



WEBINAR   
WEDNESDAYS

# How MS Impacts Your Mood & Cognition

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# MAY PROGRAMS

JUMPSTART – May 8  
*Taking Charge of Your Mood*

COACHING – May 12  
*Managing Your Emotions*

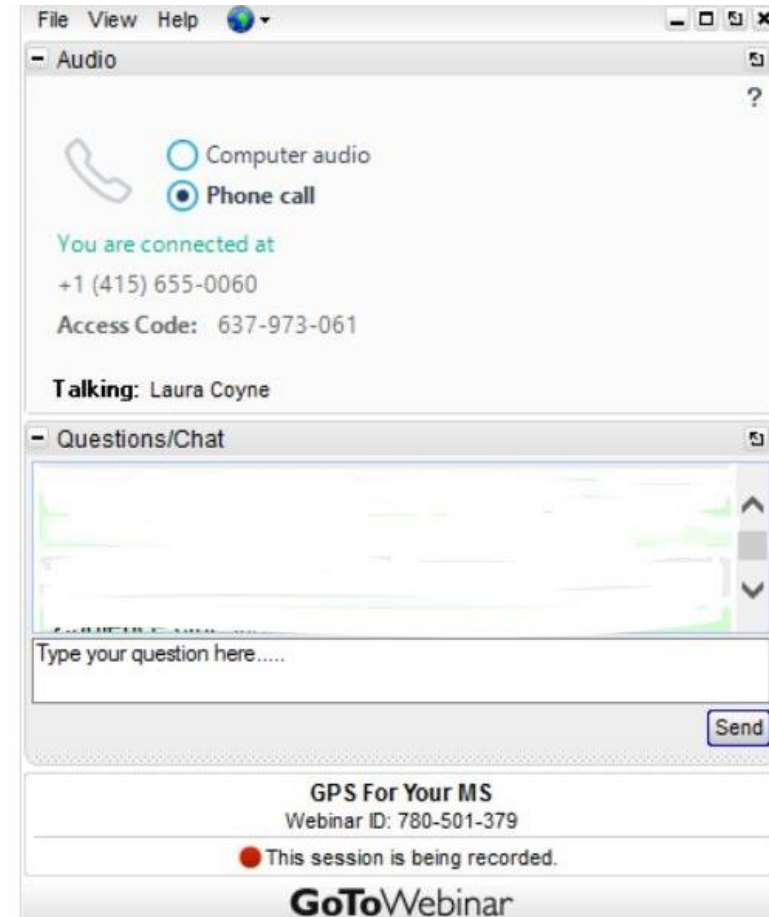
JUMPSTART – May 20  
*State of Mind: Coping with Changes in  
Your Thinking*

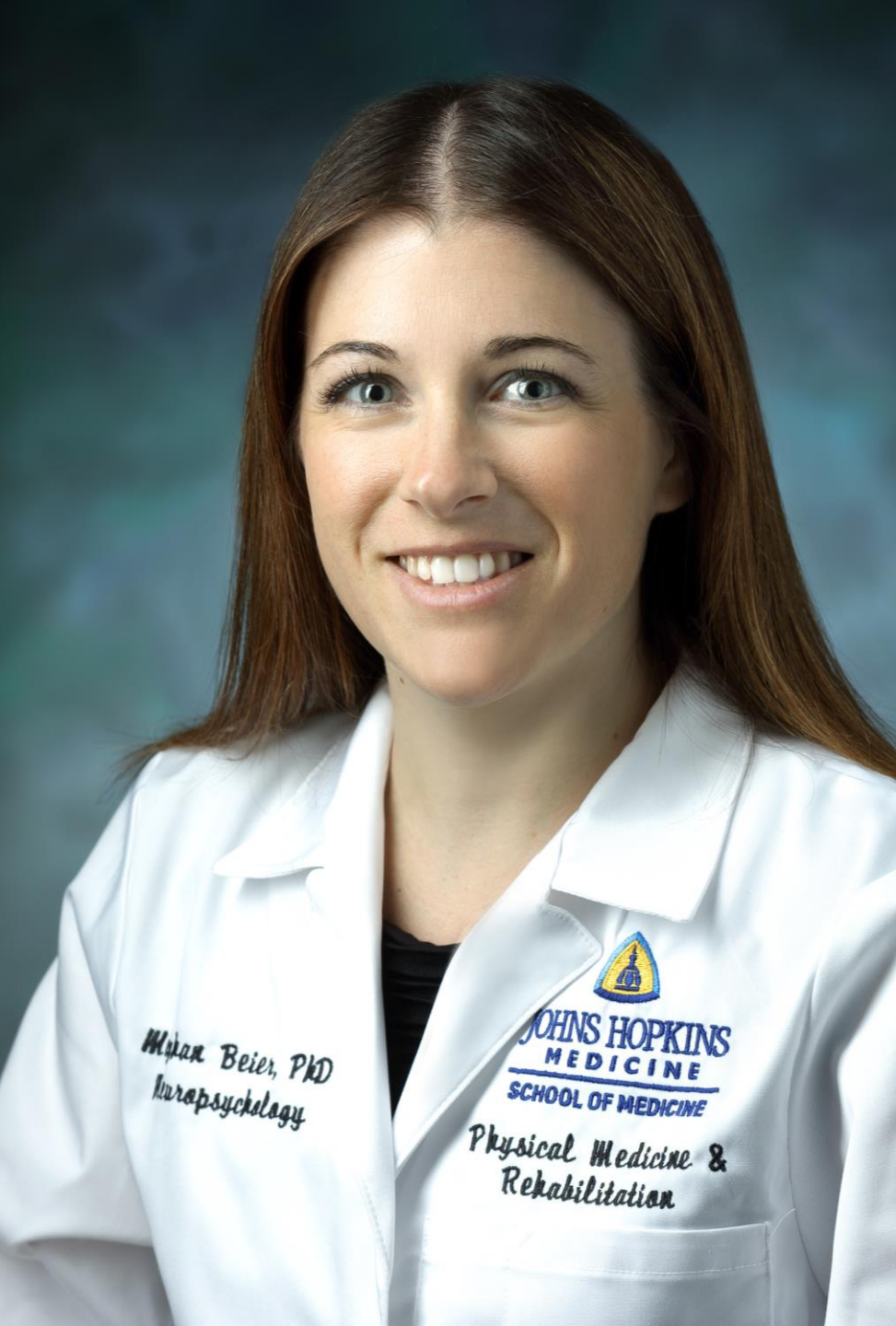
**Your Questions, Answered!** – May 25  
**Mood & Cognition**



