

# MS Fatigue

Why You Are More Than Just Tired

**CAN DO**  
MULTIPLE SCLEROSIS

**WEBINAR**   
WEDNESDAYS

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# UPCOMING PROGRAMS

Thursday, September 29

## JUMPSTART

Solutions for Restful Nights and Energetic Days

4 Weeks Starting September 24

## COACHING SERIES

Bowel and Bladder Health: Finding Comfort, Control, and Freedom

Wednesday, September 25

## MS MOVES MEETUP

Thursday, September 26

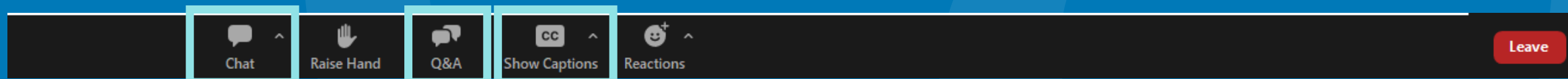
## BLACK COMMUNITY MEETUP



[CANDO-MS.ORG](https://cando-ms.org)

# How to Ask Questions During the Webinar

Type in your questions  
using the Questions Box



Provide comments and engage  
with the speakers and audience  
using the **Chat Box**



**NEW!** Closed captioning



# YOUR SPEAKERS



**Stephanie Buxhoeveden**  
**Nurse Practitioner**

Virginia



**Derrick Robertson, PhD**  
**Neurologist**

Florida

# LEARNING OBJECTIVES



1

Learn about MS fatigue!

2

Understand the factors that contribute to MS fatigue

3

Learn about ways that other aspects of wellness can contribute to better fatigue and sleep management

# What is MS Fatigue?

## Definition

- A subjective lack of physical and or mental energy that is perceived by the individual or the caregiver to interfere with the usual and desired activities

## Description

- Occurs in the vast majority of MS patients and often is rated as the most disabling or worst symptom
- Comes on suddenly
- Often occurs even after a “good nights sleep”
- Heat/humidity aggravate it
- Associated with physical, emotional and mental exhaustion

# Pathology of Primary MS Fatigue



- Biologically complex
- Cytokine/neurochemical relationship
- Nerve conduction (speed) abnormalities within the CNS
  - Evidence of frontal cortex dysfunction
- Increased energy demands can be secondary to neurological disability
- Aggravated by heat; worsens at end of day



# Neurological Compensation in MS: Passive and Active Reserve

## Neurological Reserve:

The ability of the brain to compensate for, and recover from, damage caused by MS



### Passive (Brain) Reserve:

Physical size of the brain or number of neurons available; “neural hardware”

- Predominantly determined genetically or congenitally
- Typical measures: brain volume, head circumference, synaptic count, dendritic branching



### Active (Cognitive) Reserve:

Ability to flexibly/efficiently use brain reserve when performing tasks; “neural software”

- Can be shaped through lifetime experiences
- Typical measures: educational attainment, occupational attainment, leisure activity, degree of literacy

