in a five-point harness to the upper height and weight limit of the seat. The child should also stay in the back seat.

The middle seat of the back seat is the safest position in the vehicle, Whenever possible the car seat should be installed in that position.







### **Prevention of back overs and trunk entrapment deaths**

Cars are also dangerous for this age group when they are sitting still. Leaving a car unlocked gives an opportunity for this age group to climb inside. Many children become trapped in cars because they do not know how to open a car door from the inside.

Since children of this age also are mobile, they can climb into an open trunk, it closes, and they are trapped, or they dart behind a car into its moving path. When adults are going to move the car, it is important to walk around the car looking for toys, animals and children. Once in the car, be sure to continually check the back-up camera. To learn more about back overs and trunk entrapments, visit <https://www.kidsandcars.org/>



## INJURY PREVENTION TIPS **MIDDLE CHILDHOOD** (5-9 years)

Middle childhood is a dynamic time of growth and development for children. During this time, children transition from being dependent on family for everything to starting to exert autonomy. As they seek independence, they spend more time outside of the home travelling by car, bike, and foot to school, to friends' homes, to play groups and to social activities. All these factors increase the risk of injury during transport to and from home and risk injury during playtime activities. Children at this age have not fully developed a sense of risk aversion and safety, and need adults to supervise, guide and model safe behaviors. This age group is adherent to rules and guidance and is most likely to repeat actions of a role model.



## **MOTOR VEHICLE - CHILD PASSENGER SAFETY**

Motor vehicle crashes are the lead cause of unintentional death and injury for children 5 to 9 years old. Many of these injuries are preventable if the child is seated in the most appropriate car seat for the child's development, height and weight. Seat belts are designed for adults that are minimum height of 4 foot 9 inches. If a passenger is not that tall, the seat belt will not fit the body correctly and will not work to absorb the energy of an abrupt stop or collision. Too often, children of this age group are transferred into a backless booster seat or a car seat belt. It is recommended that those children remain in a 5-point harness until they reach the maximum upper weight and height limits for that seat and then transition to a high-back booster seat.

California law requires children to ride in the back seat until 8 years old or 4 foot 9 inches tall. The American Academy of Pediatrics recommends that children remain in the rear seat of a vehicle until their 13th birthday. The rear seat is the safest seat for travel. As children grow older, they may want to sit in the front seat or not use a booster seat in the back seat. The 5 Step Seat Belt Fit Test keeps their children in the back seat and in a booster until they are physically and developmentally ready.

### ***The 5 Step Seat Belt Fit Test includes:***

- Shoulder belt crosses between the shoulder and neck
- Lower back against the vehicle seat
- Lap belt on thighs
- Knees bend at the edge of the seat
- The child rides like this for the whole trip

Children grow in varying proportions; some children grow in height through the length of their legs before their torso can catch up. They may reach the height of 4 foot 9 inches but have a short torso so are unable to pass the 5 Step Seat Belt Fit test. It is extremely important that children stay in a booster seat until they can pass the test. A booster seat positions the child correctly to ensure the seat belt works properly. Always consult a certified child passenger technician to get advice on the best seat for your child. You can find CPST contacts through Safe Kids at <https://www.safekids.org/coalition/safe-kids-san-diego>



## DROWNING PREVENTION/WATER COMPETENCY



Drowning is the second leading cause of unintentional death for children in middle childhood. Many children have access to water (either pools or the ocean). Most children of this age have the coordination and the cognitive development to learn how to swim. They may even know basic strokes. Swim lessons often focus on stroke proficiency, we recommend children learn to be water safe by being able to achieve these five water competency skills:

1. Step or jump into water over head and return to the surface
2. Float or tread water
3. Locate the exit
4. Swim at least 25 yards
5. Exit the water

For more information go to <https://www.rchsd.org/programs-services/center-for-healthier-communities/injury-prevention/safe-kids-san-diego/drowning-prevention/>

Regardless of their swimming abilities, children at this age should not be left unattended near water, they always require arm's length supervision. Also, California law requires that children of this age group wear a Coast Guard approved life jacket when they are on a dock or a boat. Safe Kids recommends caretakers adopt a "Water Watcher" policy whenever children are near or in water.