# How to Ask Questions During the Webinar

Type in your questions using the  
**Questions/Chat** box





# Meghan Beier, PhD

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- Psychologist
- Glen Arm, MD





# Abbey Huges, PhD

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- Psychologist
- Baltimore, MD

# Learning Objectives

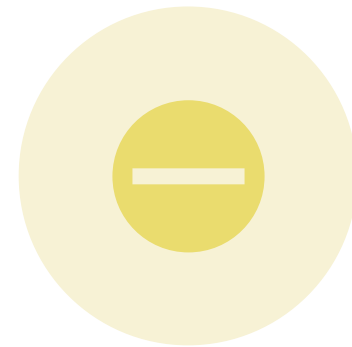
- Understand causes of mood and cognitive symptoms/changes in MS
- Recognize the overlap of mood and cognitive symptoms
- Review latest research on treatment recommendations
- Learn treatment options, symptom management strategies, and where to find resources

# Interactive Poll

In your last MS-related appointment, did your provider ask you about your **mood**?



**YES**



**NO**

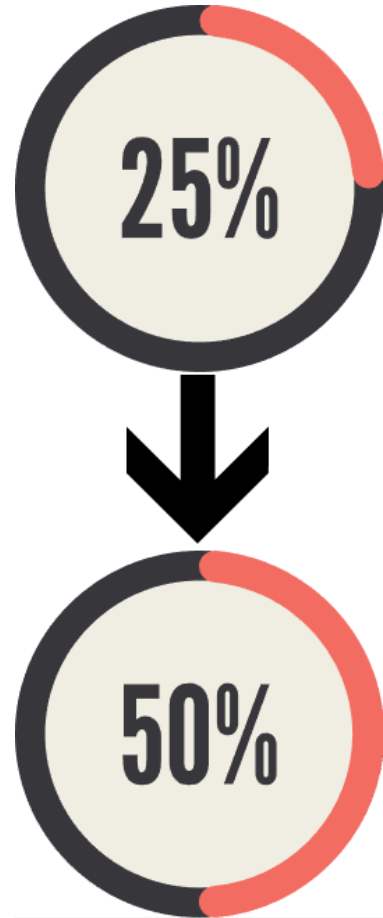
# Overview of Mood and Cognition in MS

## **Mood – a person's emotional state at a particular time**

- Emotions – brief feelings in response to events/people around us
  - E.g., "I felt relieved when my MRI showed no new lesions this year."
- Mood – longer-lasting than emotions and can include different emotions
  - E.g., "For the past week, I have felt excited and nervous about going back to work after my recent relapse."