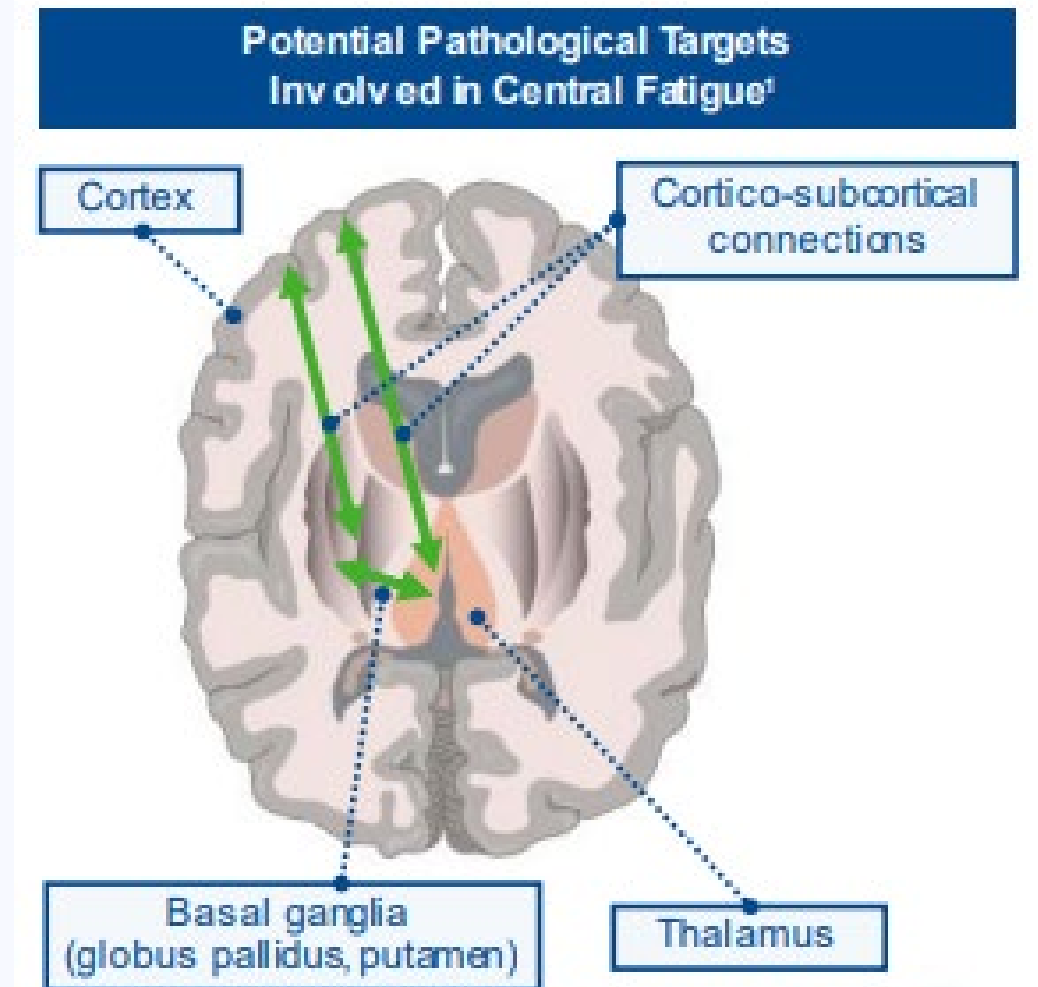
# Brain Atrophy Drives Fatigue in MS

## Grey matter pathology associated with fatigue:

- Damage and atrophy in grey matter structures
- Decreased thalamic connectivity between cortical and subcortical structures<sup>5</sup>

## Other possible etiologies of MS fatigue:

- Proinflammatory cytokine release
- Endocrine influences
- Sleep disorders
- Depression<sup>6</sup>
- Heat sensitivity

