



TEENS AND DISTRACTION

An In-Depth Look at Teens' Walking Behaviors

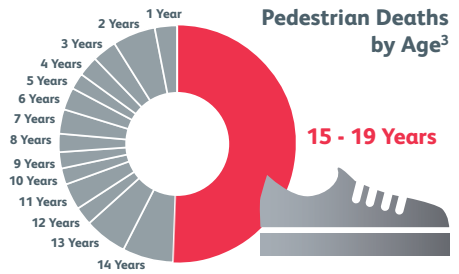
August 2013



How Does a Teenager Cross the Road?

Older teens now account for half of all pedestrian deaths among children 19 and under. In the last five years, pedestrian injuries among 16-19 year olds increased 25% over the previous five years.²

How big a problem is distraction? To find out, Safe Kids observed 34,325 middle and high school students crossing the street in a school zone. Here's what we learned.



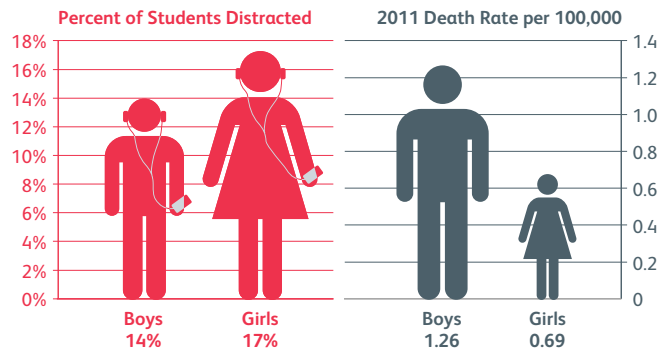
One in five high schoolers and one in eight middle schoolers were observed crossing the street while distracted.



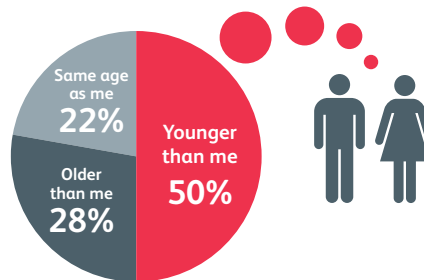
Teens who were distracted were most frequently texting or wearing headphones.



Girls are more likely to walk while distracted, but the pedestrian death rate is 1.8 times higher for boys.



78% of teens perceive the most at-risk age group for pedestrian injuries to be one other than their own.



Join the Moment of Silence Campaign to stop distracted walking. Learn more at www.safekids.org

Executive Summary

Parents do everything they can to keep their kids safe, from holding their hands when crossing the street to teaching them to look left-right-left before crossing at an intersection. And we've seen those efforts pay off: the rate of children dying in pedestrian crashes has fallen 39 percent since 2000.¹ Despite this success, we still have work to do, especially among teenagers. Of the many hazards that parents of teenagers worry about—driving, drinking, later curfews, dating—one that likely doesn't create alarm is walking. Yet a 2012 report from Safe Kids Worldwide found that the pedestrian death rate for teenagers was twice that of younger children.² In fact teenagers ages 15-19 years old account for half of all pedestrian deaths among children ages 19 and under.³ We hypothesized that distraction by mobile technologies plays a role in these tragedies.

Safe Kids, with the support of FedEx, sought to explore the issue of distraction while walking among this at-risk population. Safe Kids conducted an observational study to understand how often middle and high school students cross streets near schools while using a cellphone, headphones or another mobile device. In addition, Safe Kids coalitions spoke with students about their walking behaviors and how they perceive their own safety as pedestrians. In total, more than 34,000 observations of students crossing roads in front of schools were collected from 68 schools by 24 Safe Kids coalitions in 17 states.

We found that one in five high school students and one in eight middle school students were observed crossing the street distracted. Students were most often texting on a phone (39 percent) or using headphones (39 percent). Girls were 1.2 times more likely than boys to be walking while distracted.

Teens and pre-teens have a lot to say about their walking behaviors. More than 2,400 students participated in discussion groups led by Safe Kids coalition members. Half of students (49 percent) say they use a cell phone while walking to school. Four out of 10 say they listen to music while walking. While we know that teens are at greater risk than younger children for pedestrian crashes, teens don't perceive that being distracted may put them at greater risk for an injury while walking. Seventy-eight percent of students say that it's a problem for children of other ages, not kids their own age.

