

# Overview of Dementia\*

## Dementia

Dementia refers to the new onset of memory difficulties and other cognitive problems severe enough to impair daily living. Dementia is a syndrome and is not, in itself, a diagnosis. It does not refer to a specific disease or cause. There are many causes of dementia. In addition, there are reversible and irreversible causes of dementia. Reversible causes include such factors as depression, thyroid abnormalities, vitamin deficiencies, and infections. Irreversible causes of dementia include vascular disease and frontotemporal dementia, among others.

## Alzheimer's Disease

Alzheimer's disease is the most common cause of dementia. It is a progressive, irreversible brain disorder. Currently, about 5.3 million people in the U.S. are living with Alzheimer's disease, and this number is projected to increase drastically as baby boomers age. More than 70 percent of people with Alzheimer's disease live at home.

Symptoms of Alzheimer's disease are memory loss (i.e., the inability to learn and recall new information), decreased judgment, mood and personality changes, and difficulty with reasoning and activities of daily living (from tasks such as making change and making telephone calls, to bathing and dressing).

The two main types of Alzheimer's disease are late-onset and a rare, early-onset form of the disease. Late-onset is by far the most common type of Alzheimer's disease, and it affects people primarily over the age of 65. The chance of an

individual developing Alzheimer's disease over 65 doubles every five years. Some estimates suggest that nearly half of those over 85 have Alzheimer's disease.

Symptoms may not be apparent in an individual until long after brain changes start. When an individual becomes symptomatic, the brain cells that play a role in storing and gathering information have begun to die. "Plaques" (caused by an over-abundance of a protein called amyloid) and "tangles" in the brain are the hallmark features of Alzheimer's disease. The plaques form outside the brain's nerve cells and the tangles are strands of protein that form in the brain cells.

Alzheimer's disease may have multiple causes. Some people may be genetically predisposed to late-onset Alzheimer's disease. A physician should conduct a thorough examination to assess any changes in memory, mood or personality. In addition, a neuropsychological evaluation, involving formal tests of memory and cognitive functioning may be ordered. The individual's family member(s) will play a key role in relaying any changes he or she sees in the person's memory or thinking abilities.

Individuals can take measures that may possibly reduce their risk or delay symptoms. These include reducing high blood pressure and cholesterol levels, maintaining a healthy weight, engaging in healthy mental and physical activities, and having a socially active lifestyle.

# Facts About Older Drivers

*Age alone is not a reason to stop driving. Many older adults drive safely their entire lives.*

## **Accident Rates of Older Drivers**

Older drivers (age 65-plus) represent about 14 percent of licensed drivers but only 8 percent of all crashes. In comparison, younger drivers between 16 and 29 represent about 13 percent of licensed drivers but represent 33 percent of crashes. In general, older drivers do not represent a public safety threat. Some drive safely for their entire lives.

## **Common Physical Changes Affecting Driving**

As we age, we experience physical changes that can affect driving ability, particularly changes in vision and reflexes. Older drivers who have health conditions that cause functional limitations may be at greater risk for driving problems. Staying as healthy as possible, and maintaining flexibility and strength, can go a long way to staying on the road safely. To optimize vision for safer driving, older adults need to have regular vision checkups and proper eyeglass corrections.

## **Older Drivers and Self-Regulation**

Most older drivers respond to physical changes by “self-regulating,” which means modifying the way they drive. They may avoid driving on certain roads or at night. Research indicates that most older drivers make modifications – or self-regulate – to stay safe on the road and prolong their driving years. Older drivers have lower crash rates in part because of their voluntary self-regulation of when and where they drive. By driving less and avoiding riskier situations – such as rush hour, inclement weather and long distances – many older adults continue to drive safely.

Research conducted by The Hartford’s Advance 50 Team and the MIT AgeLab revealed that two-thirds of older drivers voluntarily self-regulate their driving. Older drivers who are in fair to poor health self-regulate more than those in good to excellent health. In fact, an 80-year old in excellent health will self-regulate about as much as a 60-year-old in poor health.