# Depression and MS



- 25-50% of persons with MS will develop a form of depression in their lifetime
- In people with MS age 18 to 45, there is a 25% chance of developing a form of depression over the course of 1 year.
- Depression is more common in MS than in people without MS and in individuals with other long-term medical illnesses

# Anxiety and MS



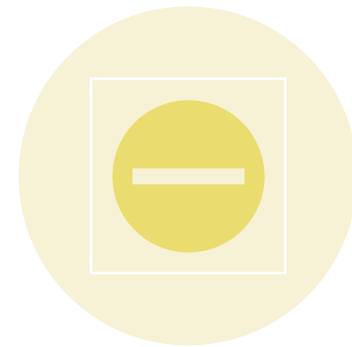
- Anxiety disorders are 3x greater in MS than the general population
- Up to 40% of people with MS experience Anxiety
- Anxiety can exacerbate cognitive dysfunction, specifically processing speed
- Increased fight or flight response, due to anxiety, can also decrease in the moment problem-solving skills

# Interactive Poll

In your last MS-related appointment, did your provider ask you about your ***cognition***?



**YES**



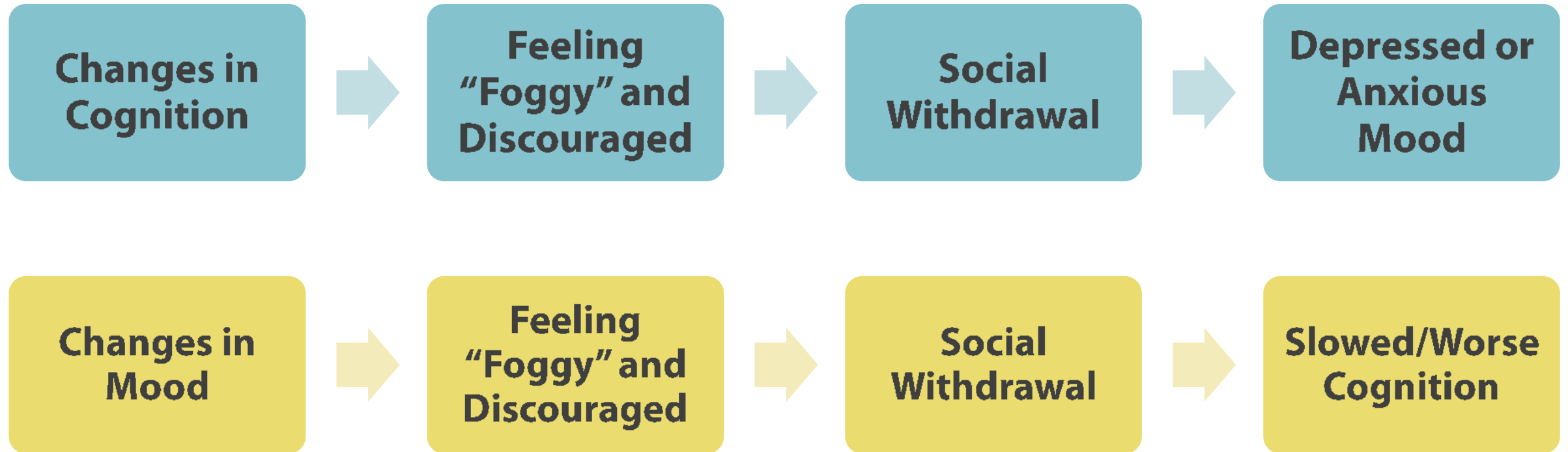
**NO**

# Overview of Mood and Cognition in MS

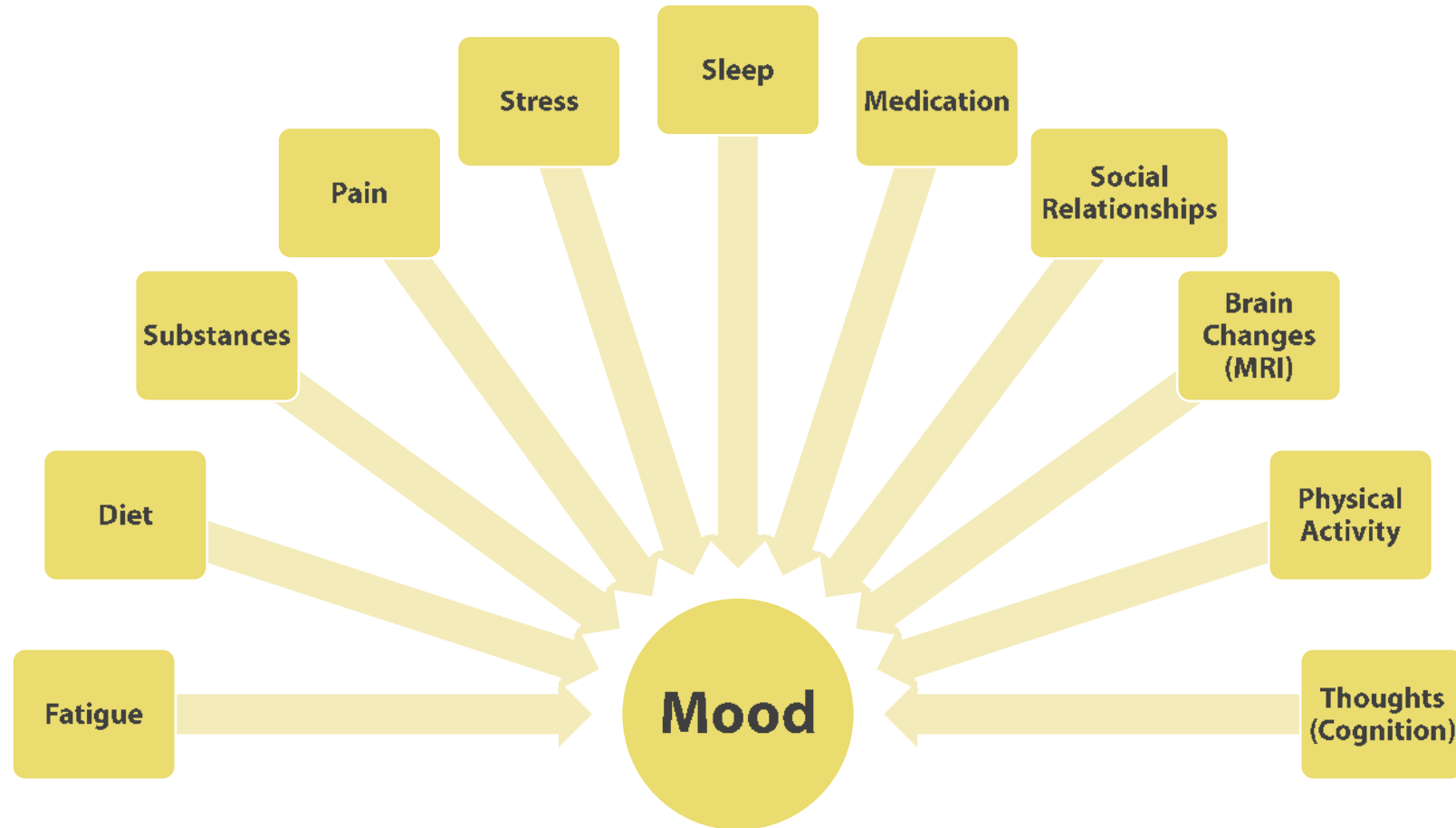
- Approximately 65% of people with MS experience cognitive changes
- Cognition – a person's mental processes involved in gaining and maintaining knowledge
  - Thinking
  - Reasoning/Interpreting information
  - Problem-solving
  - Organizing
  - Learning new information
  - Recalling previously learned information
  - Processing auditory, visual, and motor information from your environment
  - Language (understanding and producing speech, word-finding)