Based on these insights, here are four things that Safe Kids recommends parents and teens can do to stay safe while walking:

- 1. Talk to kids, especially teens, about the danger of distraction and the importance of putting devices down when crossing the street.**
- 2. Start the discussion about safely using technology when kids get their first mobile device—and keep talking about it.**
- 3. Set a good example of what crossing the street safely looks like.**
- 4. Be aware of others who may be distracted—and speak up.**

Distraction while crossing the street is a serious problem that many parents don't think about. By taking part in these strategies, we can keep kids and teens safer while walking.



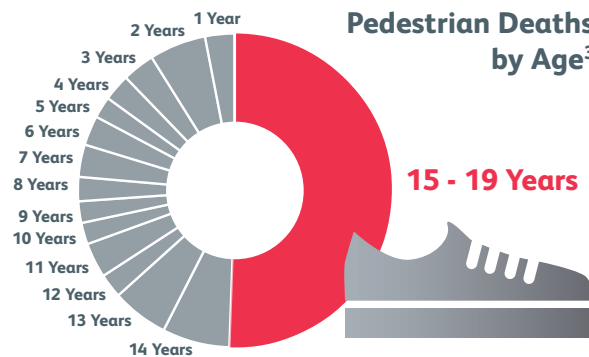
What Teens Are Doing

Pedestrian injuries: What's happening to teenagers?

In August 2012, Safe Kids Worldwide released a report demonstrating that the death rate of teenagers from pedestrian injuries was twice that of younger children.² In fact, teenagers ages 15-19 years account for 27 percent of the U.S. population of children 19 and under, but represent 51 percent of pedestrian deaths among children (Figure 1).^{3,4} In 2011, 11,097 teen pedestrians ages 13 - 19 were nonfatally injured.²³

Figure 1.

51% of pedestrian fatalities occur in teens ages 15-19.³



Distraction may be an important factor in many pedestrian injuries.^{5,6,7} Distraction can take many different forms, from talking with friends to texting. What makes technological distraction different is that it takes a person's eyes or ears off of what's going on around them. It's hard to hear cars while listening to music at full volume; it's also hard to see cars while composing the perfect text. While reports on pedestrian fatalities currently don't capture how many of these fatalities were a result of a pedestrian being distracted, previous studies have found that an estimated 1,496 children and young adults under the age of 21 were seen in emergency departments for pedestrian injuries related to cell phone use from 2004 to 2010.⁸ However, no study until now has looked at how common distracted walking is among teenagers, or asked what teens think about their safety while walking.

To better understand the prevalence of distracted walking in older children, Safe Kids Worldwide conducted an observational study of middle and high school students crossing streets in front of schools during the 2012-2013 school year. In addition, students participated in discussion groups in school to share what they really think about the risk of walking while distracted. With the help of the 24 Safe Kids coalitions who participated in the study, we are able to gain insights into teens' walking habits on an unprecedented scale.

Observing distraction

In total, Safe Kids coalitions recorded 34,325 observations of teens and pre-teens crossing streets in front of schools. Of these, 19,395 were students from 48 middle schools, and 14,930 were students from 20 high schools (Figure 2).

Figure 2.

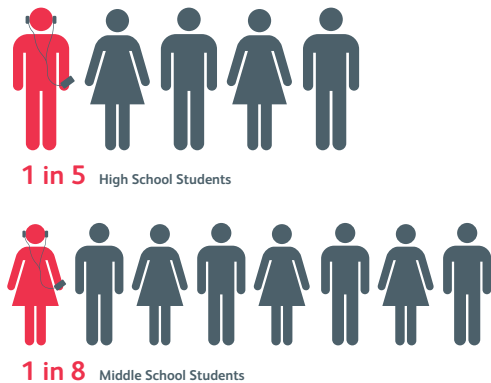
34,325 observations were made of kids crossing the street in front of schools.



Distraction was more commonly seen in high school students: 20 percent of high schoolers, or one in five, were seen crossing the street while distracted by a mobile device. In comparison, 12 percent of middle school students were observed distracted, or one in eight (Figure 3).

Figure 3.

One in five high schoolers and one in eight middle schoolers were observed walking while distracted.

