



# Research in Action

A bimonthly e-newsletter from the Center for Injury Research and Prevention at The Children's Hospital of Philadelphia

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## Children Safer in Crashes When Driven By Grandparents

CHOP researchers found that children are half as likely to be injured in a crash when driven by their grandparents versus their parents. The study, funded by the [Center for Child Injury Prevention Studies \(CChIPS\)](#) at CHOP and published in *Pediatrics*, examined crash data on over 11,000 children from 2003 to 2007. Although the researchers found children are less frequently injured in crashes with their grandparents behind the wheel, their parents are more likely to use child restraints correctly.

While further research needs to be conducted to better clarify the protective effect of grandparents as drivers, study authors suggest grandparents may drive more cautiously with their grandchildren on board. Subsequent studies of grandparent driving practices when carrying grandchildren may inform future child-occupant driving education guidelines for all drivers. In the meantime, grandparents should be encouraged to practice optimal restraint use. To view the most recent child passenger safety recommendations from the American Academy of Pediatrics, visit [www.chop.edu/carseat](http://www.chop.edu/carseat).

[Read the \*Time\* article.](#)

## Evaluating Strategies to Reduce Child Occupant Fatalities from Hyperthermia

At a recent roundtable hosted by the National Highway Traffic Safety Administration (NHTSA), Kristy Arbogast, PhD, director of CIRP's Engineering Core, described a CIRP project underway to help prevent child fatalities from hyperthermia in cars. It is estimated that approximately 50 such deaths occur each year. Hyperthermia occurs when the body produces or absorbs more heat than it can handle and requires immediate treatment to

## Focus On: Research Experiences for Undergraduates



After a very competitive application process, eight talented undergraduate students were selected to spend the summer working side-by-side with Center researchers as part of our new Injury Science Research Experiences for Undergraduates (REU) Site.

Sponsored by the National Science Foundation (NSF), CIRP's 10-week REU program provides a diverse group of student scholars with mentorship and hands-on research experience in the fields of Engineering, Behavioral Science, Education, Population Science, and Statistics. Each student is paired with a CIRP mentor to work on specific projects and also receives formal training in research ethics, conducting studies, and presenting research findings.

"The National Science Foundation spends over \$160 million annually to support numerous REU sites across the country. As a former

prevent disability or death. Based on a review of NHTSA's Special Crash Investigations child hyperthermia cases, a majority of the deaths occurred due to a change in driver routine, with most victims less than 3 years old.

The study, conducted by CIRP researchers in conjunction with The Ohio State University, is funded by NHTSA to evaluate currently available technologies designed to prevent children from being left behind in closed, parked vehicles. "Our goal is to develop and implement methodology that will evaluate the ability of these technologies to determine the presence of a child, alert the caretaker, and influence the behavior of the caretaker," says Dr. Arbogast.

The NHTSA forum gave stakeholders the opportunity to share best practices and current research to mitigate these deaths involving the most vulnerable population. In attendance were NHTSA Administrator David Strickland, auto industry representatives, technical experts, child safety researchers and advocates, and a mother whose child died from hyperthermia this year.

[Read the \*New York Times\* article.](#)

## Children With ADHD Are At Increased Risk When Crossing Street

Recent research funded in part by the [Center for Child Injury Prevention Studies \(CChIPS\)](#) found that children with attention deficit hyperactivity disorder (ADHD) are at increased risk of being hit by a vehicle when crossing a street. The study, conducted by researchers at The University of Alabama at Birmingham (UAB) and published in *Pediatrics*, involved 78 children, ranging in age from 7 to 10, half with ADHD and half without. The children completed 10 simulated street crossings in UAB's Youth Safety Laboratory. The findings indicate that children with ADHD do not process information as well and tend to make incorrect decisions on when to begin crossing a street to a greater extent than children without ADHD.

[Read the \*U.S. News & World Report\* article.](#)  
[Read the press release.](#)

Visit Us On 

You can now access a variety of our evidence-based video resources on YouTube. The Center has three channels: **ChildPassengerSafety**, with a lineup of important child passenger safety (CPS) videos, including a podcast explaining

beneficiary of an undergraduate research program, I know how important an experience like this was in shaping my research career," says Flaura K. Winston, MD, PhD, founder and co-scientific director of CIRP and director of the Injury Science REU site at the Center. "We at CIRP feel fortunate for the opportunity to mentor and work with these exceptional students. I hope that we will inspire them to pursue careers in injury science."

CIRP's REU students were recruited from schools across the country, including The University of South Florida; Brigham Young University; The University of Michigan; Johns Hopkins University; Bloomsburg University; Princeton University; Drexel University; and The University of Pennsylvania.

Melanie Ward, an REU student who will be beginning her junior year at The University of Michigan this fall, is working on two projects with Mark Zonfrillo, MD, an attending physician at CHOP and an investigator on the Center's Epidemiology team.

"I was drawn to the REU program at CIRP because I'm interested in looking at injury science as a public health issue. I'm able to do that in a very unique way here," Ward says. "Being a Sociology major and working with Dr. Zonfrillo on one Epidemiology project and one Engineering project has given me the varied, interdisciplinary experience I was seeking."



Pictured left to right are 2011 Injury Science REU students Aimee Hildenbrand, Melanie Ward, and Gabby Loeb putting their heads together to apply engineering principles to build a model car for crash testing.

While the REU students are gaining invaluable experience and insight from highly trained injury science professionals, the staff at CIRP has

the American Academy of Pediatrics' new CPS recommendations and our popular crash simulations, **teendriversource**, with a wide array of teen driver safety-related segments, including a series for parents called "Communicating With Your Teen About Driving," and **AfterTheInjury**, with videos supporting content found on AfterTheInjury.org, the award-winning website to help children recover after an injury. Video content on all three channels is updated regularly. Be sure to check back frequently.

