



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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Study Reveals 1 in 25 Teens Drive Without a License

A study released in the November issue of *Pediatrics* and conducted by Center researchers focuses on an often-overlooked group of teen drivers: those without a license. The 2006 National Young Driver Survey (NYDS) of more than 5,500 teens across the country revealed that about 6 percent of students in grades 9 through 11 reported driving unsupervised without a license. However, according to the national fatality data, a full 20 percent of 14- to 18-year-old drivers involved in fatal crashes in 2006 did not have a license. This means unlicensed teens are significantly over-represented in fatal crashes. According to the NYDS unlicensed teen drivers engage in more unsafe driving behaviors than those with a license, such as not wearing seat belts, driving under the influence of drugs or alcohol, and driving without a purpose. These behaviors are known to increase the likelihood of a crash becoming fatal. To learn more: Read the *Health Day* article
Read the press release

Evaluating "Ride Like A Friend"

The Center's Young Driver Research team recently completed a pilot site evaluation of "Ride Like A Friend/Drive like you Care," an initiative designed to increase awareness of teen driver and passenger safety that took place during the second annual National Teen Driver Safety Week (NTDSW) in October. The peer-to-peer initiative involved two pilot high schools in Pennsylvania-Pennsbury and Radnor-representing a student population of more than 4,000. The pilot site evaluation included pre-surveys and post-surveys, post-campaign focus groups with student organizers, and key informant interviews with school leaders, administrators, teachers, and supporting community action group members. Results from the survey data, including changes in driver and passenger knowledge, attitudes, and behavioral intentions will be analyzed and used as input to future interventions, including activities during NTDSW. Next year's NTDSW will take place October 18 to 24, 2009.

The research team engaged more than 700 teens to create content for the initiative. The online planner, www.ntdsw2008.org, featured evidence-based and teen-informed messages and activities to help teens, parents, and schools/organizers take action to prevent teen driver crashes and injuries. More than 100 high schools, including the two pilot schools, used "Ride Like A Friend" online resources, including activities and materials to promote teen driver safety in their schools during NTDSW.

Walking to End Youth Violence

The Philadelphia Collaborative Violence Prevention Center (PCVPC) sponsored a team that walked a mile to eliminate youth violence. Held on October 25 at the Starfinder Urban Promise Center in Manayunk, PA, The Relay to End Youth Violence brought together community members, youth-serving organizations, adolescents, and teens to raise money and awareness of this growing problem in Philadelphia. For more information on the PCVPC, visit its recently launched website at www.chop.edu/pcvpc, which now includes violence prevention resources, updates on the Center's research activities, data about violence prevention in Philadelphia, and much more.

Helping Families Cope With Injury

The Injury Center's Child and Adolescent Reaction to Injury and Trauma (CARIT) Research Program has reached an important milestone. It recently completed enrollment for the CBC-funded Stepped Preventive Care study, which was conducted over a two-year period. When follow-up data is complete, this study will increase researchers' understanding of how to prevent traumatic stress symptoms in parents and children after injury. The study is evaluating screening tools and intervention methods to promote emotional recovery that are integrated into medical care following injury. Leading the effort is Nancy Kassam-Adams, PhD, director of behavioral science at the Center for Injury Research and Prevention and co-director of the Center for Pediatric Traumatic Stress at CHOP.

Research Sponsors Wanted

Our center is performing cutting-edge research on injury prevention in children. Doctors and researchers at the Center for Injury Research and Prevention partner with industry and academia to determine ways to prevent injuries and to effectively cope when injuries do occur. If you are interested in sponsoring our research, please call Karen Matthews, the Center's administrative director, at 215-590-3118.

Recent Presentations from the Injury Center

- Balasubramanian S, Seacrist T, Hopely T, Sterner R, Maltese M, Constans E, Arbogast K. [Electromyography responses of pediatric and adult volunteers in low speed frontal impacts](#). 36th Annual International Workshop on Human Subjects for Biomechanical Research at Stapp Car Crash Conference. San Antonio, Texas. November 2, 2008.
- Balasubramanian S, Seacrist T, Hopely T, Sterner R, Maltese M, Constans E, Arbogast K. [Cervical spine](#)

Focus On: Sriram Balasubramanian, PhD



To Sriram Balasubramanian, PhD, working on cutting-edge bioengineering research is the norm, not the exception. As a co-investigator of the Center's study on spinal kinematics in adults and children exposed to low speed frontal acceleration, Balasubramanian is gathering data to create more biofidelic (human-like) crash test dummies by measuring how they respond to non-injurious loads. "This study is the first of its kind to test pediatric human subjects under dynamic impact conditions and will serve as a landmark study in pediatric impact biomechanics," he says.