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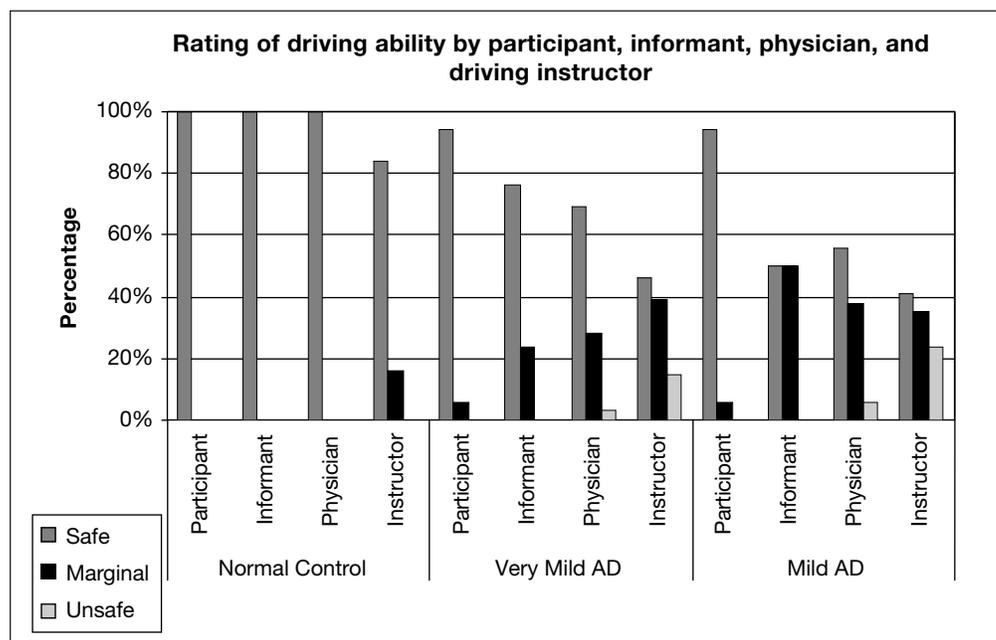
### **Health Problems and the Decision to Stop Driving**

A diagnosis alone seldom gives enough information to make a judgment about driving safety. However, some individuals have health problems that seriously interfere with safe driving. Some of these drivers cannot continue driving safely even by limiting where and when to drive. The decision to stop driving is generally a private one, made by older drivers with the input of their families and doctors. However, not all doctors agree that they are the best source for making decisions about driving. Physicians may not be able to detect driving problems based on office visits and physical examinations alone. They can assess diminished visual, cognitive and motor skills, or refer the driver to a specially trained occupational therapist who is qualified to conduct a comprehensive driving evaluation. The difficult decision to stop driving is often based upon the individual driver's health and confidence behind the wheel and available transportation support.

Some medications – such as antidepressants, anti-anxiety, and antihistamines – can interfere with driving. Any drug that warns of decreased alertness or drowsiness may cause driving problems. Many older drivers are taking multiple medications, and little research has been done to determine the effect on their driving. When in doubt, ask your pharmacist or doctor.

# Facts About Drivers with Dementia

Research shows that most people – not just those with Alzheimer’s disease (AD) – tend to overrate their driving skills. People with dementia are especially likely to minimize the complexity of driving and overestimate their abilities. As the disease progresses, the person with dementia cannot make new memories and learn new tasks. So, as their skills decrease, they cannot retain this new information about their driving skills.