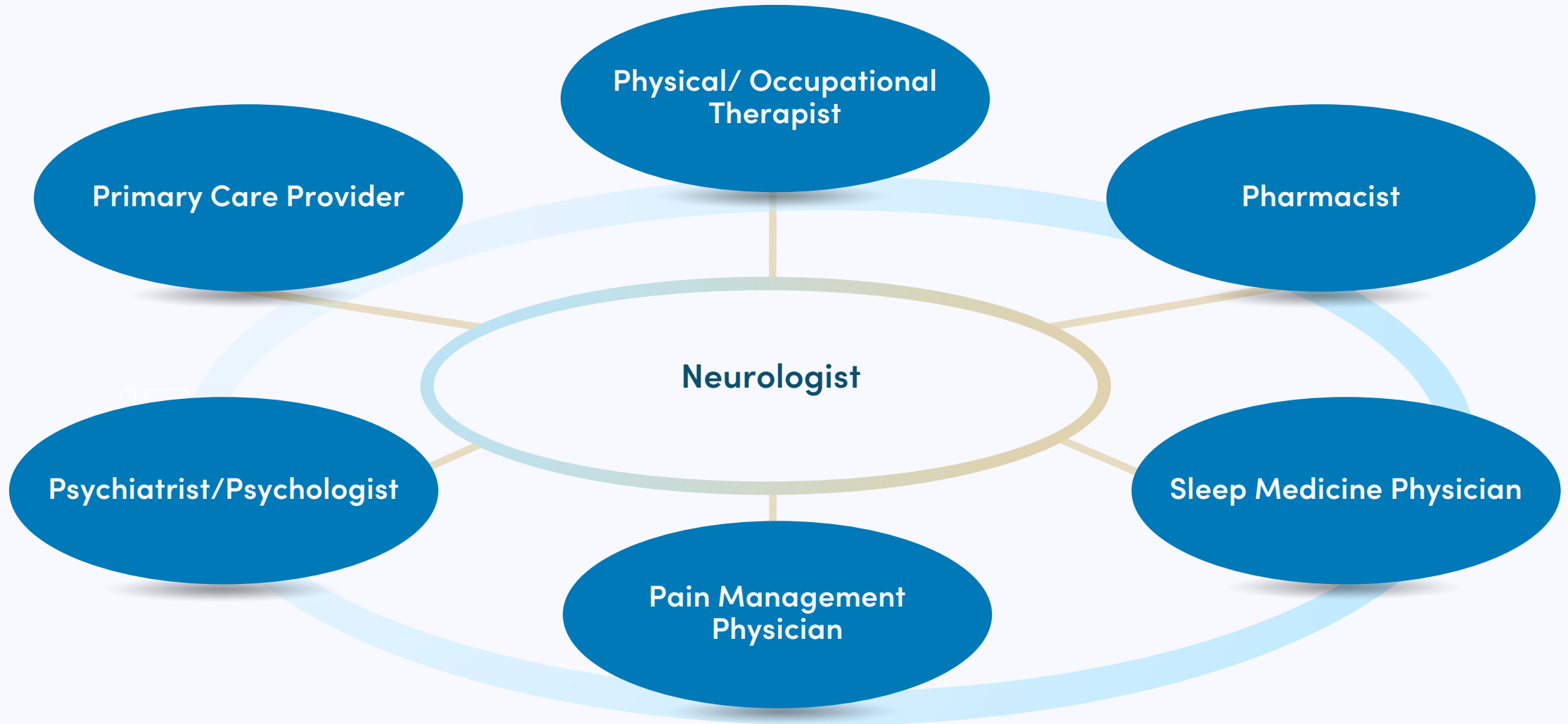


# Fatigue: Contributing Factors

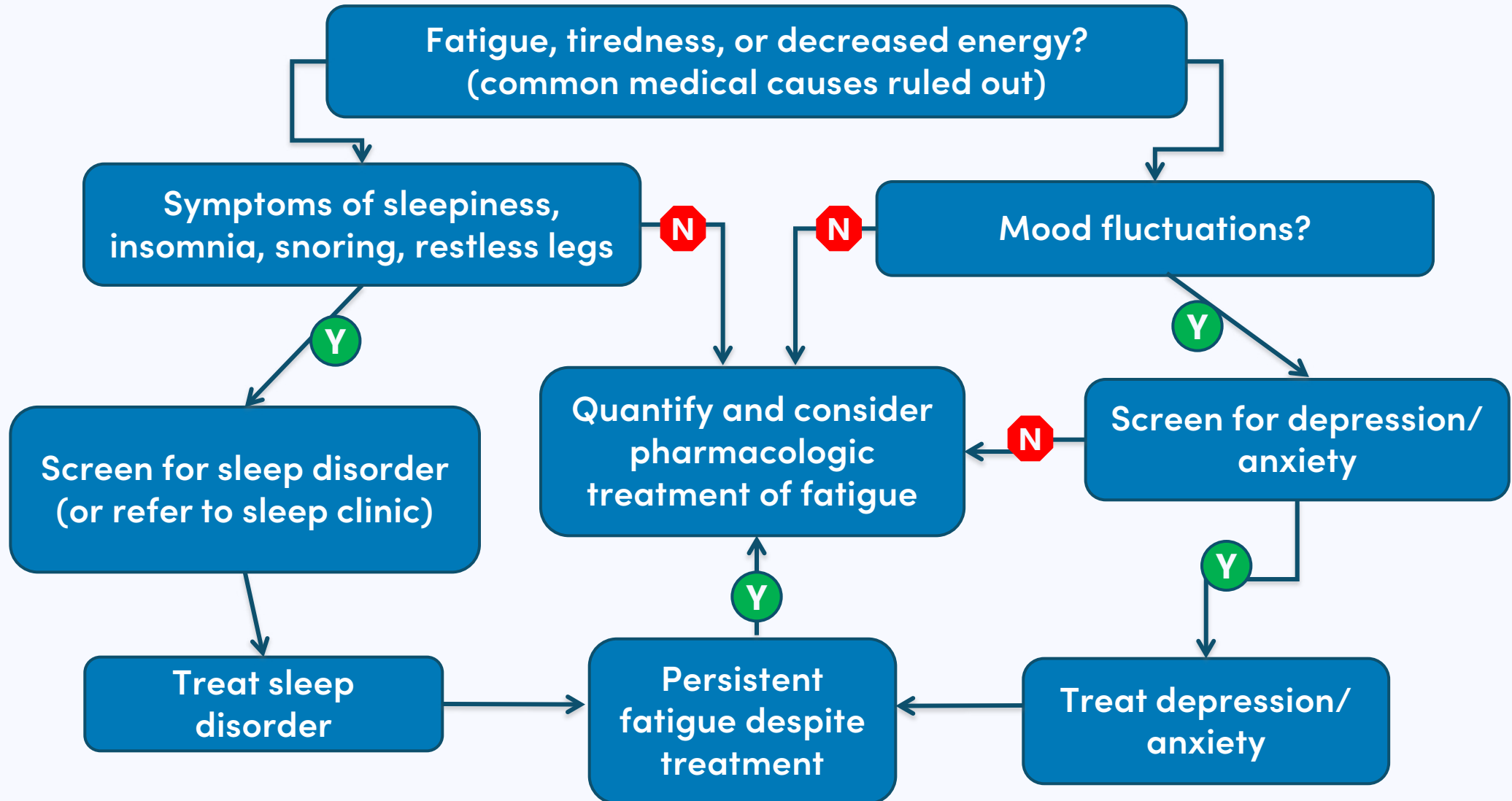


- Insomnia (and other sleep related issues)
- Mental Health: Anxiety, depression, stress
- Pain (nerve pain and muscle spasms)
- Urinary frequency
- RLS-type symptoms
- Medication side effects
- Other medical conditions (anemia, heart problems, thyroid problems, many others)

# Healthcare Team Approach to Fatigue



# Fatigue: A Systematic Approach



# Pharmacologic Fatigue Treatments



- Medications can help! But not always =(
- Some medications we try in the clinics:
  - Amantadine- dopamine agonist
    - Some potential side effects include nausea, lightheadedness, confusion, dry mouth
  - Modafinil/Armodafinil- dopamine reuptake inhibitor
    - Some potential side effects include nausea, headache, decreased appetite