# Overlap of Mood and Cognition in MS

- Mood and cognition are highly related to one another

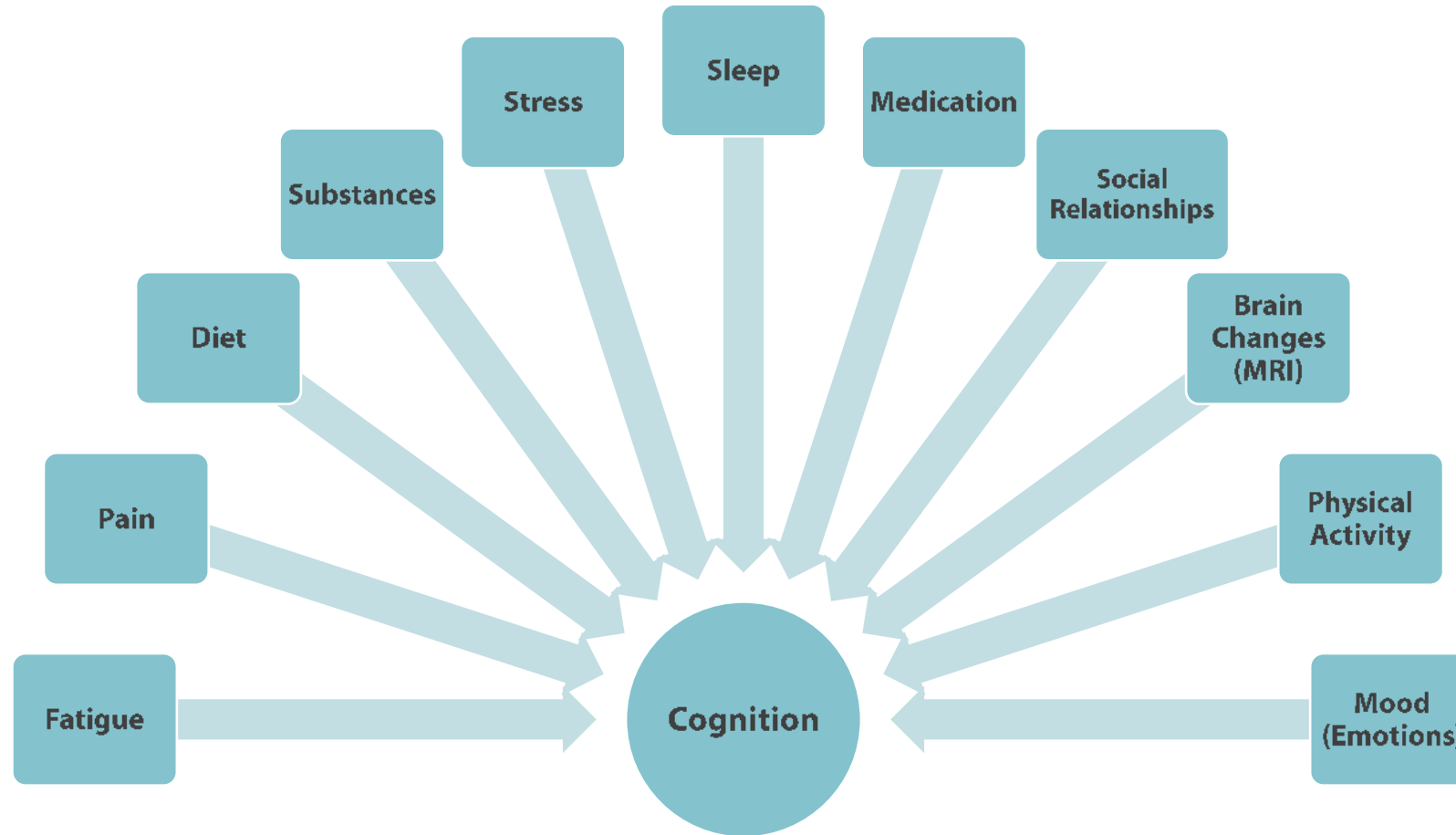


# Factors that Contribute to Mood





# Factors that Contribute to Cognition



# Mood and Cognition are Intertwined



“Simply trying to **figure out and plan** my day can become **a big struggle; anxiety provoking**. I very much rely on a routine and my wife to get things done, otherwise **I can sit for a very long time trying to figure out what to do first,** which is **frustrating**.”<sup>1</sup>