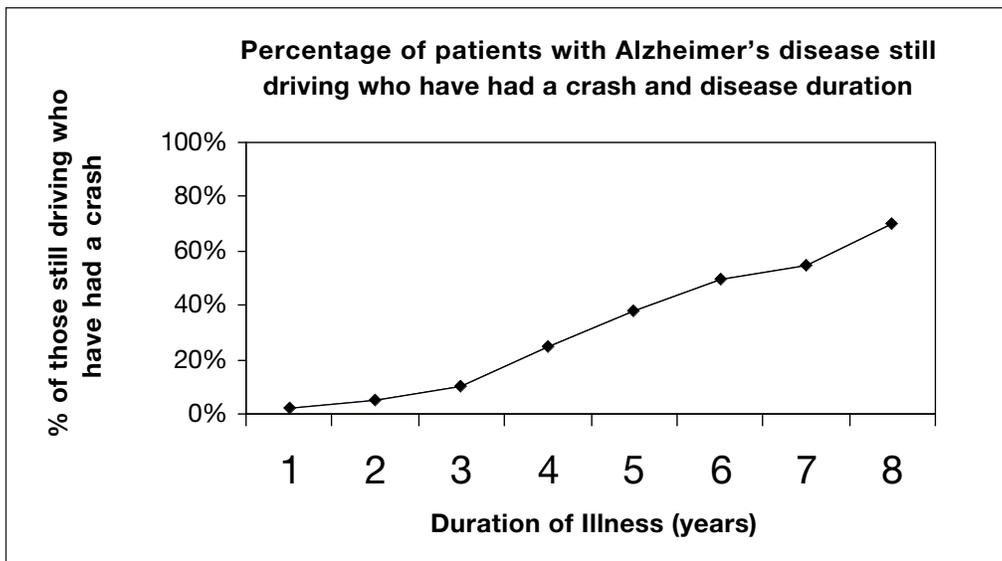
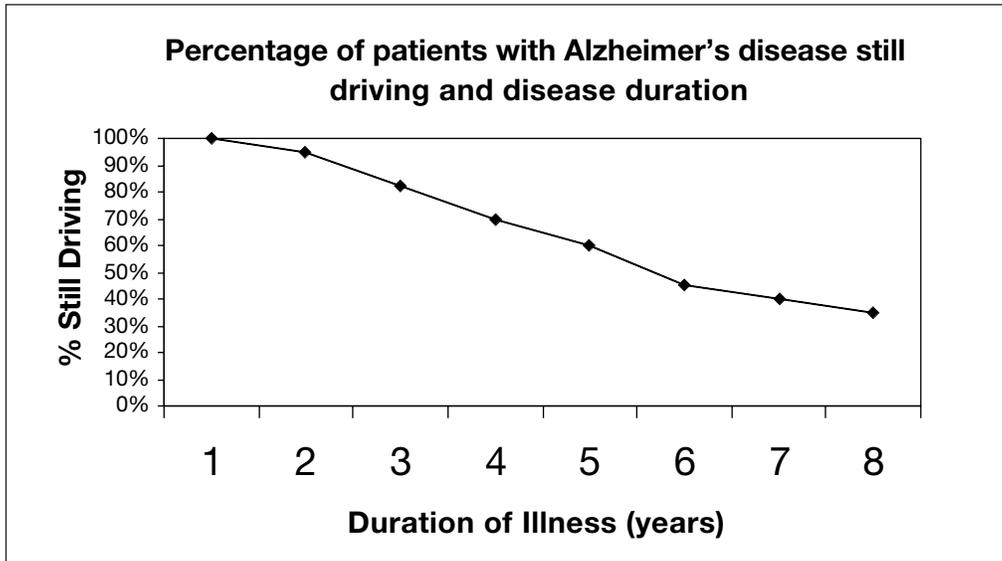


- 94% of participants with very mild or mild AD rated their driving as safe.
- Driving instructors rated less than half of the participants with very mild or mild AD driving as safe (46% of those with very mild AD were rated as safe, and 41% of those with mild AD were rated as safe).
- Neurologists rated the driving ability of 56% of the participants with mild AD safe, and 69% of those with very mild AD as safe.

**Neurologists’ ratings of participants’ driving abilities – based upon clinical assessments – were significantly related to driving instructors’ ratings of on-road driving performance.**

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The first of the following two charts shows that over time, people who have been diagnosed with Alzheimer's disease tend to stop driving. Even so, eight years after diagnosis, more than 30 percent of those diagnosed with Alzheimer's disease are still driving. The second chart shows that the longer a person with Alzheimer's continues to drive after diagnosis, the greater the chances of getting into an accident. On average, the chances increase most between three and four years after diagnosis. Among those who have been driving for eight years after their diagnosis, well over 60 percent have had at least one accident since their diagnosis.



