

Series: Driving and Progressive Dementia

Session 3: Safe Driving and Alzheimer's Disease or a Related Dementia (Memory Disorder)

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Purpose of Series: Driving and Progressive Dementia

*The purpose of the series of educational sessions called **Driving and Progressive Dementia** is to describe briefly issues of driving safety especially as driver skills change in people who have declines in memory and thinking functions. [Note: In these educational sessions "Driving" refers to driving any motor vehicle or any all-terrain vehicle, for example a car, a truck, a dune buggy, a van, an SUV, a trailer, a motorcycle, a golf cart, a lawn mower, a motor boat or motorized water bikes, a motorized scooter, a snowmobile... in other words any kind of moving vehicle with a motor.]*

*There are three sessions. **Session One: Safe Driving** focuses on the importance of the driver who may be undergoing general health changes and ways to stay safe when operating a motor vehicle. **Session Two: Safe Driving and Mild Cognitive Impairment** focuses on the driving issues related to the person who is having some mild short-term memory problems and perhaps some very early signs of occasional difficulty in other thinking functions, but appears to be functioning normally on a daily basis. **Session Three: Safe Driving and Alzheimer's Disease or a Related Dementia (Memory Disorder)** focuses on the driving issues related to the person who is dealing with a diagnosis of Alzheimer's disease or a related progressive memory disorder (dementia). **This third session is on Safe Driving and Alzheimer's Disease or a Related Dementia (Memory Disorder).***

Session 3: Safe Driving and Alzheimer's Disease or a Related Dementia (Memory Disorder)

Alzheimer Disease and Driving

People with Alzheimer disease have decreases in brain cell function that may increase their risks as drivers. The changes in brain cells affect memory (at first, short-term memory and then much later, long-term memory) and other thinking functions such as recalling specific names of people, objects, or places; being orientated to the current time and place; doing complicated tasks such as planning the details of a future event; evaluating choices and making good decisions, keeping track of family finances (paying bills, tracking the savings accounts and balancing the checkbook); and keeping up with normal duties, schedules, and relationships at work or at home.

Impact of Decline on Driver Safety

Decline in short-term memory: A person must be able to remember information that was just heard or seen to be a safe driver, for example, remembering a sign by the roadside in order to:

1. make an appropriate turn or to exit the highway
2. prepare to pay a toll
3. slow down for an upcoming school zone
4. stop for a pedestrian to cross the street
5. watch out for road repair or detours
6. watch out for hazardous driving due to weather changes

Decline in naming: A person must be able quickly to read and understand language such as names of places, directions such as "right turn only" and "left lane ends 100 feet ahead" and warnings such as "detour ahead" or "flash flood during rain".

Decline in learned skilled hand movements: A person must be able to use both hands and arms smoothly and quickly in coordinated ways to drive safely. People with difficulty using one or both hands or arms need to undergo a medical evaluation to determine if the difficulty may be an early sign of a progressive dementia. If the person has a progressive decline in skilled hand movements (the medical term is apraxia), then a physician's exam may result in removal of driver privileges. A person with progressive apraxia who should not be operating motor vehicles also should not be handling dangerous tools such as power cutting tools, food choppers, and sharps such as electric knives and other sharp weapons, razors, box cutters, and scissors with pointed ends.

Decline in vision and perception: A person must be able to see and process details on the dashboard and instrument panel of the motor vehicle as well as street signs, vehicles on the road, and objects or people on the sides of (or in) the road. For example, the safe driver must be able to see:

- road signs and signal lights clearly
- signs on other vehicles, special signs on buses such as “stops at railroad crossings” or signs on trucks such as “extra wide load”
- cars approaching, not caught off guard by a car suddenly seeming to come from nowhere and moving close behind or next to you

Slowed thinking: A person must be able to take in information, process it and act on it quickly to be a safe driver. During driving, there is a great deal of visual information and sounds for a person to see, think about and act on. Slow processing of information (slow thinking) may lead to accidents because there was not enough time to read through the whole sign, think through all the details of the setting, respond ahead of time to an emergency vehicle coming from behind, and act safely. In a way, it is as if fewer details are actually seen.

