

Study finds airbags reduce risk of kidney injury in car crashes

October 21 2010

Occupants in motor vehicles with airbags are much less likely to suffer kidney or renal damage in a crash than are occupants in vehicles without airbags, according to a new study in the September *Journal of the American College of Surgeons*.

Little is known about how to prevent or reduce injury to solid organs from motor vehicle collisions. In fact, this study is the first to evaluate the protective effect of airbags on a specific organ system – in this case, the kidney and other renal, or upper urinary tract, organs.

The researchers found that compared with the non-airbag group of crash patients, front-impact airbags were associated with a 45.3 percent reduction in renal injuries and side-impact airbags were associated with a 52.8 percent reduction in renal injuries. The importance of these finding is underscored by the fact that motor vehicle crashes are the most common source of blunt force trauma to the kidney, accounting for from 48 percent to 66 percent of all such injuries.

"The sharp reduction in the rate of [kidney injury](#) was surprising because airbags are primarily designed to protect the head and spine," said Thomas G. Smith III, MD, assistant professor of urology in the Department of Surgery at The University of Texas Medical School at Houston. "These findings warrant additional investigation into the role airbags could play in protecting the kidney and other organs during a crash."

In the crashes that involved renal injury, 54.7 percent were front-impact and 45.3 percent were side-impact. In the front-impact crashes, 74.9 percent involved a driver-side airbag and 16.6 percent involved a passenger-side airbag. For the side impact crashes, 32.2 percent of occupants had a side-impact airbag.

Researchers analyzed 2,864 records in the Crash Injury Research and Engineering (CIREN) database from 1996 to September 2008 and identified 139 kidney injuries in crashes in motor vehicles with and without airbags. The CIREN database was developed by the National Highway Traffic Safety Administration (NHTSA) to provide detailed crash site analysis and specific occupant injury data to aid in the study of prevention, treatment and rehabilitation of motor vehicle crash injuries. In 2008, there were about 6 million police-reported motor vehicle crashes in the U.S. that resulted in 2.3 million injuries and 37,261 deaths.

Provided by Weber Shandwick Worldwide

Citation: Study finds airbags reduce risk of kidney injury in car crashes (2010, October 21) retrieved 6 May 2024 from

<https://medicalxpress.com/news/2010-10-airbags-kidney-injury-car.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--