Friedland, R. P. (1988). Motor vehicle crashes in dementia of the Alzheimer's type. *Annals of Neurology*, 24(6), 782-786.

# Findings

## From Family Conversations about Driving Study

A national survey conducted by The Hartford and the MIT AgeLab found that 50 percent of married, older drivers would prefer to hear about their driving first from their spouse. A small percentage (15 percent) said their spouse is the last person they'd like to hear deliver the message about driving. If they don't hear it from a spouse, then married older adults (14 percent) would prefer to hear from an adult child, usually a daughter, and some (27 percent) say they would listen to a physician.

Unmarried drivers say they would prefer to hear either from an adult child (31 percent) or a doctor (41 percent).

Older drivers say it is important to them that the person who talks to them about their driving needs to have their best interests at heart (51 percent), be close enough to know about the driving ability by seeing them or riding with them regularly (39 percent), and knows whether they are physically capable of being a good, safe driver (63 percent).

Of course, the last person anyone wants to hear from is a police officer or government official.

The percentage of older drivers who say these changes or events would be appropriate times to talk with them about driving are as follows:

- After a significant change in health status (74 percent)
- If they were generally concerned about my safety (71 percent)
- After some incidents of forgetfulness or getting lost while driving (70 percent)
- After a car accident (51 percent)

Opportunities such as doctor's visits or changes in medication or health are often overlooked as times to initiate meaningful conversations about driving. Sometimes families wait until there is an accident or traffic violation to have a conversation. However, older drivers may dismiss accidents or traffic violations as being common occurrences, not related to their abilities, especially if they are found to be not at fault in an accident. Drivers are less likely to think an accident alone warrants changes in driving behavior.

# Comprehensive Driving Evaluations

## No Reliable Test Is Available

There is no simple, accurate, readily available test to determine whether an older driver is safe to continue driving. This is especially true when the driver has cognitive problems, like dementia or Alzheimer's disease. Even existing tests (e.g., pencil and paper or vision and reaction time tests) often tend to focus only on a few of the skills important for driving. For this reason, families need to observe driving from the time of diagnosis in order to gain valuable facts about any changes in driving performance over time. This information not only helps families know whether the driver's skills are diminishing, but also can be useful to share with health professionals, such as a doctor or care manager.

Some drivers who have specific driving difficulties related to health conditions may benefit from a comprehensive driving evaluation from an occupational therapist (OT). Occupational therapists or other trained specialists can help assess driving skills and develop a plan to improve those skills. In some cases, limitations can be compensated for with exercise, special equipment and a plan for avoiding certain types of driving.

If there is a specially trained occupational therapist available in your area, a comprehensive driving evaluation may be helpful. If the older driver can drive after some rehabilitation, driving may be extended. A professional evaluation that driving is no longer safe may be convincing to an older driver.

## The Occupational Therapist

While several types of practitioners can rate some aspects of driving ability, an occupational therapist with specialized training in driving evaluation has the credentials to perform a comprehensive evaluation of an individual's driving ability. These specially trained occupational therapists are qualified to offer services to evaluate driving and to involve the team of professionals required to address individual needs. They will either work with the older driver to develop a plan to continue driving or prepare him or her to transition from driver to passenger when the time comes.

A full assessment costs about \$250 to \$600 and lasts anywhere from one to four hours. Generally, Medicare and private insurers do not cover the cost of a driving evaluation, but Medicare will cover the cost for neurological screening for drivers.

Veterans may be eligible for a driving evaluation through the VA healthcare system. Eligibility is determined on a case-by-case basis. Eligible veterans may receive: a driving evaluation; patient and family education, including defensive driving techniques; behind-the-wheel instruction; and vehicle and equipment evaluation/prescription.

Driving evaluations may be available through rehabilitation programs and some motor vehicle departments. Driving tests are not uniform, and the evaluations vary depending on the extent of the tests and the evaluators' familiarity with cognitive impairments and other conditions that affect driving. Nevertheless, such tests may provide families with additional input and support.