Some researchers describe the smaller amount of information that is taken in and acted upon as a smaller *useful field of vision* (useful field of vision describes what we see, how much we see and how fast we can process the information in our brain and body to react or carry on a task). Slower processing while driving a car results in the driver picking up and working with fewer details than are actually there. The driver may be working hard and fully intend to be as safe as possible, but slower thinking results in fewer details being considered and used to adjust driving actions. Thus, the driver may be focusing on the road and the lights at the intersection up ahead and miss seeing the car door ahead in the right lane begin to open up. Missing that information may result in hitting the door and person who began to step out of the car.

In summary, **slowed thinking and decreased useful field of vision** may lead to missing sight of:

- objects in the road ahead
- drivers in the side lane or lanes behind you
- slow pedestrians trying to cross the street
- children on bikes who may skid on a rock or sand
- children playing with any wheeled toys or balls
- an object flying through the air toward your vehicle

Decline in decision-making: A person must be able to consider ongoing, changing details and make quick, safe appropriate choices while driving. For example, the safe driver must avoid changing lanes when in the distance there is a speeding car moving forward in that lane.

Decline in judgment: A person should think about choices, possible consequences of each choice, past experience with such choices, the value, usefulness and appropriateness of the final choice. For example, the safe driver should:

- schedule an appointment during the time of low traffic
- put on the headlights more than half an hour after sunrise and before sunset, during cloudy weather, and during daylight driving
- fill the gas tank when it is one-fourth or more full, not when it is on “E” (Empty)
- choose a parking spot that is easy to get into and out of
- never try to “teach that other driver a lesson”.

Decline in sense of direction (visual-spatial skills): A person must know the correct direction and how to follow easy directions to find a location. For example, a person must be able to:

- drive in the north bound lane when going north, etc.
- signal a right turn before taking a right turn; signal a left turn before turning left
- turn into the appropriate lane ahead of time before turning at an intersection or exit
- merge with other traffic correctly...noting the speed of other cars to allow enough time and space on the road before merging into the correct lane

Slowed movement: A person must be able to turn her or his neck easily from side to side to scan all the mirrors (side mirrors and rear view mirrors) as well as to move arms and legs quickly to adjust driving actions to changes, especially to sudden changes by other drivers. A safe driver must be able to

- allow enough space between vehicles to allow for adjusted driving or quick stops to avoid any accidents
- move quickly to the side of the road to allow an approaching emergency vehicle to pass through
- move into a “safe space” at any time, for example move into the next lane or the break down lane quickly to avoid a sudden crisis such as a fender bender or exhaust pipe falling off the car in front or an animal or person darting across the road

Limiting or Removing Driving Privileges

Many people who are aware of their changes in ability to deal with the demands of driving will take the initiative to stop driving. Some people will limit driving to low traffic places or times. Others will drive only when there is a “copilot” (someone seated in the front passenger seat to notice upcoming activity on the road or to give frequent directions). Some people will stop driving based on the request of a family member or other loved one.

Tips to Help Someone Stop Driving

1. Plan ahead early with choices for rides or ordering deliveries to the home.
2. List specific reasons why a person should stop driving: problems with vision, medical prescription or letter from physician to stop driving; accidents; near misses (give dates and describe details).
3. Ask person's help keep family safe.
4. Ask person's help to keep others, such as *your grandkids*, on the road safe.
5. List and schedule other activities (instead of going for a ride): walks, yard work, bird watching, lunch meetings (ride from friends or taxi)...
6. Give a consistent message: No driving.

Emotional Challenges

It may take the family physician to deal with the situation of stopping driving privileges. Not only is it hard for some family members, but also for some physicians to address the removal of driver privileges. Some older drivers have never had an accident, have never been cited for a driving violation, and have used their driving skills to save the lives of others. Some people with military backgrounds have driven all kinds of vehicles in many dangerous situations; they have a driving record that is clear of mishaps. Some elderly drivers, through their ability to drive, maintain the self-sufficiency of their own family unit, many neighbors, and others who are unable to drive.