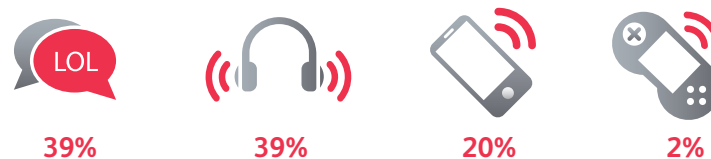


The most popular tech

Thirty-nine percent of teens and pre-teens observed walking distracted were typing on a phone (Figure 4). While much attention has been paid to the serious issue of texting and driving, our understanding of the risk of injury from texting and walking comes from a limited number of studies. An experimental study of college students in a simulated walking environment found that kids who were texting or listening to music were more likely to be hit by a car than those who crossed undistracted.⁵ Texting isn't the only concern—while 78 percent of teens ages 12 to 17 have a cell phone, almost half of those with a cellphone (47 percent) have a smartphone.⁹ In a study of college students, students using smartphones for mobile internet use were more likely to be hit or almost hit in a simulated street crossing than when they didn't use a phone.⁷ An observational study found that pedestrians who were texting were much more likely to cross the street without looking both ways.¹⁰

Figure 4.

Teens who were distracted were most frequently texting or wearing headphones.



We also observed that 39 percent of distracted students were wearing headphones. Many adults wear headphones when going to the gym or commuting to work on the subway. What is the risk of using headphones while crossing the street? Research involving college students has demonstrated that in louder environments, young adults turn up the volume, even reaching unsafe levels for their hearing: 80 percent of students were over the safe threshold using earbud earphones in a loud setting, compared to 6 percent of students in a quiet environment.¹¹ With music that loud, it's easy to imagine how teens walking near loud traffic could tune out their surroundings—including oncoming cars. A recent review of fatalities and injuries involving headphones found that a third of victims were younger than 18 years old, and that 91 percent of incidents involving children ages 18 and under occurred during the school year.⁶

Only 20 percent of distracted students were talking on their phone. That texting was more popular than talking won't come as much of a surprise to anyone who knows a pre-teen or teenager. Unfortunately, talking on the phone also presents a risk of distraction. When 10- and 11-year old children were speaking on a cell phone while crossing a virtual street in an experimental study, kids were less attentive to traffic, had more close calls and collisions with traffic and left less time to safely cross, than when the kids weren't distracted.¹²

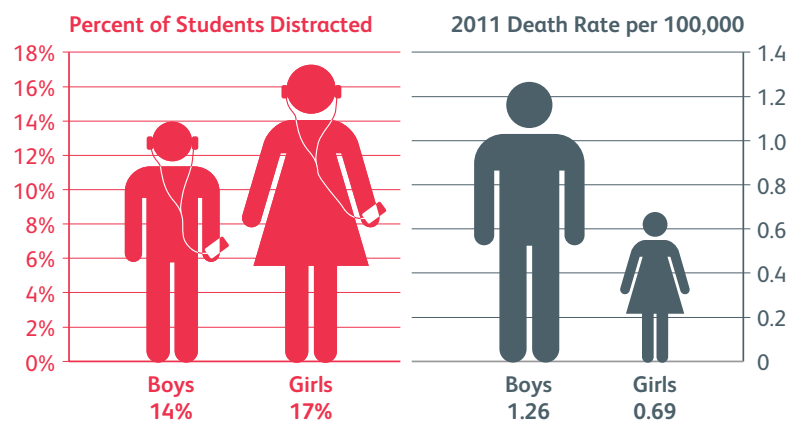
Who is most likely to be distracted?

We used logistic regression models to determine whether any of the observed factors resulted in increased odds of distraction. Data was collected on a variety of factors, such as whether the student was walking in the morning or the afternoon, the gender of the student, and whether there was a crossing guard present. For the regression models, we used data from 44 middle schools and 20 high schools.

We found that the odds of a girl crossing the street distracted are 1.2 times greater than the odds for a boy. Overall, 17 percent of girls were distracted, compared to 14 percent of boys. Previous research found that teen girls more often use their phones for internet access than boys: a survey of teens found that 34 percent of teen girls ages 14-17 say they mostly go online using their cell phone, compared to 24 percent of boys of the same age.⁹ While girls were more likely to be crossing the street distracted, boys have almost twice the death rate from fatal pedestrian crashes. The pedestrian death rate for boys ages 13-19 was 1.8 times that of girls of that age (Figure 5). More research is needed to explain the differences between the risk for girls and boys.

Figure 5.

