

# Webinar Series



## Driving & Multiple Sclerosis

July 10, 2018

*Presented by:*

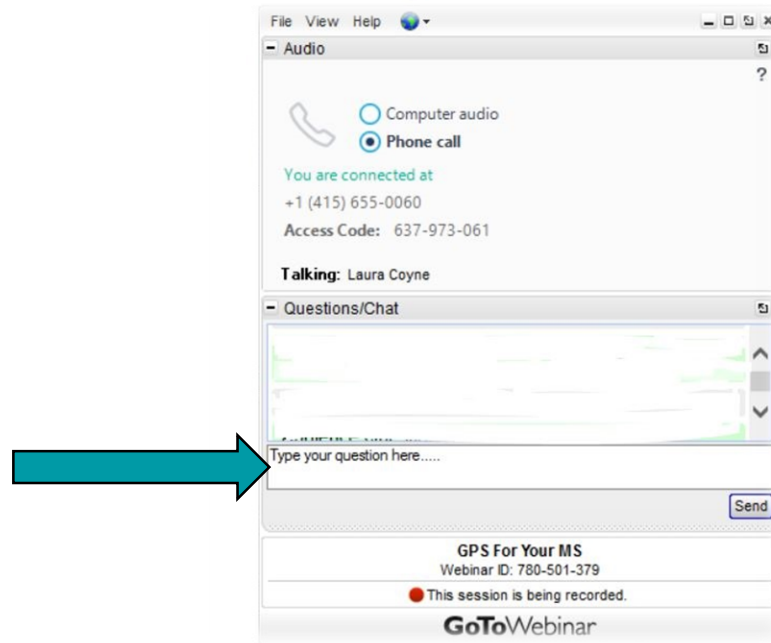


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Society**

[nationalmssociety.org/telelearning](http://nationalmssociety.org/telelearning)



# Learning Objectives

1. Understand the role driving plays in our lives and why people are sensitive to lost or changing abilities.
2. Recognize the skills needed for safe driving and how MS can affect them.
3. Identify signs of altered ability and evaluation resources.
4. Learn how a Certified Driver Rehab Specialist can offer recommendations to keep you and your loved ones safe.
5. Review adaptive equipment options that may be available.
6. Discuss how changing driving abilities can affect relationships and the importance of communication.
7. Explore ways to cope if you are no longer able to drive, including alternative transportation options

# Ali Azin

Headshot

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# Driving = Freedom (or so we think)

From Keroac...



To Hollywood...



# To Everyday Life...



# From Childhood On...



# We are Bombarded with Messages, Images, and Cultural Cues About Driving...



# Driving is Glamorous!

- **Independence:** Take on the open road—with all of its possibilities and metaphors
- **Autonomy:** Do what you want, when you want
- **Strength:** Physical prowess and reflexes to handle a complex machine
- **Adulthood:** Maturity, good judgment, good citizenship
- **Mental acuity:** Quick thinking for safe navigation

*Is it any wonder that drivers don't want to stop?*

# Driving is Practical and Essential!

*Our communities and lifestyle are built on a dependency on cars and our ability to drive ourselves.*

## We drive to:

- **Get to work**
- **Shop**
- **Visit the doctor**
- **Transport our kids**
- **Socialize**

*Driving feels like survival!  
Does it have to?*

# Facts

## THE FULL IMPACT OF MOTOR VEHICLE CRASHES

For every 1 person killed in a motor vehicle crash



8 people were hospitalized



100 people were treated and released from the ED



“Motor vehicle crashes are a leading cause of death in the United States.... In 2011, motor vehicle crashes killed more than 32,000 people and injured more than 2.6 million ” (CDC, 2012)

SOURCE: CDC WISQARS (Web-based Injury Statistics Query and Reporting System), 2012

# Components to Driving

- Vision, cognition, and motor functions are the three key functions required for safe driving (Pellerito, 2006)
- The risk of driving errors increases when there are deficits in any of these areas





# Components to Driving

## Physical/Motor Components

- Coordination, range of motion, strength, sitting balance, reaction time
  - Being able to access and utilize primary controls
    - Smooth steering
    - Smooth acceleration
    - Smooth braking
  - Being able to access and utilize secondary controls
    - Turn signals, wipers, headlights, etc.
  - Quick reaction times to avoid hazards

# Components to Driving

## Visual/Perception Components

- Scanning, depth perception, visual fields, contrast sensitivity, visual acuity, visual perception
  - Scanning aids in checking cross traffic
  - Depth perception affects the ability to judge distance and speed for a stop or lane change
  - Intact visual field is to identify potential hazards
  - Contrast sensitivity helps identify the median ahead
  - Visual acuity is important for reading roadway signs
  - Visual perception helps maintain lane alignment