Some elders learned to drive before they were teen-agers in order to help on the family farm or ranch. Driving is so much a part of their identity, function, independence and sense of purpose that it is hard for them to remember a time when they did not drive or to consider a time when they may no longer drive.

The independence, pride, and mobility that driving provides for people make it difficult for some to leave behind that aspect of their lives. In a way it is a deep loss. Memories and emotions surface with the issue of "not driving". The emotions may be difficult for the family and the physician to process. There may be a stronger grief reaction than when they learned about the diagnosis of Alzheimer's disease. Or, the removal of driving privileges may be "the final straw". The removal of driving privileges may be the point that makes clear and immediate, the future decline and loss associated with the long-term, progressive changes coming with Alzheimer's disease.

Occasionally the family caregiver will continue to allow the person with the disease to drive despite the physician's insistence to stop. The family member may disagree with the conclusions of the physician or may struggle because it is

too stressful to deal with their loved one's sadness, sense of humiliation, anger or refusal to cooperate. It may be difficult for the family to meet their basic daily needs without a family driver.

The Help of a Physician

When there are signs of a memory disorder, a medical evaluation is critical. The medical evaluation may uncover a fixable problem such as a vitamin B deficit, a hormone imbalance such as low thyroid, or a medicine for urine incontinence that interferes with memory function. The medical evaluation may find a condition such as high blood pressure or irregular heartbeat that under treatment leads to improved memory, better cognition, and slowed decline. Other people with progressive conditions such as Alzheimer's disease may show improved function with some "memory boosters and protectors" [anticholinesterase medicines such as aricept (donepezil, a product of Eisai/Pfizer), exelon (rivastigmine, a product of Novartis) or razadyne, (galantamine, a product of Janssen) or neuroprotective medicines such as namenda (memantine, a product of Forest Pharmaceuticals).

The medical evaluation should include questions about driving. If the person is still driving, the physician should consider carefully how the health changes may impact driver skills. (The physician should document the findings in the person's medical record.)

Sometimes it is unclear if the person can still operate a motor vehicle safely. In those cases, the physician should recommend that the person undergo a comprehensive driver evaluation test before continuing to drive. The physician should document the discussion in the person's medical record.

A diagnosis of Alzheimer's disease is not enough to remove driver privileges; level of skills and driver safety are the important issues. States in the U.S. vary in their reporting mandates to physicians regarding health changes and driving. A few states require reporting, for example in California the physician must report a diagnosis such as Alzheimer's disease to the state offices of the Department of Transportation, which then provides a medical review and considers possible removal of driver privileges.

The American Medical Association lists each state and the requirements for physician reporting in its publication, "Physician's Guide to Assessing and Counseling Older Drivers". The guide was written in cooperation with the U.S. Department of Transportation, National Highway Traffic Safety Administration. For further information, contact the American Medical Association at www.ama.org [or telephone them at (313) 464-4179] or contact the U.S. Department of Transportation, National Highway Traffic Safety Administration at www.nhtsa.dot.gov [or telephone them at (888) 327-4236].

Often by the time a person has undergone a medical evaluation for serious problems in memory, language ability and other thinking functions to the point

that the family is concerned about the possibility of Alzheimer disease, the person often no longer can operate a motor vehicle safely, thus should not be permitted to drive. In these cases, the physician should be very clear about stressing “no driving” to the person and anyone else coming to the evaluation with that person. (The physician should document in the person’s medical record: the findings, the discussion, and who, such as a family caregiver, was present during the discussion.)

Tips to Stop an Unsafe Driver

1. Have a family meeting and ask (or plead) that the person stop driving.
2. Have a special picture I.D made to replace driver’s license. Most Dept. of Motor Vehicles will provide this I.D. for a small fee.
3. Keep a “Do Not Drive” note in large print or a Prescription from the physician on the refrigerator door, on the garage door, and in the car on the driver’s side (steering wheel, driver’s seat or visor).
4. Hide the car keys.
5. File down the ignition key so it fits into the ignition but does not start the car. For a remote door opener (and key), remove the battery.
6. Keep car (one block away) in a neighbor’s garage.
7. Donate the car to a deserving family member or charity (a great tax deduction!).
8. Redo car upholstery to give the interior a very different look. It may be too hard for the person to adjust to the “new look” and to figure out how to drive in the “new car”.
9. Buy a different car. The different model, style, color, dash board, and smell should make it impossible for the person to learn how to drive.
10. Disable the car: remove distributor cap, disconnect spark plugs.