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### ***A Water Watcher commits to the following:***

- Always keep your eyes on the water and children
- Stay within arm's reach of children in the water
- Know simple rescue techniques such as a life ring or hook
- Have a cell phone on hand to call 911
- Know CPR and rescue breathing



## PEDESTRIAN SAFETY

Pedestrian injuries are the third leading cause of unintentional death for this age group. Children of this age group understand traffic very differently from adults.

### *Developmentally, children in this age group:*

- Have less peripheral vision than adults, so they cannot see objects approaching from the side as well as adults
- Cannot localize the location of sound, for example they cannot judge the location of the sound of an approaching car or siren
- Do not understand that if they see a car, a car may not see them
- Have poor impulse control, they will run after a ball without checking for oncoming cars

Knowing how a child differs in their developmental abilities is valuable information for adults to keep in mind.

Children in this age group are also changing rapidly in their physicality and confidence. For many children, walking to and from school is an important part of their daily exercise. Still, caretakers should walk with their children until at least 10 years old. It is important that adults model the safest pedestrian behavior by crossing streets at intersections using the cross walk. Instruct your children about the importance of making eye contact with the driver before crossing. And to always look right, left, and then right again to make sure there is no oncoming traffic. As with all other modes of transportation, teach your child by demonstrating putting your cell phone away when walking and riding.





## **SPORTS INJURY PREVENTION**

Children in this age group are beginning to play organized sports and much of their free play time is with other children. The categories “struck by” and “falls” are leading causes of hospitalizations for these children. If your child is playing a sport, be sure they have the appropriate equipment. If your child plays a sport that requires a helmet, be sure that it fits properly and can be adjusted if needed. Also, it is important to vary the sports for your child to avoid repetitive use injuries. Unstructured play offers a balanced way for your child to develop their strength and coordination. Also, children are motivated to play because it means time with their friends.





## **BICYCLE/WHEELED SAFETY**

Bikes, skateboards, scooters, and roller blades are a fun way for children in this age group to get exercise. But this type of riding is also a leading cause of hospitalization for this age group. Teaching children safe riding habits, including stopping at stop signs, is important to keeping them safe. Children at this age still look at the adults in their life as role models. When riding, adults and children should always wear a helmet. Research shows that if adults wear helmets children will also wear helmets. If an adult does not wear a helmet, children will be less likely to wear a helmet.

California law requires that all children under the age of 18 years of age wear a helmet, whenever they are riding on any type of wheels, that includes bikes, scooters, skateboards, and roller blades.





## INJURY PREVENTION TIPS **PRE-TEEN** (10 -14 years)

When a child transitions from middle childhood to a pre-teen, they are adjusting to growing bodies and striving for independence. Adult caregivers try to strike a balance by allowing freedoms while still ensuring their safety. As children transition to pre-teens, their peers become more influential. For adult caretakers it is important to remember, your children still need supervision and guidance to keep them safe. Studies show that the components of the brain that assist with decision making and judgements are not fully developed until most individuals reach their early 20s. All these transitions lead pre-teens to begin feeling invincible which can lead to more risky behavior and risk-taking activities.





## MOTOR VEHICLE CRASHES

Motor vehicle crashes are the most common cause of unintentional injury death for San Diego children 10-14 years of age. Many more were hospitalized and came through the emergency room. National studies have shown that for 8-12-year-old, 43 percent were not buckled up.

Children in early adolescents often stop using booster seats, even if they have not reached the appropriate height for a seat belt. California law states that children aged 8 or older, or who are 4 foot 9 inches or taller may use the vehicle seat belt. The American Academy of Pediatrics and child passenger safety advocates recommend that children remain in the back seat of a vehicle until they reach their 13th birthday, because many children have not reached the required weight for an airbag deployment system.