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## Components of a Driving Evaluation

What happens in a driving evaluation? Although evaluations can vary, they should include these three components:

### 1. Clinical Evaluation

The driver's medical and driving history should be reviewed. The OT will perform some clinical tests of the driver's performance behind the wheel, such as:

- Vision (depth perception, peripheral vision, visual spatial skills and contrast sensitivity)
- Cognition (judgment and memory, following instructions, speed with which brain reacts)
- Motor strength (also range of motion, coordination, sensation, reaction time)

### 2. On-The-Road Evaluation

Depending on the results of the clinical assessment, the OT will most likely watch how the driver does behind the wheel out on the road. Drivers are rated not just on how they handle the car, but also on their problem-solving ability and judgment, and how well they negotiate the traffic around them.

### 3. Oral Feedback and/or Written Report

Immediately after the testing or at an agreed upon time in the future, the driver will meet with the OT to discuss the clinical results, driving-related strengths and weaknesses, and any recommendations. The OT will review the results and help develop a plan. Such a plan will likely include suggestions about whether, and under what circumstances, the driver should continue to drive – or whether he or she will need to stop driving.

**Note:** Participants who do not do well on the clinical evaluation may still take the road test. These individuals may still demonstrate safe driving because they have “over learned” the tasks involved in driving. Also, family members may need additional information in order to accept the fact that their loved one can no longer drive.

## Questions to Ask about Driving Evaluation Programs

Before pursuing a driving evaluation program, be sure to ask about:

- What makes up the evaluation?
- Who does the driving evaluation?
- How does your program work?
- How much does the evaluation cost?
- Do I need to contact my doctor for a prescription?
- Is a written report generated following the driving evaluation?

For more information about the benefits of having a comprehensive driving evaluation from an occupational therapist with specialized-driver evaluation training, download or order a free copy of *Your Road Ahead: A Guide to Comprehensive Driving Evaluations* at [www.safedrivingforalifetime.com/publications](http://www.safedrivingforalifetime.com/publications).

# Sample

## National and Local Resources for Information on Comprehensive Driving Evaluations

### National Resources

**American Occupational Therapy Association**  
[www.aota.org/olderdriver](http://www.aota.org/olderdriver)

**American Medical Association**  
[www.ama-assn.org/go/olderdrivers](http://www.ama-assn.org/go/olderdrivers)

**Association for Driver Rehabilitation Specialists**  
[www.aded.net](http://www.aded.net)

### Local Resources

*(Facilitator to add local resources here)*

# Other Valuable Resources from The Hartford

The Hartford is one of the few companies in the U.S. with in-house experts on aging. For more than 25 years, The Hartford Advance 50 Team of gerontologists has advanced the creation and delivery of research, educational guidebooks and innovative business solutions for the mature market.

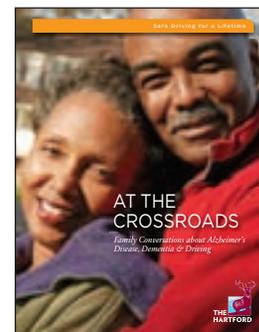
The Hartford became a founding sponsor of the MIT AgeLab in 1999. The Hartford Advance 50 Team and the MIT AgeLab are committed to producing original research to improve the quality of life for older adults and their families. Through publications, professional meetings and public education, The Hartford/MIT AgeLab partnership has reached millions of people around the globe with meaningful information to guide important decisions about safety, mobility and independence.

The following guidebooks – many of which were developed from research conducted jointly by The Hartford and the MIT AgeLab – are available free of charge. To order or download copies, visit [www.safedrivingforalifetime.com/publications](http://www.safedrivingforalifetime.com/publications).

## Topics of Interest to Dementia Caregivers:

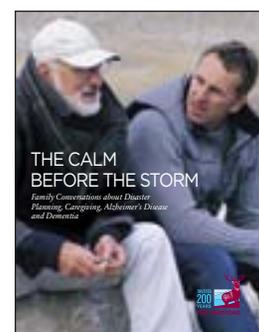
### At the Crossroads: Family Conversations about Alzheimer's Disease, Dementia & Driving

- Helps families determine when it's time for loved ones with dementia to stop driving and offers strategies for coping with driving cessation.