# Cognition & Mood Can Impact the Whole Family

**Support Partner:** “Do you want chicken or pasta for dinner?”

**Person w/MS:** Looks at support partner but doesn’t respond. (taking longer to process and think of words).

**SP– Getting frustrated:** “Did you hear me?”



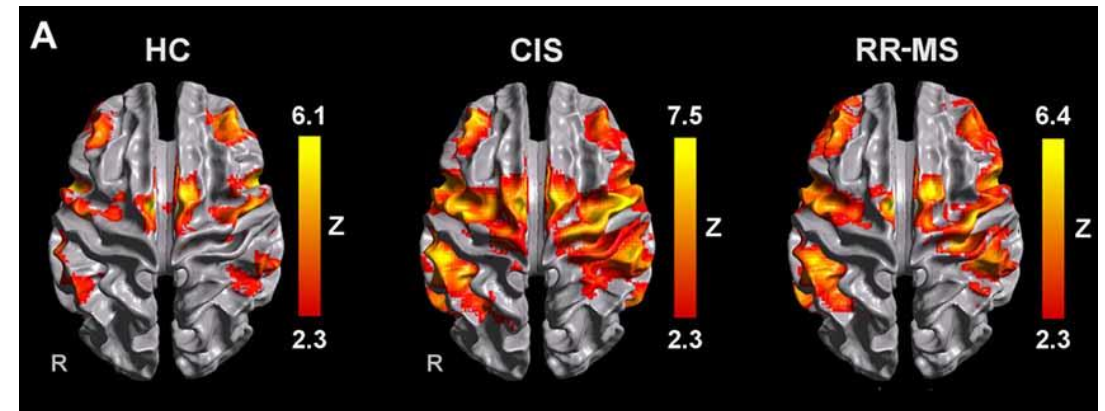
# Mood and Cognition Impact Work



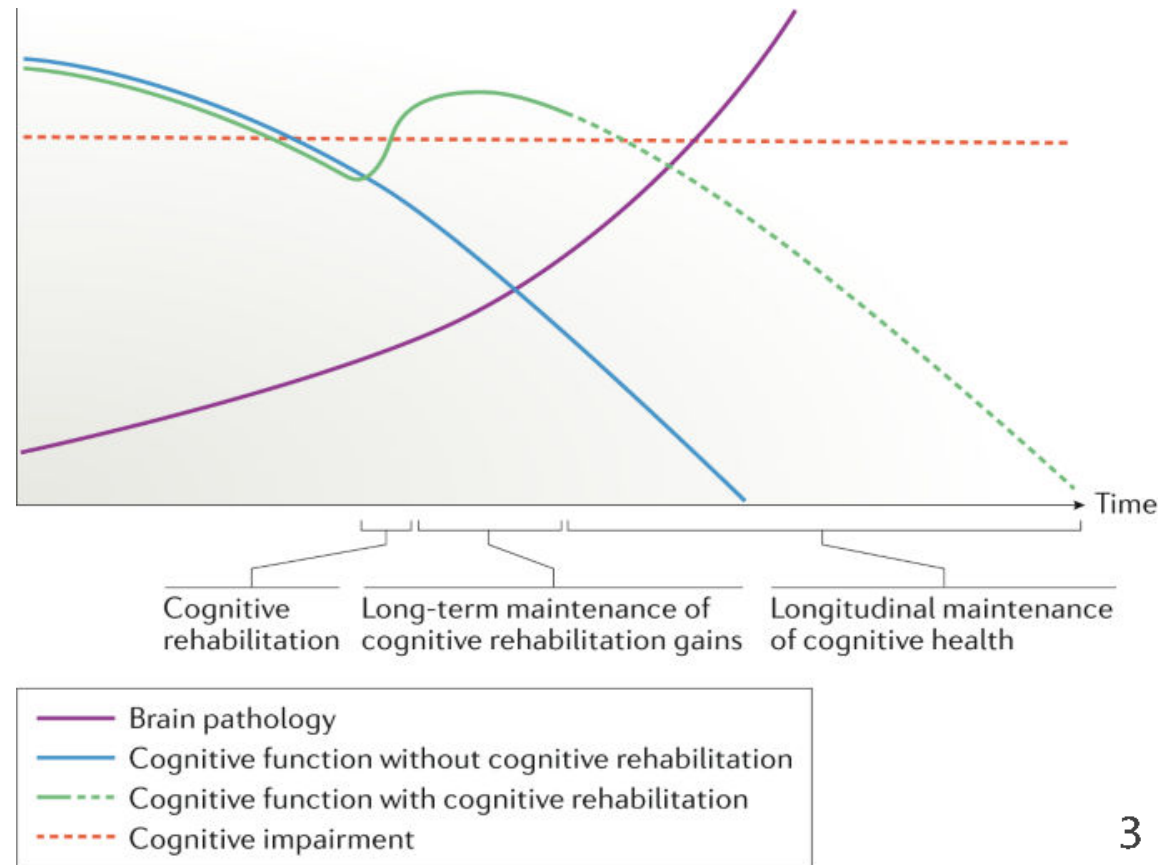
“A 48-year commercial lawyer with early secondary progressive MS, diagnosed 16 years ago, is having increasing problems **completing work tasks on time due to cognitive issues**. Her boss has pointed out several late projects and asked, “*is everything ok?*” She is **worried** that she may have to stop working. Feeling like a “failure” at work and **worrying** about her job performance has led to feeling **hopeless and depressed.**”<sup>2</sup>

# Recent Research

- Changes in brain matter and connections between neurons/brain regions are associated with changes in cognition
- MRIs show that the brain works “harder” to maintain the same functions. (Can happen early in MS or years later.)
- Cognitive impairment → difficulties with employment, driving, finances
- Not enough evidence shows medications that *directly* improve cognition. (Some evidence for *indirect* improvements.)



# Recent Research



3



# Recent Research

Benefits from			
<b>Focused Strategies</b> (e.g., Kessler Foundation modified Story Memory Technique)	<b>Computerized Training</b> (e.g., BrainHQ, COGNI-TRAcK, BrainStim)	<b>Physical Exercise</b> (e.g., PT, exercise training)	<b>Psychological Intervention</b> (e.g., cognitive behavioral therapy, psychotherapy)

- Compared to no treatment, both mindfulness and adapted cognitive training improved perceived cognitive dysfunction.
- Mindfulness was more effective than cognitive training for improving emotion dysregulation.

# Recent Research

- People with MS and their support partners (with anxiety and depression symptoms) attended 12 weeks of emotion regulation skills training.
- People in the ER group improved on mood and emotion regulation skills more so than people in a standard support group.
- Using mental skills focused on thoughts, emotions, and relationships may improve mood when people and their support partners work together

# Interactive Poll

What treatment has your  
provider offered for *mood*?

Referral to  
mental health  
professional

Referral to  
psychiatrist

Medication

Nothing

Other

# Interactive Poll

What treatment has your provider offered for ***cognition***?