Adult caretakers should continue to be good role models to encourage safe passenger behavior. Many experts believe that if you encourage a safe passenger at this stage, children will become safer drivers later. With that in mind, reinforce that your children always use a seat belt, insist that all vehicle travel requires seat belt usage. Also, set the example of not being distracted when driving, do not call or text while driving. Put the phone away!



Reinforce that pre-teens should not ride in vehicles with older teen drivers.

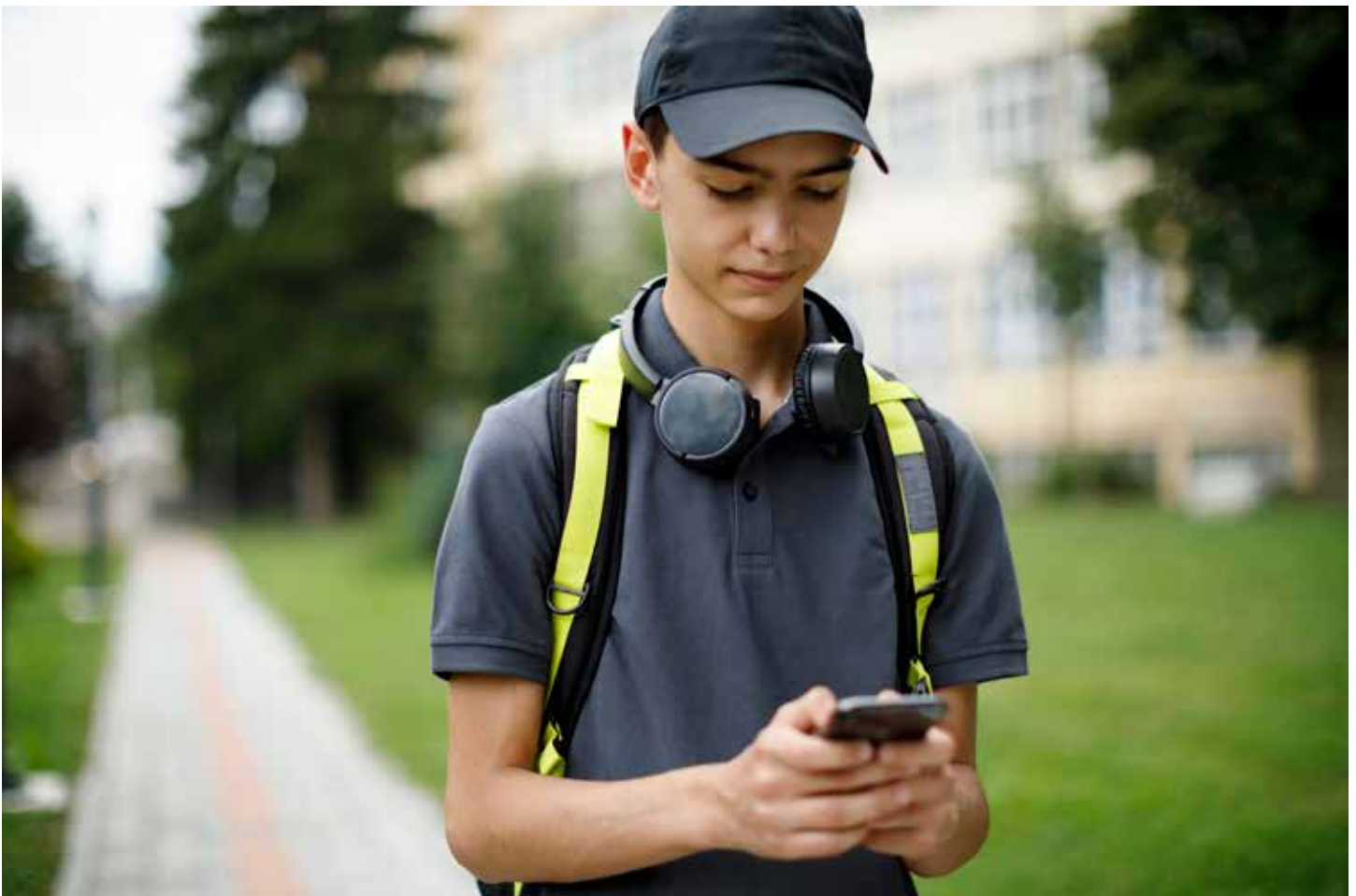
When two or more teens ride in a car with a teenage driver, the risk of a fatal crash is 2 times to 4 times more likely. Encourage your child to never ride with a driver that is intoxicated. Practice saying “no” and “I want to get out of the car” so your pre-teen is more comfortable in situations.