Girls are more likely to be distracted, but the pedestrian death rate is 1.8 times higher for boys.



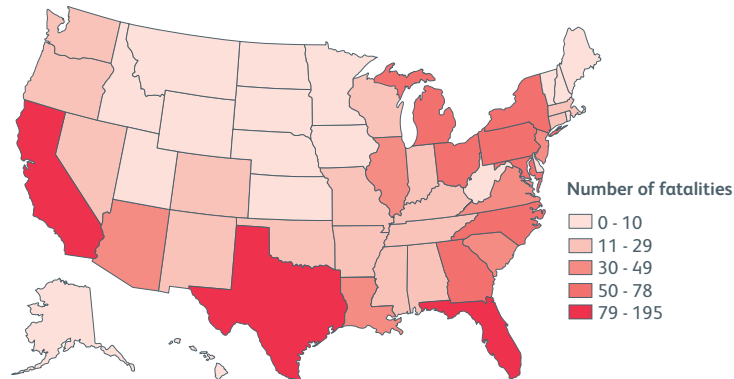
We also found that the odds of a student being distracted are 26 percent higher if there is a traffic light device present. Teens and pre-teens may be more willing to take risks when they perceive their surroundings are safe. This is known as risk compensation: the idea that as safety solutions are engineered to reduce the number and severity of accidents, people may actually take more risks.¹³ Teens may look at a road with a traffic light and decide that it is safe to cross, even while distracted by a phone or headphones.

We didn't see a statistically significant difference in distraction between the fall and spring periods. In fact, the observations in the spring and fall were very similar—in the fall, 15.9 percent of students were observed distracted, compared to 15.4 percent in the spring.

Geographic differences in teen pedestrian fatalities

The number of teenage pedestrians hit and killed varies dramatically by state. Looking at fatality data from 2007 to 2011, on average, 39 teens died in California each year in pedestrian crashes. Texas ranked second, with an average of 33 teens killed each year. While New Mexico had relatively fewer deaths over the five year period (20 fatalities), given the smaller population size, it had the second highest rate of fatalities per 100,000 children. Two-thirds of pedestrian fatalities in children 19 and under occurred on urban roads, compared to one-third on rural roads, in 2011.

Pedestrian fatalities among children ages 12-19 years old, 2007-2011³



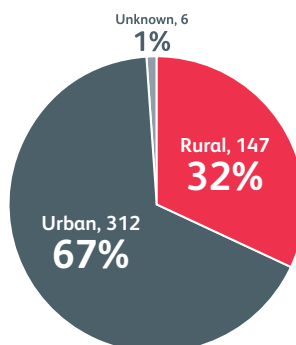
Top ten states with the greatest number of pedestrian fatalities among children ages 12-19 years, 2007-2011³

California	195
Texas	163
Florida	153
New York	78
Georgia	61
Pennsylvania	60
Ohio	56
North Carolina	55
Maryland	54
Michigan	53

Top ten states with the greatest rate of pedestrian fatalities per 100,000 children, ages 12-19 years, 2007-2011^{3 15 16}

South Dakota	1.75
New Mexico	1.71
Maryland	1.68
Delaware	1.63
Florida	1.59
South Carolina	1.58
Louisiana	1.41
Arizona	1.36
Montana	1.33
Nevada	1.26

In 2011, 67% of pedestrian fatalities in children 19 and under happened in urban settings.³



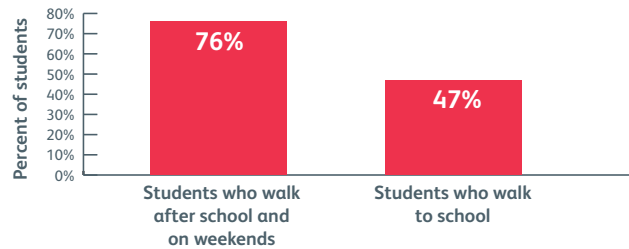
What Teens Are Saying

To find out what teens and pre-teens know and think about distracted walking, 20 Safe Kids coalitions conducted discussion groups in middle and high schools where observations were taking place.

Safe Kids coalition members spoke with 2,441 students. Half of students (47 percent) said that they walked to school at least some of the time, and three-quarters of students (76 percent) said that they walk after school and on the weekend (Figure 6).

Figure 6.