**Referral to  
cognitive  
rehabilitation**  
(neuro-psychology or  
SLP)

**Medication**

**Brain Games**

**Nothing**

**Other**

# A Few Examples: Treatments & How They Help Both Mood & Cognition

- Psychologist or Mental Health Professional
  - **Mood**: Learn strategies to manage difficult emotions
  - **Cognition**: Learn to increase flexible thinking, apply emotion management strategies to cognitive lapses
- Mindfulness
  - **Mood**: Move away from worrying about future, and ruminating about the past
  - **Cognition**: Attention exercises
- Deep Breathing or Relaxation
  - **Mood**: Reduces fight or flight response to decrease anxiety or worry
  - **Cognition**: Reduces heart rate, brings executive functioning back online

# Stop, Relax, Restart

- When to Use: when feeling overwhelmed, lost, or confused
  - When you go into a room and forget why you went there
  - When you can't find the word you want to say
  - When you learn unpleasant news
- **Stop:** What was I doing before, what do I need to do next?
- **Relax:**
  - Take a break (20-30 minutes)
  - Take a few deep breaths
  - Slowly notice your thoughts & feelings
  - Slowly notice your body, senses, & environment (Grounding)
- **Restart:** Take the next step forward in your task
- These strategies can apply to everyone – including people with MS and SP's

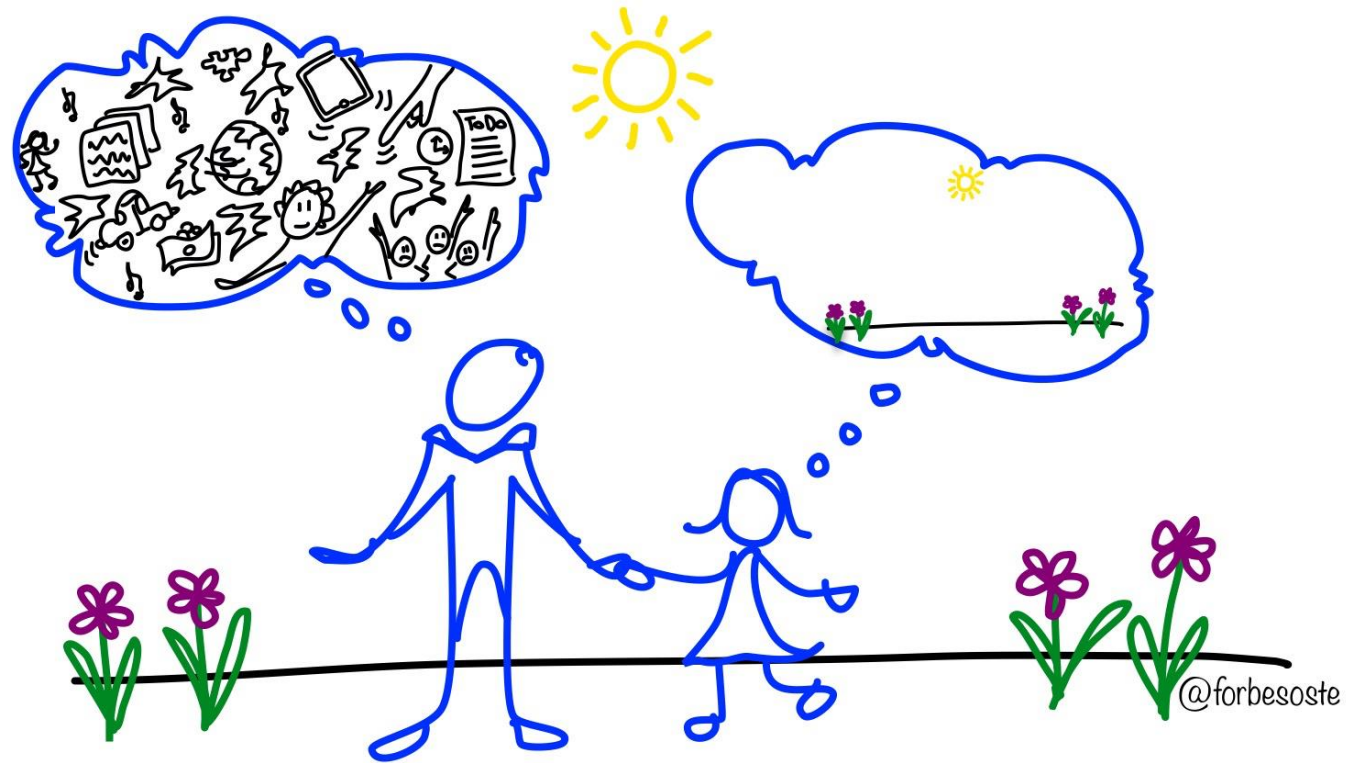




**Breathe in...**

# Staying in the Present Moment

## Mind Full, or Mindful?



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**Breathe in...**

# Noticing our Bodied, Senses & Environment

- When you stop to take a breath or notice your feelings/thoughts, you might also notice changes in your other senses
  - 5 senses (Vision, Hearing, Touch, Taste, Smell)
- Sometimes we have difficulty integrating these senses when we feel overwhelmed (e.g., you might not notice a loud sound because you are focused on something else)