# Pharmacologic Fatigue Treatments

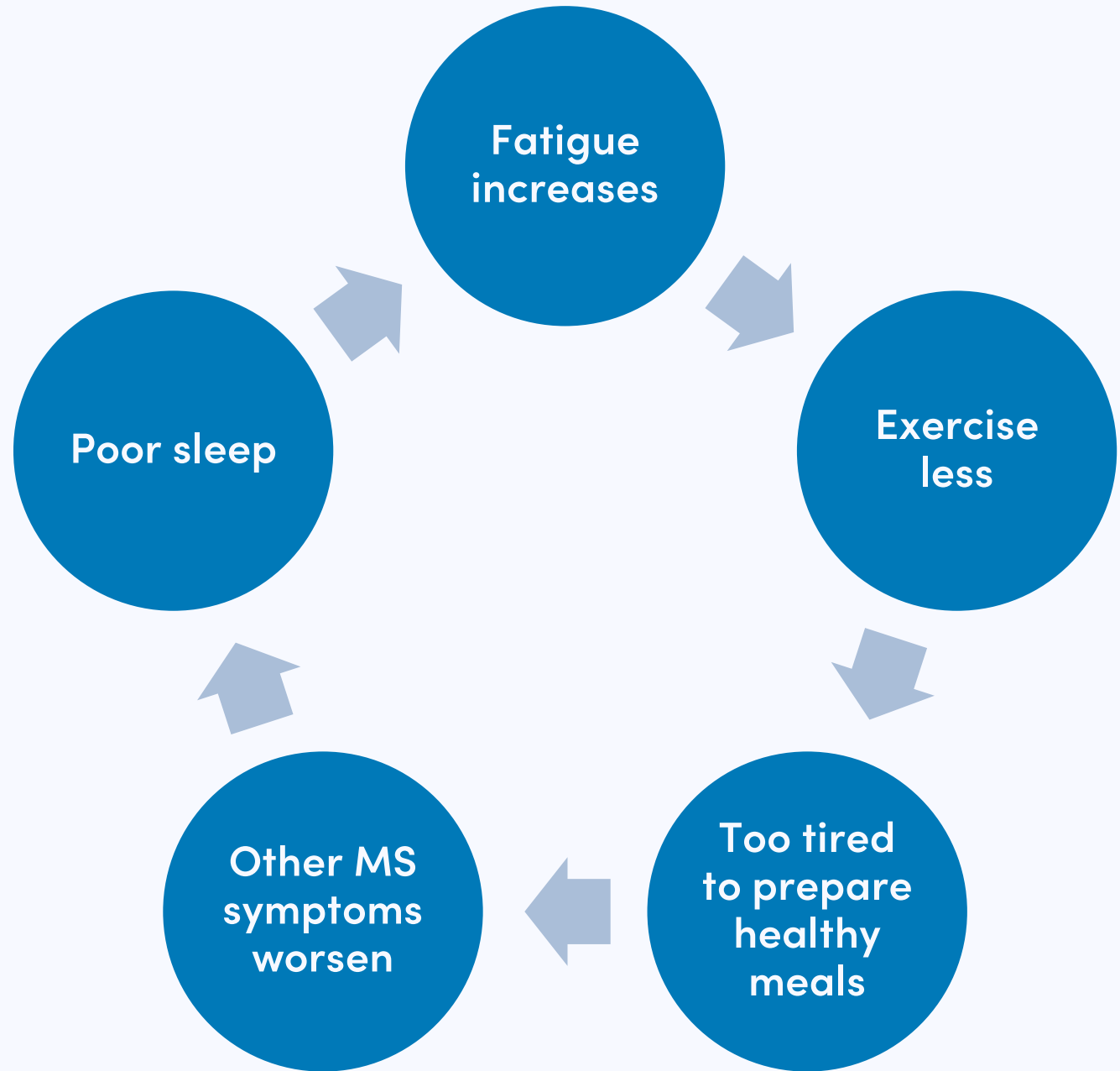


## Rarely used medications:

- Methylphenidate – dopamine and norepinephrine reuptake inhibitor
  - Some potential side effects include loss of appetite, insomnia, headache, abdominal pain
- Amphetamine/dextroamphetamine– dopamine and norepinephrine boosters
  - Some potential side effects include loss of appetite, insomnia, headache, abdominal pain

# Breaking The Fatigue Cycle

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# Impact of Diet on Fatigue



- **Obesity** can worsen *MS* symptoms and decrease overall quality of life. No single “*MS*” diet has been identified, but **research is ongoing**.
- Some people report symptom improvement with special diets (e.g., **Intermittent Fasting Swank**, or **Wahls diets**).
- In general, follow a **heart-healthy diet** to optimize overall health:
  - **Limit** sodium, sugar, and processed foods.
  - **Increase** fruit and vegetable intake.
  - **Choose lean proteins**: chicken, turkey, fish, beans, soy.
  - **Choose healthy fats**: nuts, seeds, vegetable oils, oily fish.
  - **Consume plenty of fiber** to support digestive health.
  - **Hydrate well** to maintain energy and reduce fatigue.

# Easy Meal Prep and Energy Saving Tips



- **Use curbside or delivery grocery services**
- **Plan easy, nutrient dense meals in advance:**
  - Look for recipes that use **one-pan**, or tools like **slow cookers** and **pressure cookers**
  - **Cook once, eat twice:** Double the portions, then have as leftovers or freeze for later
- **Batch cook** grains, proteins, and veggies in large quantities for use in multiple meals.
- **Use pre-cut or frozen veggies**
- **Sit while prepping**
- **Special kitchen tools & kitchen organization:**
  - Use ergonomic or electric gadgets (e.g., can openers, choppers) to reduce strain.
  - Keep frequently used items in easy-to-reach areas to minimize movement and bending.



## Cabinets & Pantry

- ✓ **“Dinner builder” items:** canned or dried beans, such as kidney, pinto, black, butter and navy; canned or pouched tuna, salmon and chicken; spaghetti sauce
- ✓ **Canned vegetables (no-salt and low-salt):** for easy side dishes and adding to soups and sauces
- ✓ **Whole grains:** brown rice, oats, couscous, bulgur and quinoa; whole-grain pastas, breads and tortillas (store extra bread and tortillas in the freezer); whole-grain flour or cornmeal for baking
- ✓ **Cooking oils:** non-tropical, vegetable oils, such as olive, canola and corn
- ✓ **Nuts, seeds and nut butters:** for stir-fries and garnishes (and satisfying snacks)
- ✓ **Broths:** fat-free, low-sodium chicken, vegetable and beef — for making soups
- ✓ **Dried herbs and spices:** keep a variety on hand and buy or create salt-free seasoning blends