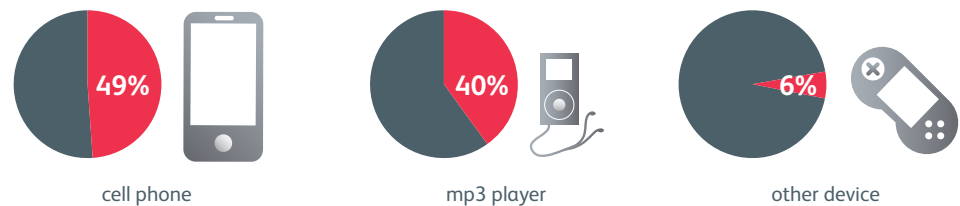
Most students are pedestrians, either walking to school or on the weekends.



Half of students (49 percent) say that they use a cell phone when walking to school (Figure 7). Two out of five students (40 percent) report listening to music while walking. Other electronic devices that students reported using (6 percent) include gaming devices and tablets.

Figure 7.

Half of students say they use a cell phone to text or talk while walking.

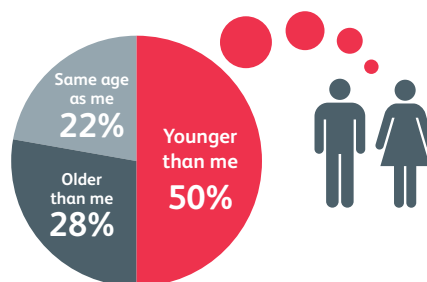


Perceived risk

When asked who they thought was more likely to be hit by a car when walking, half of middle and high school students (50 percent) said children younger than them (Figure 8). Twenty-eight percent said that older teens were most likely to be struck. Only 22 percent said that children their age were most likely to be hit while walking.

Figure 8.

78% of teens perceive the most at-risk age group for pedestrian injuries to be one other than their own.



Importantly, teens and pre-teens said that their parents talk less about safety now that they are older, and that parents sometimes exhibit unsafe behaviors.

What Parents and Teens Can Do to Stay Safe While Walking

Talk to kids, especially teens, about the danger of distraction and the importance of putting devices down when crossing the street. Teens report that parents speak with them less about safety as they get older. Parents can remind pre-teens and teens that taking a moment to lower their cell phone, headphones or game player before crossing the street could be the difference between life and death. It's a valuable discussion to have when talking about distracted driving—another important danger for teens just getting their drivers' licenses.

Start the discussion about safely using technology when kids get their first mobile device—and keep talking about it.

Kids today are raised with technology, so by the time they're teenagers, they are already pros at texting and posting pictures. Parents can make safety part of the discussion about responsible use when a child gets his or her first MP3 player or phone. Find tips on preventing pedestrian injuries at www.safekids.org/walkingsafelytips.

Set a good example of what crossing the street safely looks like. Parents and caregivers are the most important role models in a child's life. Kids are acutely aware of when their parents aren't being safe—many parents have a story about their child reminding Mom to buckle her seat belt before starting the car, or telling Dad to wait for the crosswalk light to change before crossing the street. Parents need to model safe behaviors on the sidewalk, so that distracted walking isn't seen as the norm by kids. Teens can also model safe walking for younger children who look to them. As one teen said in the discussion groups: "We do what we see other people do."

Be aware of others who may be distracted—and speak up.

Teens can remind others to pay extra attention when using headphones, and suggest they take them off when crossing the street. Parents and children shouldn't assume that drivers are focused on them, and not distracted themselves. It's always a good idea to make eye contact with drivers before crossing the street.

Parents, teens and kids can all play an important role in keeping children safe while walking. By taking part in these strategies, we can ensure that teens are making smart decisions to stay safe as pedestrians.



Top Tips

Parents

- From the first conversation you have with young children about crossing the street safely, talk about the dangers of distraction.
- Talk to teens about putting down mobile devices while walking and remind them of the importance of looking up, listening and making eye contact when crossing the street.
- Set a good example by putting devices down when you are driving or walking around cars.

Teens

- Put devices down, look up, listen, and make eye contact with drivers before crossing the street.
- Remember to watch out for cars that are turning or backing up. Walk on sidewalks or paths and cross at street corners with traffic signals and crosswalks when possible.
- Be aware of others who may be distracted—and speak up when you see someone who is distracted.
- If you need to use a cell phone, stop on the sidewalk and find a safe area to talk.
- If you are wearing headphones, pull them down before you cross the street or turn the volume off.
- Driveways and parking lots can be especially dangerous because we are walking close to moving cars. Turn off devices in places where cars are going in unexpected directions, like backing out of a parking spot or turning out of a driveway.