# Components to Driving

## Cognitive Components

- Attention, processing speed, memory, decision making, planning, organization, multi-tasking
  - Appropriate timing for changing lanes
  - Knowing when to yield to oncoming traffic
  - Deciding when to get over on the freeway for an exit
  - Anticipating hazards
  - Obeying traffic signs
  - Remembering directions to intended destination

# Physical Impairments



- Poor reaction time or coordination could lead to this driver having difficulty with braking in time or swerving to avoid this pedestrian

# Visual Impairments



- Poor visual perception skills may cause difficulty in perceiving lane markings for this driver

# Visual Impairments



# Cognitive Impairments

- Decreased insight/risk perception
- Poor planning and organization
- Impaired processing speed
- Impaired sustained and/or divided attention
- Poor memory
- Impaired topography (map of area)



# MS & Driving

Impairment	Impact on driving
Abnormal visual perception and attention	May not perceive, attend, or interpret a stimulus (i.e. signs on the road, pedestrians, median ahead)
Executive dysfunction	Cannot plan or execute an immediate response or correction to road conditions (i.e. braking, taking foot of accelerator, steering correction)
Abnormal memory	Cannot recall how to handle specific driving scenarios (i.e. when raining), unable to get to specific location (i.e. grocery store, relatives home)
Motor dysfunction	Unable to control, steer, apply brakes, or move foot off accelerator



# MS & Driving

- Studies show that both cognitive changes and spasticity affect driving performance and increase the risk of a car crash
- Persons with MS are 3 times more likely to have a car accident, putting themselves and others at risk
- A car accident can exacerbate MS symptoms, adversely affecting its progression
- Your well-being has a direct impact on the lives of family and friends

***“Independence” means keeping yourself safe.***



# Be Self-Aware...

## *Pay attention to...*

- **Your instincts and *your inner voice*:** If you think you feel uncomfortable or that you lack confidence behind the wheel, you probably do. *Your body and mind are signaling you that something is not right.*
- **The opinion of others:** Have family, friends, doctors expressed concern for your safety behind the wheel? Suggested modifications? Expressed unwillingness to be a passenger when you drive?
- **The condition of your car:** Are there increased dings and dents?
- **Driving infractions:** Have you been in automobile crashes? Pulled over by the police? Received moving violations?

# How to Avoid Denial

## *Self-evaluate...*

- What does driving represent to you?
- What are the practical reasons you love it? What are the emotional reasons?
- What sense of pride do you associate with your ability to drive? What sense of freedom?

*When you come to terms with your definition of independence and how driving contributes to it, you will be able to talk about when and how to make adaptations to your car, to phase out driving at certain times, or to give it up altogether.*

# How to Self-Evaluate

## Recognize thoughts or **red flags** that signal it's time to make adjustments in driving:

- “I only feel comfortable driving during the day.”
- “I often feel too tired to drive but I’m doing it anyway because... *I have to get to work! I have to pick up my kids! I need groceries! I have a doctor’s appointment!*”
- “Sometimes I feel unsafe behind the wheel.”
- “Those dings on my car are a normal part of driving, right?”
- “I’m not comfortable driving my grandchildren.”
- “I have trouble concentrating when the radio is on in my car.”
- “I don’t want to discuss my uneasiness with my family or doctor because... *They will make me stop driving. They will make me feel sick and inadequate. I will burden my family and friends.*”

# Face Facts: A Checklist

*Ask yourself...*

**Am I experiencing **physical changes** that could compromise my safety in the car, or the safety of others?**

- Fatigue
- Leg tremors
- Muscle weakness or stiffness/spasms/cramps/pain, particularly in arms or right foot
- Difficulty getting in and out of the car
- Difficulty moving your foot between the gas and brake pedals
- Loss of sensation, strength or coordination
- Slowed reaction time
- Visual problems: Blind spots? Compromised peripheral vision? Blurred vision? Can you distinguish colors of a stop light?
- Difficulty driving at night

# Face Facts: A Checklist

*Ask yourself...*

**Am I experiencing cognitive or emotional problems that could interfere with the safe operation of a car?**

- Difficulty judging distance or rate of speed
- Feelings of fear or anxiety around driving
- Memory problems: Forgetting destination? Getting lost?
- Poor concentration
- Inability to multitask
- Slowed driving decisions
- Mood changes, e.g. anger, depression

# The Role of Family & Friends

Are you hiding your concerns about your health and its impact on driving from loved ones?