### The Calm Before the Storm: Family Conversations about Disaster Planning, Caregiving, Alzheimer's Disease and Dementia

- The first comprehensive natural disaster planning guide specifically created for caregivers, families and friends of those with memory disorders.



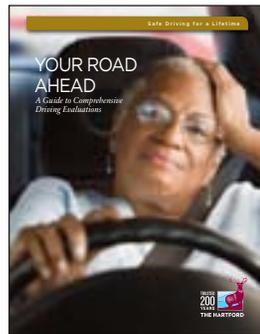
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## Other Topics:

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### Your Road Ahead: A Guide to Comprehensive Driving Evaluations

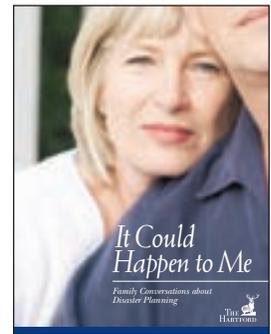
- Describes the benefits of having a comprehensive driving evaluation from an occupational therapist with specialized driver evaluation training.



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### It Could Happen to Me: Family Conversations about Disaster Planning

- Based on the experiences of older adults who live in disaster-prone areas, this booklet guides readers through the disaster planning process, from assessing risk through working with a network of people to create a plan.



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### We Need to Talk: Family Conversations with Older Drivers

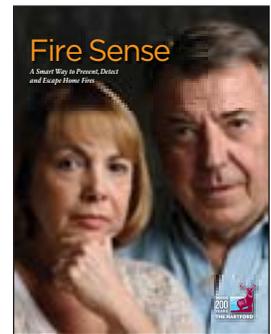
- Provides families with practical information to help them plan ahead and initiate productive and caring conversations with older adults about driving safety.



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### Fire Sense: A Smart Way to Prevent, Detect and Escape Home Fires

- Describes the most common causes of residential fires, offers lifestyle changes that can reduce a family's risk, and suggests what to do if fire strikes.



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### Your Road to Confidence: A Widow's Guide to Buying, Selling and Maintaining a Car

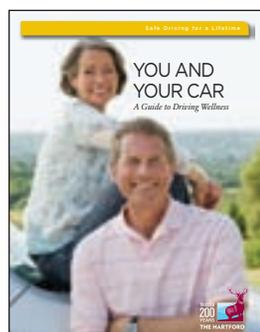
- Empowers widows to take control of their driving future and confidently buy, sell and maintain a car.



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### You and Your Car: A Guide to Driving Wellness

- Describes how drivers can be safe on the road for a lifetime.



# Support Group Leader Feedback

We value your feedback. Please complete and mail this form to:

The Hartford Advance 50 Team  
200 Hopmeadow Street C3E2  
Simsbury, CT 06089

If you would prefer to receive and complete an electronic version of this form, please request a copy at [safedriving@thehartford.com](mailto:safedriving@thehartford.com).

1. How many times have you facilitated the At The Crossroads support group based on the kit? \_\_\_\_\_
2. How many people attended your most recent session? \_\_\_\_\_
3. When you facilitate the ATC support group is it part of an ongoing support group for caregivers of persons with dementia?  Yes  No

On a scale of 1-5, where 1 is not very helpful and 5 is very helpful, how would you rate the following?

	Not Helpful	1	2	3	4	Very Helpful
• Overall – the entire kit.....	<input type="radio"/>					
• At The Crossroads: The Guidebook.....	<input type="radio"/>					
• Introduction Booklet.....	<input type="radio"/>					
• Session 1 Guide: Assessing Driving Ability & Activity.....	<input type="radio"/>					
• Session 2 Guide: Building Family Cooperation & Communication ....	<input type="radio"/>					
• Session 3 Guide: Knowing Your Options.....	<input type="radio"/>					
• Appendices .....	<input type="radio"/>					

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