Take Action Against Distraction: Students in Action

As part of the discussion groups, students worked on creative projects to talk about distracted walking which were submitted to the Safe Kids Take Action Against Distraction contest. We received entries that included raps, YouTube videos, even a cake. One school that went above and beyond was North Thurston High School, in Thurston County, Washington.

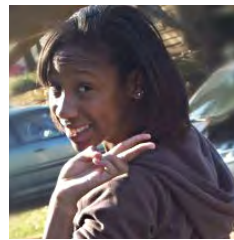
As Safe Kids Thurston County's Coordinator Danielle King says, "The North Thurston High School's RAMS in Action group was great—they took the project seriously, they volunteered (and volunteered WELL!), and they took the messages to their student community."



From L to R, Colby Hurst, Laurent Pinch, Megan Wilson and Xuanmai Vo, students at North Thurston High School, Washington

Communities in Action

On Halloween morning in 2012, 15-year-old Christina Morris-Ward was killed while crossing the street just two blocks from Seneca Valley High School in Maryland. She was dressed in dark clothes, wearing headphones and carrying a cell phone. In memory of Christina, her friends, family and community members are teaming up to raise awareness and educate students about the dangers of distracted walking. They talk to kids on their way to and from school. They distribute reflectors to wear when it's dark and encourage kids to remove their earphones and cross the street safely. Students at Seneca Valley High School created a video to share Christina's story and provide tips to keep kids safe. "I'm not going to stop until we continue to save lives, save as many lives as we can," Christina's mom, Gwendolyn Ward, told news reporters. "I know that she's giving her mom the thumbs up and peace sign like, 'Go, mom.'"



Christina Morris-Ward

Moment of Silence Campaign

In honor of Christina and the thousands of teens who are killed or injured while crossing the street, Safe Kids is launching the Moment of Silence Campaign, asking teenagers and parents to put their devices down when crossing the street. Watch the video and learn more about the Moment of Silence Campaign at safekids.org.

A graphic for the Moment of Silence Campaign. It features a black circle with a white vertical bar, the text "Join the MOMENT of SILENCE Campaign", a photo of four students walking, and the text "Take a moment of silence when you cross the street in honor of the thousands of teens who are hit by cars each year. DEVICES DOWN & HEADS UP". Below this is a "TAKE THE PLEDGE" button with radio buttons for "I'm a student." and "I'm a parent.". At the bottom, it says "Please pause and join our campaign against distracted walking." and "#devicedown LEARN MORE" with a red arrow.

Distracted Walking: The Impact of Public Policy

Public policy has a proven record of success in public safety, especially when it comes to kids, cars and highways. For instance, laws requiring the use of seat belts and child passenger restraint systems have led to significant reductions in deaths and injuries of kids in cars. But even with these changes, motor vehicle crashes remain the number one killer of kids in the U.S. With the increase of mobile devices in the hands of both drivers and walkers, there is a role for public policy in protecting our kids.

Here are some public policy prescriptions inspired by this report.

1. **Collect Data.** The National Highway Traffic Safety Administration (NHTSA) tracks when pedestrians are involved in traffic collisions, but not the causes of the injury. To understand the impact of mobile devices on pedestrian injuries, we urge NHTSA to collect data to track when a pedestrian in a collision is using some form of technology.
2. **Safe Routes to School.** While the 2012 MAP-21 law passed by Congress was forward thinking on safety in many respects, one program that was reduced in terms of priority and funding was the Safe Routes to School program (SRTS).¹⁷ SRTS remains in the law, and states and municipalities are continuing to develop SRTS with this reduced amount of federal funds.

SRTS provides grants at the state and local level to improve safety around schools. Initiatives include practical measures like lowering speed limits in school zones and enforcing those limits.

Studies show that innovations like these make people on foot and on bikes safer. According to a study published in the journal of the American Academy of Pediatrics, the injury rate in New York City for school-aged pedestrians near schools was reduced by a staggering 44 percent during school commute hours after the introduction of safety measures such as speed bumps, speed boards, more vivid crosswalk markings and reduced speed limits.