## Fear of:

- Burdening them with your illness?
- Depending on them for transportation, or finding you alternatives?
- Appearing sick?
- Having your car taken away?
- Starting an argument?

# Or Perhaps You Think Your Loved Ones Haven't Noticed?

**Don't kid yourself: They noticed!**

**They may not be talking to you about it because:**

- They tried and you rejected their intervention
- They fear your reaction
- They want to maintain harmony—personal and familial
- They are investigating third-parties to force you to modify or give up driving
- **The DMV:** Allows reporting unsafe drivers, often anonymously. (DMVs typically require the reported person to take a driver's test.)
- **Your Doctor:** May be asked to intervene on their behalf



# The Role of Your Physician

- Is sympathetic to your challenges
- Can check medications and adjust dosages, which may improve concentration, coordination, and reaction time
- Is an objective voice of authority on modifications that will keep you driving *as long as possible*
- Can order tests (such as an eye exam) to get precise information on your abilities (and share with loved ones)
- Can direct you to a [Driver Rehabilitation Specialist](#), who can provide **driving evaluations**, **risk modifications**, and/or **adaptive equipment**.

# What is a Driving Evaluation?

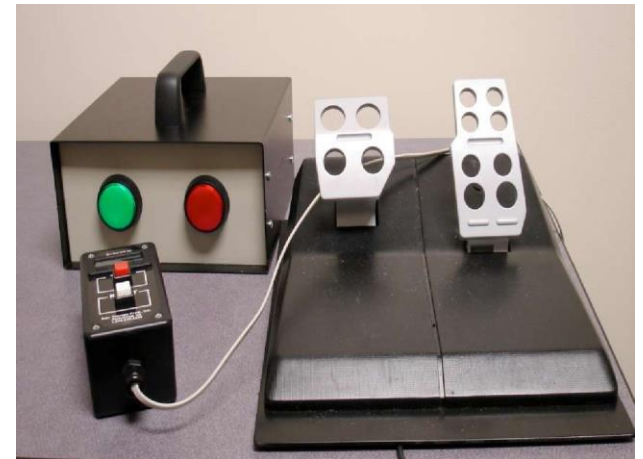
- Clinical evaluation
- On-the-road evaluation
- Adaptive driving training sessions (if needed)

# Clinical Evaluation

- Occupational profile
- Physical components
- Visual components
- Cognitive components
- Driving simulator

# Clinical Evaluation

- Physical components
  - Range of motion of neck, trunk, upper and lower limbs
  - Manual muscle test of upper and lower limbs
  - Coordination
  - Sensation testing
  - Brake reaction time



# Clinical Evaluation

- Visual components
  - Visual acuity
  - Peripheral field test
  - Visual field test
  - Pursuits
  - Saccades
  - Depth perception
  - Color perception
  - MVPT
  - UFOV



# Clinical Evaluation

- Driving Simulator
  - Evaluates basic driving skills and reaction to hazards
  - Simulated drives that require the driver to match the video on the screen
  - Records steering, braking, signaling, and acceleration errors



# On-The-Road Evaluation



# Recommendations

- Fit to drive
  - Continue driving
- Fit to drive with restrictions
  - No freeway, night time driving
  - Require adaptive equipment and training
- At-risk driver
  - Outpatient services
  - Driving school
- Driving cessation
  - Alternative transportation options



# Modifying Risk

- **Modify the internal environment**
  - Adaptive equipment
- **Modify behavior**
  - Increase space cushion
  - Blind spot checks
  - Adhere to posted traffic signs
- **Modify the external environment**
  - Limiting/restricting driving at night
  - Limiting/restricting driving on freeways
  - Limiting/restricting driving at rush hour

# How to Stay Safe on the Road with MS

## Make adaptations, as necessary:

- Know your daily rhythms:
  - If symptoms are more pronounced later in the day, drive only in the morning
  - Don't drive if you are having a "bad day"
- Drive only when you feel high energy
- Avoid driving in bad weather, high traffic, and distractions; stay within familiar radius
- Don't drive with another illness, when MS symptoms could worsen
- If fatigue is caused by heat sensitivity, don't drive during warmer times
- Avoid driving during MS exacerbation; resume normal driving when exacerbation ends
- Look into public transportation options to supplement your driving routine
- Communicate your MS symptoms to loved ones

# Start the discussion...

- Just because you have MS *doesn't mean you shouldn't be driving!* **Fight stereotypes from yourself and others!**
- Starting a discussion yourself relieves stress on family and friends who care about you, fear for your safety, and want to help. **Starting a discussion does not mean stopping the driving.**
- The discussion about driving with MS should be progressive, like the disease itself (modifications made depending on your abilities and changes over time)
- Driving adaptations are common, e.g. aging
- Starting a dialogue, making driving modifications, and using **adaptive equipment** are ways to *keep you on the road*, not take your license away!