Balasubramanian was also recently appointed co-director of The Center for Child Injury Prevention Studies (CChIPS) at CHOP, a National Science Foundation Industry/University Cooperative Research Center that focuses exclusively on making children and adolescents safer. As co-director of CChIPS, Balasubramanian is working to recruit new corporate members to join the consortium and exploring new programs and funding mechanisms within NSF. "This year I plan to develop strategies to promote collaborative research with other research labs and university-based scientists," he says. "My future vision is to expand CChIPS' research portfolio by introducing new thrust areas in sports injury and orthopedic biomechanics research."

Towards that goal Balasubramanian recently submitted a proposal to the National Organizing Committee on Standards for Athletic Equipment (NOCSAE) to study the biomechanics of anterior cruciate ligament (ACL) injuries in young adult athletes. "From the literature we know that females are more prone than male athletes to suffer these knee ligament injuries," he says. "We want to build on the biomechanical reasons for that difference by studying the gender-specific kinematics involved in common sports moves, such as jumping, and then find the attributes that make females more prone to these injuries. We already know that when females jump, their knees go in, while male knees go out."

This difference, Balasubramanian explains, may be why so many female athletes injure their ACL, one of four ligaments critical to knee joint stabilization. To prevent ACL injuries in the future, Balasubramanian believes female athletes may need to recondition their muscles and change their neuromuscular response to help them jump more like men.

Balasubramanian earned his MS in Mechanical Engineering from Kettering University in Flint, Michigan, and his PhD in Biomedical Engineering from Wayne State University in Detroit. He joined the Center for Injury Research and Prevention at CHOP in 2006.

"Biomechanics is the perfect marriage of engineering and medicine and is an epitome of applied science," he says. "I enjoy working with kids, and the research

electromyography responses of pediatric and adult volunteers in low speed frontal impacts. Spine Research Symposium. Philadelphia, PA. November 13, 2008.

- Balasubramanian S, Seacrist T, Hopely T, Sterner R, Maltese M, Constans E, Arbogast K. Comparison of neck flexor and extensor muscle EMG responses in children and adults. Spine Research Symposium. Philadelphia, PA. November 13, 2008. (Poster Presentation)
- Durbin D. Into the Driver' Seat: Policies and Practices to Develop Safer Teen Drivers. Lehigh Valley Hospital. Muhlenberg, PA. October 3, 2008.
- Ginsburg K. National Young Driver Survey Findings. New York State Traffic Safety Conference. Albany, NY. October 20, 2008.
- Ginsburg K. Resilience in Action: A Strength-Based Approach to Keeping Teens Safe. New York State Traffic Safety Conference. Albany, NY. October 20, 2008.
- Holm K. National Teen Driving Safety Week '08: Pilot High School Ride Like A Friend Campaigns. New England Transportation Education Association Conference. North Conway, NH. November 15, 2008.
- Winston F. National Teen Driver Safety Week 2008: Focus on Passengers. Forging New Frontiers: Securing the Future of Injury Prevention--13th Annual Conference of the Injury Free Coalition for Kids and the Columbia University College of Physicians and Surgeons. Fort Lauderdale, FL. December 12, 2008.

Recent Publications from the Injury Center

- Elliott MR, Ginsburg KR, and Winston FK. Unlicensed Teenaged Drivers: Who Are They and How Do They Behave When They Are Behind the Wheel? *Pediatrics*. Vol. 122, No. 5. November 2008.
- Garcia-Espana F and Durbin D. Injuries to Belted Older Children in Motor Vehicle Crashes. *Accident Analysis and Prevention*. Vol. 40. November 2008.

we're conducting is very novel. The Center's interdisciplinary approach makes it an exciting place to work."

The Center for Injury Research and Prevention Family of Websites

- The Center for Injury Research and Prevention (www.chop.edu/injury)
- Keeping Kids Safe in Crashes-English language – English language (www.chop.edu/carseat)
- Cómo Mantener a los Niños Fuera de Peligro Durante los Choques – Spanish language (www.chop.edu/asientos_infantiles)
- Keeping Young Drivers Safe (www.chop.edu/youngdrivers)
- National Teen Driver Safety Week (www.ridelikeyfriend.org)
- Philadelphia Collaborative Violence Prevention Center (PCVPC) (www.chop.edu/pcvpc)

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 an 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.