Safe Kids supports federal policy that would return the Safe Routes to School program to the priority status it deserves, with the funding to make it effective.¹⁸

3. **Federal Transportation Investments in Pedestrian Safety.** Safe Kids supports the new set of tools announced by Transportation Secretary Anthony Foxx in the “Everyone is a Pedestrian” campaign, including \$2 million in grants to six cities with high rates of pedestrian deaths. In awarding the grants, we urge the Department to consider how competing states would deal with distraction, teens and school zones. The Department should also consider pedestrian safety in school zones in its funding of new highway and transit projects, specifically whether safety “best practices” could and should be engineered into the project based on cost-benefit analyses.

4. **Encouraging Invention.** There may be technology solutions to help solve the negative consequences of technology. Federal funding and tax policies can incentivize companies to invest in research and development. For example, crosswalks that light up when a walker steps onto the curb have been developed in Seattle and the Netherlands to put both drivers and pedestrians on alert.¹⁹ And technology developed for the deaf may also be helpful. For example, noise-detecting, wearable technology, now in the testing stages, vibrates and/or lights up when it detects sounds such as traffic and honking horns.
5. **Jaywalking 2.0.** Jaywalking laws have been in place for years to discourage dangerous middle-of-street crossings. Similarly, municipalities should consider laws that equate distracted walking with jaywalking, especially in dangerous intersections and school zones. Some communities are already doing so. In Los Angeles, county sheriffs cracked down on drivers distracted by texting near one of the city's mass transit lines.²⁰ The Utah Transit Authority passed an ordinance outlawing pedestrians from using cellphones, headphones or other distracting electronic devices while crossing the tracks of its light rail system in Salt Lake City.²¹ In Fort Lee, New Jersey, police may issue an \$85 ticket to pedestrians who are texting and walking.²² These laws help communicate the importance of putting devices down and paying attention when walking.



Acknowledgements

We gratefully acknowledge the coalitions who participated in this research.

Safe Kids Branch-Hillsdale-St. Joseph Counties, MI
Safe Kids Cape Fear, NC
Safe Kids Carroll and Haralson, GA
Safe Kids Central Oregon
Safe Kids Chelan-Douglas, WA
Safe Kids Delaware County, IN
Safe Kids Denver Metro, CO
Safe Kids Grand Forks, ND
Safe Kids Greater Cleveland, OH
Safe Kids Gwinnett County, GA
Safe Kids Huron Valley, MI
Safe Kids La Crosse Coulee Region, WI

Safe Kids Los Angeles West, CA
Safe Kids Middlesex County, NJ
Safe Kids Mid-South, TN
Safe Kids Mid-Texas
Safe Kids Orange County, FL
Safe Kids Pitt County, NC
Safe Kids Snohomish County, WA
Safe Kids Tampa, FL
Safe Kids Thurston County, WA
Safe Kids Tuscarawas County, OH
Safe Kids Upstate, SC
Safe Kids Wichita Area, KS

Methodology

Observational Study Safe Kids coalitions in 24 communities observed children walking to and from school in fall 2012 and spring 2013. Fourteen coalitions selected two middle schools to observe students and 10 coalitions selected two middle schools and two high schools. At least two adults participated in each observational session. Coalition coordinators worked with schools to select a busy location where observations could be collected in a safe manner that didn't attract attention. Observers conducted two morning and two afternoon sessions, on different days but held at the same time, on regular school days in good weather. Each observation period was 45 minutes, around the morning and afternoon bells. Each observer focused on one road. The definition of distraction used was dividing one's attention or focus because of the use of an electronic device (such as a cell phone, tablet or mp3 player). This excludes individuals distracted by things other than an electronic device, such as children talking with friends, playing ball on the sidewalk, or reading a book while walking.

Discussion Groups Twenty Safe Kids coalitions worked with the selected schools to arrange discussion groups, varying in size, to assess pedestrian safety attitudes and perceived risks associated with distracted walking in winter 2012 and spring 2013. The groups were held over 50-60 minute periods, with 20 minutes for discussion and 30-40 minutes for a creative activity. Two Safe Kids members were present, one to lead the group and one to record notes. The creative activity could be submitted to the Safe Kids Take Action Against Distraction contest for an opportunity to win a prize for the student's school.



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Suggested citation: Ferguson RW, Xu Z, Green A, Rosenthal KM. Teens and Distraction: An In-Depth Look at Teens' Walking Behaviors. Washington, DC: Safe Kids Worldwide, August 2013.



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