# Adaptive Equipment

- Handy bar



# Adaptive Equipment



# Adaptive Equipment

- Blind spot reducing mirrors
- Panoramic mirrors
- Additional mirrors



# Adaptive Equipment

- Steering devices



# Adaptive Equipment

- Mechanical hand controls
  - Push/Rock
  - Push/Pull
  - Push/Right angle
  - Push/Twist
  - Floor mounted hand controls





# Adaptive Equipment



# Adaptive Equipment

- Left foot accelerator



# Adaptive Equipment

- Mobile eye
  - Forward Collision Warning
  - Pedestrian Collision Warning
  - Headway Monitoring Warning
  - Lane Departure Warning
  - Intelligent High-beam Control
  - Speed Limit Indicator



# ***Driving is the most important activity/ability that many fear will go away...***

Losses or changes in driving can be ***practically and emotionally challenging.***

## **Feelings of Grief:**

- Loss of *independence*
- Loss of *health*
- Loss of *identity*
- Loss of *self-worth*
  - *Am I a good parent/spouse/friend if I can't drive?*
  - *Am I competent?*
  - *How will it look to others?)*

## **Lifestyle Changes:**

- Adjusting daily activities
- Asking others for help
- Relying on others for once-routine tasks (and being OK with it)

# Losing the ability to drive...

- Can feel like a personal failure
- Can feel like giving in to the disease
- Can feel like one more (very significant) milestone in the physical decline caused by MS
- Can feel emasculating (especially for men)
- Can lead to sadness and depression

# No One Wants to Give Up Their “Independence”

*But, as the National MS Society says:*

Being *independent* includes recognizing when it is no longer safe to perform certain activities.

That includes driving.

It is important to plan for that day.

“Independence” means keeping yourself safe.

# How to Live Without a Car

## It is important to stay active:

- Don't be afraid to ask others for assistance
- When someone *asks you* how they can help, find ways
- Understand accessible public transportation options
- Identify reliable cab companies
- Create Uber, Lyft and other car service accounts
- Carpool with friends and colleagues
- Check with church, community groups and social services (often have volunteer drivers)
- Contact your state Office of Disability Services & the National Aging and Disability Transportation Center for accessible transportation options
- Contact the National MS Society for transportation programs and providers

# Changing Your Driving Habits

Life does not end without driving, but it does change.

How will you define your “new normal”?

Your “new independence”?

Your “freedom”?

*Letting go gives us freedom, and  
freedom is the only condition for  
happiness.*

~Thich Nhat Hanh



Q & A



# Resources

- Association of Driver Rehab Specialist (ADED)  
[www.aded.org](http://www.aded.org)
- National Mobility Equipment Dealers Association (NMEDA)  
[www.nmeda.com](http://www.nmeda.com)
- SAFER DRIVING: The Enhanced Driving Decisions Workbook  
<http://www.um-saferdriving.org/>

# Resources

## Videos from the MS society

- Staying Independent: Driving with MS  
<https://www.youtube.com/watch?v=Ae06vXOC5Eg&feature=youtu.be>
- Driving Evaluation: A Step Towards Independence  
<https://www.youtube.com/watch?v=2feYaKCMZml&feature=youtu.be>

# Resources



## Car Talk: Why Your Aging Parent Can't Hand Over the Keys

Imagine how it feels to have your "Freedom" taken away.

PSYCHOLOGYTODAY.COM

Cecilia Simon  
*Psychology Today*

<https://www.psychologytoday.com/us/blog/whos-caring-mom/200807/car-talk-why-your-aging-parent-cant-hand-over-the-keys>

# Programs



## IN-PERSON

**CAN DO<sup>®</sup>** (Four Day)

**TAKE CHARGE<sup>®</sup>** (Two Day)

**JUMPSTART<sup>®</sup>** (One Day)



## ONLINE

**Webinar Series (Monthly)**

**Can Do On Demand**

**Ask the Can Do Team (Q&A)**

**Library Articles**

# **National MS Society Resources**

[nationalMSSociety.org](http://nationalMSSociety.org)



# MS Path 2 Care

An initiative to empower people affected by MS to be active partners in their healthcare experience.

Visit [www.MSPath2Care.com](http://www.MSPath2Care.com) to learn more about the importance of shared decision making in MS care, and to hear important tips directly from people living with MS, their support partners, and MS specialists.

MS Path 2 Care is brought to you in partnership with:



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# Webinar Series



## Progressive MS

August 14, 2018

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