[Subscribe to the ChildPassengerSafety channel.](#)

[Subscribe to the teendriversource channel.](#)

[Subscribe to the AfterTheInjury channel.](#)



[Learn about CIRP's support of the Decade of Action for Road Safety initiative.](#)

## Recent Center Presentations

Arbogast KB. Injury Risk to Seat Belt Restrained Occupants: Effect of Age and Seat Row. Enhanced Safety of Vehicles Conference. Washington, DC. June 14, 2011.

Curry AE, Mirman JH, Kallan MJ, Durbin DR. Peer Passengers: How Do They Increase Teen Driver Crash Risk? Society for Epidemiologic Research Conference. Montreal, Canada. June 14, 2011 (poster presentation).

Maltese MR. Scaling Methods Applied to Thoracic Force Displacement Characteristics Derived From Cardiopulmonary Resuscitation. Enhanced Safety of Vehicles Conference. Washington, DC. June 14, 2011.

Winston FK. Academics to Action: The Role of Science and Scientists in Saving Children's Lives. CHOP Summer Scientific Research Colloquium. Philadelphia, PA. August 1, 2011.

## Recent Center Publications

Henretig FM, Durbin DR, Kallan MJ, and Winston FK. [Grandparents Driving Grandchildren: An Evaluation of Child Passenger Safety and Injuries.](#) *Pediatrics*. August 2011.

McDonald CC, Wiebe DJ, Guerra T, Thomas N, Richmond TS. [The Importance of Family to Youth Living in Violent Communities.](#) *Journal of Psychiatric and Mental Health Nursing*. July 2011.

Richmond TS, Aitken LM. [A Model to Advance Nursing Science in Trauma Practice and Injury Outcomes Research.](#) *Journal of Advanced Nursing*. 2011 (epub).

also been enriched by the program. "We received 120 applications for the eight available spots, so the students we have are truly outstanding," says Meghan Marsac, PhD, CIRP director of training and co-Director of the Injury Science REU site. "Serving as a mentor for the REU Injury Science Program has allowed me the privilege of contributing to the development of future research scientists. My student, Aimee Hildenbrand of Drexel University, has become a key member of our research team, providing us with new ideas, excitement, and motivation. I look forward to continuing to serve as a mentor in the next steps on her academic path."

In addition to their assigned projects, the students attend formal workshops, meetings, field trips, seminars, and social events to become fully immersed in injury science research and the CIRP family. "The specific projects the students are working on are just one piece of the puzzle. Ultimately we want them to get as much as possible out of this experience," says Dr. Marsac. "Part of that involves helping them set and meet goals for their academic and future professional development. Once this summer program is complete, CIRP mentors and staff will remain resources for the students for years to come."

*Pass along information about the Injury Science REU program to professors and students. Later this winter, we announce when we will begin accepting applications for summer 2012. Be on the lookout on our [Student Opportunities page](#).*

## Increasing Physician Knowledge of Child Injury Prevention



Flora K. Winston, MD, PhD, CIRP founder and co-scientific director, is now on [medscape.com](#). She is contributing monthly videos on various injury prevention topics to increase physicians' knowledge in this area. In

Stavrinos D, Biasini FJ, Fine PR, Hodgens BJ, Khatri S, Mrug S, and Schwebel DC. [Mediating Factors Associated With Pedestrian Injury in Children With Attention Deficit/Hyperactivity Disorder](#). *Pediatrics*. July 25, 2011.

Teitelman AM, Ratcliffe SJ, McDonald CC, Brawner BM, Sullivan CM. [Relationships Between Physical and Non-Physical Forms of Intimate Partner Violence and Depression Among Urban Minority Adolescent Females](#). *Journal of Child and Adolescent Mental Health*. June 2011.

her first segment that was recently uploaded, Dr. Winston explains the American Academy of Pediatrics' new Policy Statement and Technical Report on Child Passenger Safety Recommendations.

[View the video](#). (Please note: You must create a free member log-in account to view the video.)

## Support Our Center

The dedicated doctors, researchers, and outreach professionals at the Center for Injury Research and Prevention at CHOP are fighting to save the lives of children of all ages. But we need your help. To make a secure, on-line donation, please visit [The Children's Hospital of Philadelphia Foundation Donation Page](#) and select "Center for Injury Research and Prevention" in the drop-down menu. You also may telephone the CHOP Foundation at 267-426-6500. For more information on our research and programs, please visit [www.chop.edu/injury](http://www.chop.edu/injury).

## The Center's Websites

The Center for Injury Research and Prevention  
([www.chop.edu/injury](http://www.chop.edu/injury))

Keeping Kids Safe in Crashes – English language  
([www.chop.edu/carseat](http://www.chop.edu/carseat))

Cómo Mantener a los Niños Fuera de Peligro Durante los Choques – Spanish language  
([www.chop.edu/asientos\\_infantiles](http://www.chop.edu/asientos_infantiles))

Philadelphia Collaborative Violence Prevention Center (PCVPC)  
([www.phillyviolenceprevention.org](http://www.phillyviolenceprevention.org))

After The Injury: Helping Parents Help Their Kids Recover ([www.AfterTheInjury.org](http://www.AfterTheInjury.org))

Ride Like A Friend  
([www.ridelikeafriend.org](http://www.ridelikeafriend.org))

teendriversource.org  
([www.teendriversource.org](http://www.teendriversource.org))