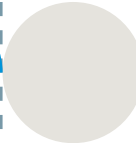
Together, you and your pre-teens can learn about driving risks and you should work together to develop a safe passenger pledge at <https://driventosafety.org/pledge-for-safer-driving/> and later, a new driver deal at <https://www.nsc.org/road/resources/dih/new-driver-deal>.



## PEDESTRIAN INJURIES

Pedestrian injuries are the second leading cause of unintentional injury death for this age group. This age group is more likely to walk without adult supervision. They are likely walking with friends, distracted by conversation and technology. They may also be engaged in play that involves risk taking activities. Before your child is walking without adult supervision, be the role model and do not text or talk on your phone while crossing the street. It is important that your children learn to put the phone down and cross the road safely. Reminders about crossing at the intersection and always looking right, left, and right again before stepping out and if there is a car, to make eye contact with the driver before crossing. Visit Safe Kids at <https://www.safekids.org/distracted-walking-pledge> and join your child in taking the “Moment of Silence” pledge to act against distracted walking.





## BICYCLES AND WHEELS

Bicycle crashes remain one of the leading causes of hospitalizations for this age group. These injuries are often even worse because helmets were not in use. California law requires that all riders under 18 wear a helmet whenever they are on wheels. This includes bicycles, skateboards, scooters, and roller blades. The influx of electric scooters and bicycles has likely contributed to the increase in bicycle related hospitalizations and deaths.

Along with a well-fitted helmet, riders should avoid riding at dusk or at night. Children should ride with reflective vests and lights on both the front and rear of the bicycle. Also, all riders should abide by the rules of the road, including coming to a complete stop at stop signs. Distractions such as earbuds and phones should be stored away until the rider can pull over safely.

It is up to adults to model safe bicycle and wheeled device behaviors, teaching children the safety rules of the road and always wearing a helmet on each ride. A properly fitted helmet can reduce the severity of bicycle/wheel related injuries among pre-teens. Being a consistent role model can reduce the frequency of injuries.



### Working for Change

The **My Grey Matterz campaign** came from a personal experience of one family who's 13-year-old son, Alex, was placed in a medically induced coma due to a severe traumatic brain injury (TBI) sustained while playing on a skateboard in front of their home. Alex recovered, but it was a long journey. Learn more about Alex's story and the campaign that he and his mother created to increase helmet use for skateboarders to decrease TBI at <http://www.mygreymatterz.org/>



## **SPORTS RELATED INJURY, FALLS AND OVEREXERTION**

Falls and “struck by objects” are leading causes of hospitalization for pre-teens and when looking at emergency room discharge data, overexertion is number three. Although the sport activities may have been limited by the pandemic, the data show that information and tips about sports and active outdoor activities help to keep safety in mind.