**Breathe in...**

# What to Expect in Treatment

- Initial appointment
  - Build a trusting relationship with your provider
  - Review your history
  - Understand your unique circumstances
  - Determine a personalized treatment plan (“precision medicine”)
- Throughout treatment
  - Setting and reviewing YOUR goals
  - Practicing exercises during and OUTSIDE of treatment
  - Problem-solving and applying “canned” exercises to YOUR life



# Feeling Overwhelmed?

- You DON'T have to address all of these factors to significantly improve your quality of life.
- Research studies usually focus on ONE or TWO symptoms, and still demonstrate significant changes.
- Your goals are yours.
- Goals can change. Maybe a goal is no longer realistic or important.

# Where to go for Information

- NMSS (Navigator Program)
- ASHA
- Psychologist/Mental Health Provider
  - Sometimes to find (insurance, distance, specializing in MS/health conditions)
  - Difference between Psychologist, Therapist, Psychiatrist
- Podcasts (several episodes on cognition and mood)
  - Can Do
  - RealTalk MS
  - MS Living Well



## Key Take-Aways

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- Mood and cognitive symptoms are common for people with MS and their support partners.
- Mood and cognitive symptoms often interact.
- Working with a psychologist or mental health provider can offer skills for managing these symptoms.

# Q & A





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**Your Questions, Answered!** – May 25  
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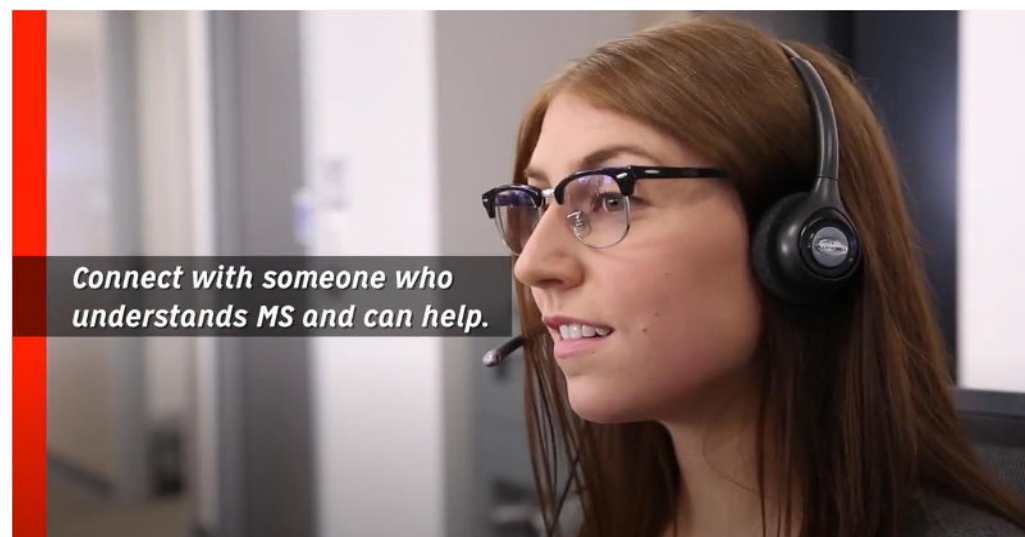
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MS NAVIGATOR

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When and Where You  
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The National MS Society exists because there are people with MS. **Our vision is a world free of MS.** Everything we do is focused so that people affected by MS can live their best lives as we stop MS in its tracks, restore what has been lost and end MS forever.



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*Connect with someone who  
understands MS and can help.*



WEBINAR   
WEDNESDAYS

# Traveling & Recreating Safely

Wednesday, June 2 at 8pm ET

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# Cited Sources

- 1 Adapted from: *My Cognitive Changes Because of Multiple Sclerosis* by Devin Garlit April 13, 2017, <https://multiplesclerosis.net/living-with-ms/my-cognitive-changes-because-of-multiple-sclerosis/>
- 2 Adapted from, "Am I Cognitively Impaired" by Prof G, <https://multiple-sclerosis-research.org/2021/04/am-i-cognitively-impaired/>
- 3 "Treatment and Management of Cognitive Dysfunction in Patients with Multiple Sclerosis" (Review article by DeLuca, Chiaravalloti, & Sandruff, 2020)
- 4 "Mindfulness training for emotion dysregulation in multiple sclerosis: A pilot randomized controlled trial" (Schirda et al., 2020)
- 5 Emotion Regulation Skills Training for People with MS and Support Partners (unpublished study, Hughes, Beier, & Botanov, 2020)

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