National Resources

1. ACTION (Accessible Community Transportation in Our Nation; an Easter Seals project) (800)659-6428 www.projectaction.org
2. AlzOnline (866)260-2466 www.AlzOnline.net
3. Alzheimer's Association (800)272-3900 www.alz.org
4. American Medical Association (313) 464-4179 www.ama.org
5. American Occupational Therapy Association (AOTA) www.aota.org/olderdriver
6. ElderLocator (800)677-1116 www.eldercare.gov
7. U.S. Department of Transportation, National Highway Traffic Safety Administration (888) 327-4236 www.nhtsa.dot.gov

Florida Resources: Florida Department of Elder Affairs (DOEA)

1. Florida Elder Helpline (800) 963-5337
2. Florida DOEA (850) 414-2000

This ends Session 3: *Safe Driving and Alzheimer's Disease or a Related Dementia (Memory Disorder)*. Further information about driving occurs in Session 1: *Safe Driving* and in Session 2: *Safe Driving and Mild Cognitive Impairment*.

Some Additional Resources

Alternative transportation: <http://www.eldercare.gov>

Association of Driver Rehabilitation Specialists: <http://www.aded.net>

CarFit: www.eldersafety.org/latest/roadmap-to-driving-wellness-and-car-fit-two-exciting-new-programs.html

Driver refresher courses: <http://www.aarp.org/drive>; www.aaapublicaffairs.com

DriveWell: <http://www.asaging.org/drivewell>

DriveAble (a Canadian program): <http://www.driveable.com>

Driving & Dementia Toolkit (published in Journal of the American Geriatric Society): <http://rgapottawa.com/dementia/english/default.asp>

Florida At-Risk Driver Council, Florida Senior Safety Resource Center. The Effects of Aging on Driving Ability. (February 2004).
<http://www.hsmv.state.fl.us/ddl/atriskdriver.pdf> or www.fssrc.phhp.ufl.edu

GrandDriver information & references: <http://www.granddriver.info/>

Independence Drive: <http://driving.phhp.ufl.edu/index.php> (NODRTC website);
<http://www.phhp.ufl.edu/ot/> (OT website); <http://www.IndependenceDrive.phhp.ufl.edu>

Older driver facts: <http://www.seniordrivers.org>; www.nhtsa.dot.gov; www.aoa.gov

Free Booklets

At the Crossroads: A Guide to Alzheimer's Disease, Dementia & Driving. (2003). The Hartford. www.thehartford.com/alzheimers; Also: *We need to talk...*

Age Page. *Age Page on Older Drivers.* (Free Brochure). 1-800-222-2225
www.nia.nih.gov/health/agepages/drivers.htm.

Florida Transportation. Lifetime Choices. FL. Dept. of Highway Safety & Motor Vehicles & FL Dept. of Elder Affairs. www.hsmv.state.fl.us or phone (850)487-0867

Physician's Guide to Assessing and Counseling Older Drivers (booklet).(9/03)
(AA34:02-520:15M7/03) (DOT HS 809 647) (ISBN:1-57947-558-2)
1. American Medical Association at www.ama.org or telephone (313) 464-4179.
2. U.S. Department of Transportation, National Highway Traffic Safety Administration at www.nhtsa.dot.gov or telephone (888) 327-4236.

Driving When You are Taking Medications. (Free Brochure DOT HS 809 777)
8/04

National Highway Traffic Safety, U.S. Dept. of Transportation. DOT Auto Safety Hotline: 1-888-327-4236. www.nhtsa.dot.gov)

Safe Driving for Older Adults. (Free Brochure DOT HS 809 493)
National Highway Traffic Safety, U.S. Dept. of Transportation. DOT Auto Safety Hotline: 1-888-327-4236. www.nhtsa.dot.gov