

SAFETY IN NUMBERS

When it comes to crashes, older drivers are more likely to be killed or injured

We know that crash rates differ by age group. Our data shows that older occupants are far more likely to sustain injuries and are more likely to die in low-severity crashes than younger people. Older adults tend to be more fragile, so they sustain injuries more easily, and are more frail, which reduces their odds of recovering from injuries.

A NHTSA NASS-CDS study examined the crashes of over 18,000 occupants, which corresponds to over 6 million occupants nationally, to document the risk of sustaining serious injury* to various parts of the body. Drivers older than 75 were more likely to have serious injuries in all body regions, but particularly the chest (thorax), head, and legs, than other age groups. Older occupants are more likely to sustain serious head and chest injuries in side-impact crashes, the kind that occur at intersections.

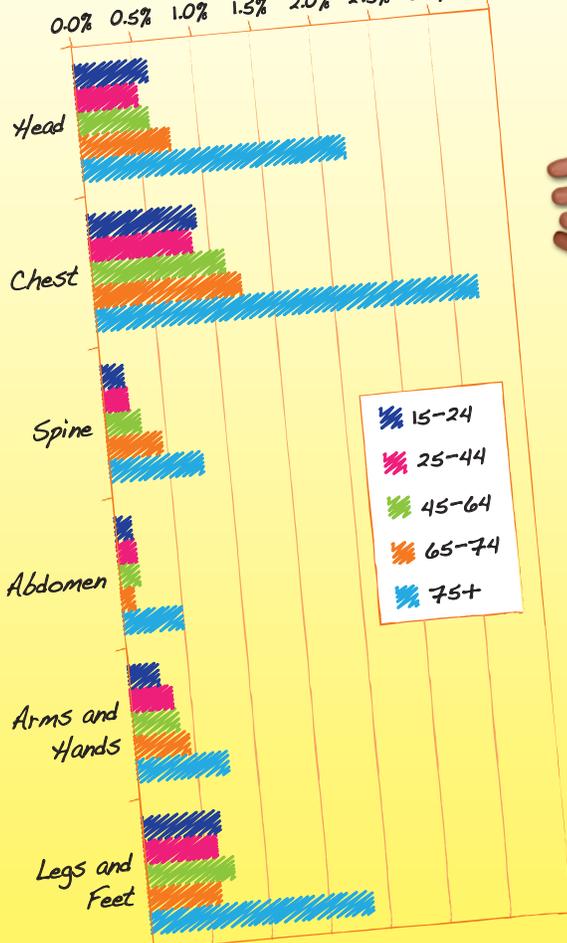
(Ridella, S. A., Rupp, J. D., & Poland, K. (2012). *Age-Related Differences in AIS 3+ Crash Injury Risk. Types, Causation and Mechanisms*. Proceedings of the IRCOBI Conference on the Biomechanics of Impact, September 12-14, 2012, Dublin, Ireland.)

*For the purposes of this paper, serious injuries are those that received scores of 3 or higher on the Abbreviated Injury Scale (1=least severe and 6=most severe).

For more information, visit:
[www.TrafficSafetyMarketing.gov/
 CAMPAIGNS/Older+Drivers](http://www.TrafficSafetyMarketing.gov/CAMPAIGNS/Older+Drivers)

Risk of serious injuries for different body regions by age group

Risk of MAIS 3+ Injury



THE PROBLEM

5 TOP crash types for OLDER DRIVERS

- 1 Turning left at an intersection with a stop sign.
- 2 Turning left at an intersection on a green light without a dedicated green turn arrow.
- 3 Turning right at a yield sign to merge with traffic at speeds of 40 to 45 mph.
- 4 Merging onto a highway from a ramp that has a yield sign.
- 5 Changing lanes on a road that has four or more lanes.

Traffic Tech: *Age-Related Functional Limitations, Countermeasures, and Crash Risks* (www.nhtsa.gov/staticfiles/traffic_tech/811596.pdf).