Sports related injuries include overuse injuries, fractures, heat related illness and head injury. It is important that young athletes participate in a variety of sports to balance their development of strength, flexibility, and endurance and to avoid overuse injuries. Make sure safety equipment, such as protective padding, is well fitted to each athlete. To avoid heat related injury, practice should be modified to account for hot temperatures and high humidity. Ensure athletes are hydrating the night before and to continue to drink two to four ounces of fluid every hour depending on age and weight. Head injury, specifically concussions, has been a focus of attention with young athletes for good reason. Younger athletes are more susceptible to concussion and take longer to recover, especially showing slow recovery in cognitive activities such as reading. Make sure athletes wear a helmet that is in good condition and fits well. Adults should promote a culture of safety in every sporting activity. Promote a reporting system for everyone on the team to call out an athlete suspected of an injury, especially a head injury. Early detection and appropriate care are key to avoiding severe consequences from all types of injury. For more information on how to prevent head injuries in sports, visit <https://www.cdc.gov/headsup/>





# SUMMARY

## Childhood Unintentional Injury in San Diego County

Unintentional injuries are the leading cause of mortality and morbidity among children in San Diego County, and thus a serious public health problem. However, childhood injuries can be predicted and are preventable. Recognizing the physical, behavioral, and cognitive changes that children experience as they grow helps to predict the type of injuries they might incur. Understanding the risk factors associated with injury at different ages gives adult caregivers strategies for injury prevention regardless of gender, race/ethnicity, income or community of residence.



The leading cause of unintentional injury death differs by age group. For infants less than 1, suffocation accounted for more than half of all deaths. Children 1-4 years were more likely to die from a fatal drowning than any other injury, and children 5-14 years were most likely to die due to motor vehicle crashes or pedestrian injuries. The leading cause for hospitalization and emergency department discharge for all age groups, 0-14, was a fall-related injury.

This report focuses only on age-related risk factors using death, hospitalization, and emergency department discharge data. While these data do not capture the burden of all injuries, such as those treated at primary care sites, other medical clinics, or at home, this information is incredibly valuable. It can be used to help local governmental and community groups prioritize programs targeting high-risk population groups, better allocate resources, identify and evaluate prevention activities, and track trends.

For more detailed data on childhood unintentional injuries, contact the County of San Diego's, Public Health Services, Community Health Statistics at **(619) 692-6667**, or visit: [https://www.sandiegocounty.gov/hhsa/programs/phs/community\\_health\\_statistics/](https://www.sandiegocounty.gov/hhsa/programs/phs/community_health_statistics/)



# INJURY CATEGORIES

Safe Kids is extremely grateful to the California Department of Public Health for their support in creating the data tables included in this report. It is important to understand that the transition from ICD-9 to ICD-10 has an influence on how injury categories are created. The California Department of Public Health (CDPH) collects and analyzes data differently than the previous report. Please see the disclaimers below for more information.

- 1.** The “external cause of injury matrix” used to classify injuries by intent and mechanism changed slightly from ICD-9-CM to ICD-10-CM. Those changes are summarized in this article:  
<https://www.cdc.gov/nchs/data/nhsr/nhsr136-508.pdf>
- 2.** Previously, CDPH only used the first external cause of injury field in the OSHPD data to identify and classify injuries from ICD-9-CM codes. CDPH is now using all 12 external cause of injury fields and 25 diagnosis fields to identify and classify injuries from ICD-10-CM codes.
- 3.** Because CDPH is identifying and classifying injuries from ICD-10-CM codes in multiple fields, a single ED visit or hospitalization may contain more than one injury cause (e.g., someone may visit the ED for both an unintentional fall and an unintentional struck by object injury). For this reason, the total number of unintentional injury ED visits/hospitalizations among San Diego County residents aged 0-14 years may be less than the sum of the number of injuries among this population when grouped by cause.

Rady Children's complies with applicable state and federal civil rights and non-discrimination laws. See <https://www.rchsd.org/patients-visitors/summary-notice-of-nondiscrimination/> for additional information regarding our policies. Language assistance services, free of charge, are available to our patients and visitors. Visit <https://www.rchsd.org/patients-visitors/your-childs-hospital-stay/language-services/> for more information.

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