## Refrigerator & Freezer

- ✓ **Proteins:** fish fillets, skinless chicken breasts, extra-lean or lean meats; tofu
- ✓ **Dairy products:** low-fat and fat-free milk, yogurt and cheese
- ✓ **Soft margarine:** made with nonhydrogenated vegetable oil and containing no trans fat
- ✓ **Frozen vegetables and fruits:** choose a wide variety (lots of colors) without salty sauces and sugary syrups



## Compare Nutrition Labels

- ✓ **Choose products with the lowest amounts** of sodium, added sugars and saturated fat, and no trans fat.
- ✓ **Look for the Heart-Check mark** to easily identify foods that can be part of your heart-healthy eating plan.



For more tips, visit [heart.org/HealthyForGood](https://heart.org/HealthyForGood).

# Impact of Exercise on Fatigue



- **Exercise can be energizing**
- **Helps other MS symptoms** including cognition, spasticity, mood, and bowel/bladder function.
- **Enhances overall health** by preventing or managing other comorbidities like heart disease and diabetes
- **Boosts sleep quality** which is crucial for managing fatigue.
- **Supports long-term wellness:** Exercise contributes to overall fitness and health, promoting independence and mobility.

# Tips for Incorporating Exercise



- **Start with low-intensity activities** like walking, biking, or swimming for a few minutes each day.
- **High frequency, low intensity:** Aim for consistency over intensity. Short daily sessions are more sustainable than occasional long workouts.
- **Try to exercise early in the day**
- **Pacing is key:** Avoid doing too much too quickly to prevent burnout and injury
  - **Build gradually** as strength and endurance improve.

# More! Tips for Incorporating Exercise



- **Incorporate variety:** Mix in stretching, balance exercises, and strength training for well-rounded fitness.
- **Adapt to your energy levels:** On low-energy days, opt for lighter activities like stretching or yoga.
- **Find fun activities:** Dancing, gardening, playing with pets, group fitness classes, or active video games
- **Explore adaptive exercises** like chair yoga, seated aerobics, or water therapy, that accommodate different levels of disability and provide safe ways to stay active.



**MS MOVES**<sup>®</sup>  
FITNESS WITH A FUNCTIONAL FOCUS

## Free Exercise Programs

- Can Do MS
  - [MS Moves](#)
  - [MS Exercise Library](#)
- [Darbee](#)
- [Keep Moving with Emily \(YouTube\)](#)
- [Overcoming MS](#)
- [The MS Gym](#)
- [MS Canada](#)

# Sleep Hygiene

## Tips for optimizing sleep

- Create a bedtime routine
- Minimize stimuli- light, sound, people/pets
- Room temperature
- MS symptom management- bladder, pain, spasticity

## Non-drug strategies

- Relaxation and meditation
- Cognitive behavioral therapy for insomnia
- Start a [sleep diary](#)

## Naps

- Naps do not replace a good night's sleep, but a brief 20-30 minute nap can improve alertness
- Longer naps can make you feel more groggy
- Do not take naps too close to bedtime



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# Sleep Disorder “Red Flags”

- Excessive daytime drowsiness
- Loud Snoring
- Headaches or hoarseness in the morning
- Not feeling rested or refreshed after sleeping
- Trouble falling or staying asleep



Fatigue is often an unavoidable  
part of life with MS, but that  
doesn't make us powerless



# Living Fully with Fatigue



- **Conserve energy:** Prioritize energy-saving strategies in daily routines to reduce the impact of fatigue.
  - ↪ If you're struggling: physical therapy (PT) and occupational therapy (OT) can help you find ways to conserve energy.
- **Know your rights:** Don't be afraid to ask HR for workplace accommodations or use a handicapped placard to conserve energy away from home.

# Living Fully with Fatigue



- **Plan for recovery:** Recognize that certain things that bring you joy (vacations, socializing) may come with an “MS tax.”
  - ↪ Enjoy the moments that matter, but plan ahead to conserve energy before and after
- **Listen to your body:** know your limits and pace yourself to avoid overexertion.

# Living Fully with Fatigue



- **It's okay to rest:** Rest is not a sign of weakness; it's a tool for maximizing your quality of life.
- If you're feeling depressed or discouraged by your fatigue, therapies like **cognitive behavioral therapy (CBT)** can help reframe your mindset and manage symptoms.

Q+A



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# Diet and Exercise Recommendations for Relapsing MS

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