What data tells us

- The 43.1 million Americans who were 65 or older in 2012 are 14 percent of the population, 17 percent of traffic fatalities, and 9 percent of all people injured in traffic crashes. In 2012, 5,560 people 65 and over died and 214,000 were injured in motor vehicle crashes. Older people are more likely to die in crashes that younger people would survive.
- From 2003 to 2012, the population of those 65 and older increased by 20 percent. The number of licensed older drivers increased by 21 percent, to 35 million licensed older drivers in 2011 (2012 data not available yet).
- In these 10 years, the proportion of older drivers involved in fatal crashes increased by 15 percent.
- Older drivers now make up 16 percent of all licensed drivers and this will increase because the first of the Baby Boomers turned 65 in 2011. The retirement age for Americans has also increased steadily – from 60 in 1996 to 67 in 2012.
- Older drivers and passengers are more vulnerable in a crash. At crash speeds of just over 31 mph (50 kph), the risk of sustaining a serious injury increases dramatically. A 50-year-old female has about a 10-percent risk of a serious injury in a frontal crash, but an 80-year-old female has about a 40-percent risk (www.irco.org/downloads/irc12/pdf_files/14.pdf).
- Older drivers sustain more serious head and chest injuries than other age groups in side-impact crashes, particularly those that occur to the right side of the car, the kind that happen in intersection crashes.

What we know about intersections

- A NHTSA study examined two-car crashes in which only one driver was determined to be the primary contributor (for example,

ran a stop sign) compared to drivers in the same age group who also were in a crash but did not contribute to the crash. Drivers under 30 and older than 70 were more likely to contribute to the crashes (ratios above 1), while those in their 30s through 60s were more often not at fault (ratios below 1). *Intersection Crashes Among Drivers in Their 60s, 70s, and 80s* (www.nhtsa.gov/staticfiles/nti/pdf/811495.pdf).

- As intersections become more complex, drivers in their 70s begin showing some increased risk of error, and those in their 80s were clearly having problems. Drivers in their 60s performed like those in their 30s, 40, and 50s. *Identifying Behaviors and Situations Associated With Increased Crash Risk for Older Drivers* (www.nhtsa.gov/DOT/NHTSA/Traffic%20Injury%20Control/Articles/Associated%20Files/811093.pdf).

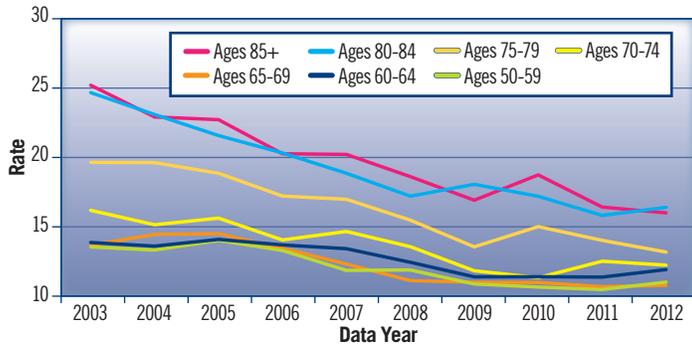
4 MOST COMMON OLDER DRIVERS make before an INTERSECTION CRASH

- 1 Not noticing potential conflicts or traffic signs and signals.
- 2 Misjudging gaps when crossing traffic.
- 3 Moving or stopping the vehicle too slowly.
- 4 Conducting a visual search poorly.

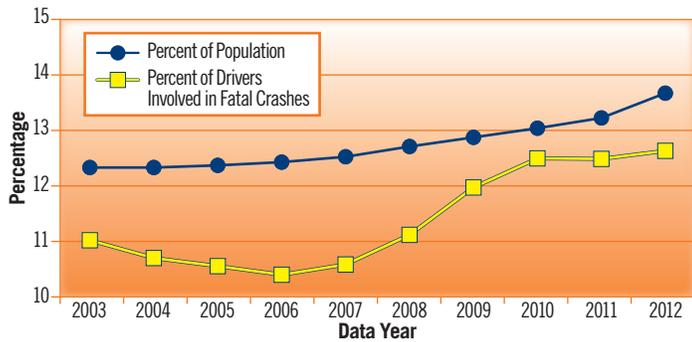




Motor Vehicle Traffic Fatality Rates in the Older Population by Age Group, 2003-2012 (Traffic Deaths per 100,000 Population)

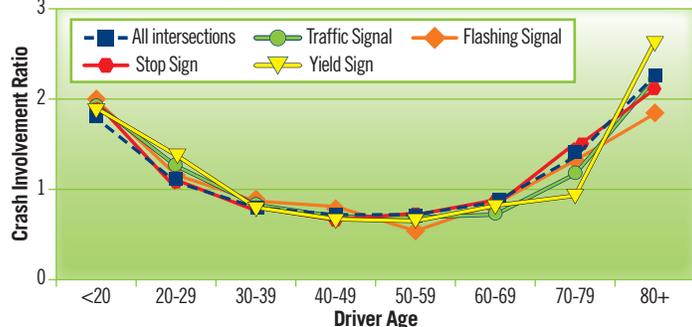


Drivers 65 and Older, As Percentage of Population and Percentage of Drivers Involved in Fatal Crashes, 2003-2012 (Census Bureau, July 1, Estimates)



Compared to drivers in the same age group, the graph below shows that drivers younger than 30 and older than 70 are more likely to have contributed to the crashes (for example, ran a stop sign) than drivers between 30 and 70. (*Intersection Crashes Among Drivers in Their 60s, 70s, and 80s*, www.nhtsa.gov/staticfiles/nti/pdf/811495.pdf).

Ratio of Drivers Who Contributed to Crashes At Intersections by Age (GES 2002-2006)



Photos of a minor-damage crash where an older person was seriously injured.

The 81-year-old woman driving this car was seriously injured when she had a minor collision with a wall. The air bag did not deploy. She suffered from multiple fractures to her spine and right foot. She was 5'1" tall and weighed 94 pounds (CIRENID - 352183427).



WHAT YOU CAN DO

We know what works

NHTSA's *Countermeasures That Work* recommends effective actions that communities can take to reduce crashes involving older drivers (www.nhtsa.gov/staticfiles/nti/pdf/811727.pdf).

Older drivers can

- Assess your visual and physical capabilities. See *Driving Safely While Aging Gracefully* (www.nhtsa.gov/people/injury/olddrive/DrivingSafelyAgingWeb/index.html) for suggestions of specific things to look for as you assess your physical, visual, and attention conditions.
- Plan trips at times of day when traffic is light, and plan your route to reduce conflict with other traffic. Avoid left turns where possible. Do most driving during the daytime.
- Wear your seat belt on every trip, every time, and insist your passengers wear them. Seat belts work only when they are used correctly, low across the hips.
- If you transport children, make sure they are in the appropriate child safety restraints for their height and weight.
- Visit NHTSA's Older Driver Web page, www.nhtsa.gov/Driving+Safety/Older+Drivers for more information.

Friends and family of older drivers can

- Begin talking about safe driving in general long before you notice

difficulties. Take advantage of situations and intersections in your community to open the discussion. It is a person's driving performance, not age, that determines fitness to drive. See *How to Understand and Influence Older Drivers* (www.nhtsa.gov/people/injury/olddrive/UnderstandOlderDrivers/) for suggestions.

- Encourage your older driver to have regular physical and visual checkups and correct the things you can. Make sure you understand the effects medications may have on driving.
- Encourage older drivers to keep physically fit to extend the time they can drive.
- See *Training for Healthy Older Drivers* (www.nhtsa.gov/staticfiles/nti/pdf/811771.pdf) for a review of four types of driver training for older drivers.
- Visit ElderCare.gov for information about older driver services and programs in your community.

Health providers can

- Talk about fitness to drive during office visits and explain how certain medications may affect driving.
- See www.nhtsa.gov/Driving+Safety/Older+Drivers/Fact+Sheets+for+Medical+Professionals and refer to *Physician's Guide to Assessing and Counseling Older Drivers* (www.nhtsa.gov/staticfiles/nti/older_drivers/pdf/811298.pdf), developed with the American Medical Association.

Law enforcement officers can

- Issue citations for violations as appropriate and take advantage of opportunities to educate older drivers. See *Cues for Law Enforcement* (www.nhtsa.gov/people/injury/olddrive/cuesindex.html).
- See NHTSA's Video Toolkit on *Medical Conditions in Older Drivers* (www.nhtsa.gov/Driving+Safety/Older+Drivers/Video+Toolkit+On+Medical+Conditions).



- Refer unsafe drivers to the State DMV or medical advisory board, if your State has one, for additional testing.

States and communities can

- Compare your older driver programs with Highway Safety Program Guideline 13 (www.regulations.gov/#!documentDetail;D=NHTSA-2013-0131-0001) and consider an Older Driver Task Force to focus attention on older-driver issues.
- Examine licensing procedures that may reduce older driver crashes, *Licensing Procedures for Older Drivers* (www.nhtsa.gov/staticfiles/nti/pdf/811833.pdf).

For more information, visit:
[www.TrafficSafetyMarketing.gov/
CAMPAIGNS/Older+Drivers](http://www.TrafficSafetyMarketing.gov/CAMPAIGNS/Older+Drivers)

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