

Management of Brain Fog During and After Chemotherapy



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What cognitive changes
have you experienced
during and/or following
cancer treatment?



What is Brain Fog?



McWhirter et al., (2023) reviewed posts on Reddit describing brain fog symptoms and found the following themes:

Fatigue

Forgetfulness

**Difficulty
concentrating**

**Cognitive
slowness and
excessive
effort**

**Difficulty
communicating**

**Fuzziness
or
pressure**



Brain Fog Associated with Cancer Treatment



- Chemo-fog or chemo-brain: refers to changes in cognitive function secondary to chemotherapy
- ~35% of oncology patients report persistence of brain fog following treatment - even up to several years
- Potential contributors to cognitive change:
 - Neurotoxicity of chemotherapy impacts cells in the central nervous system
 - Fatigue
 - Changes in mood, including anxiety
 - Other medications used for symptom management (e.g., anti-nausea)



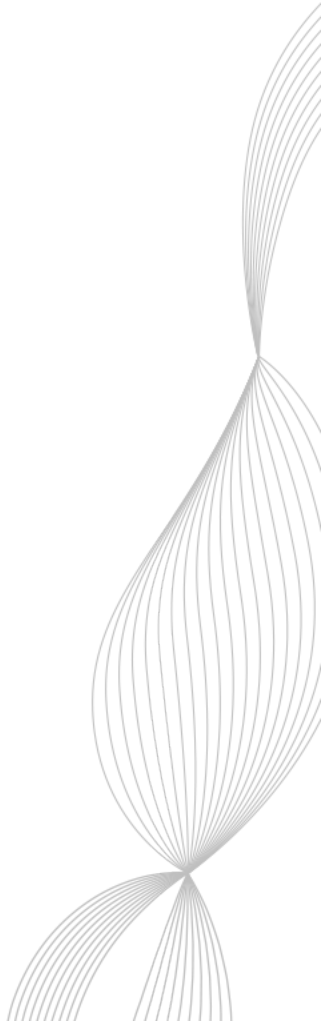
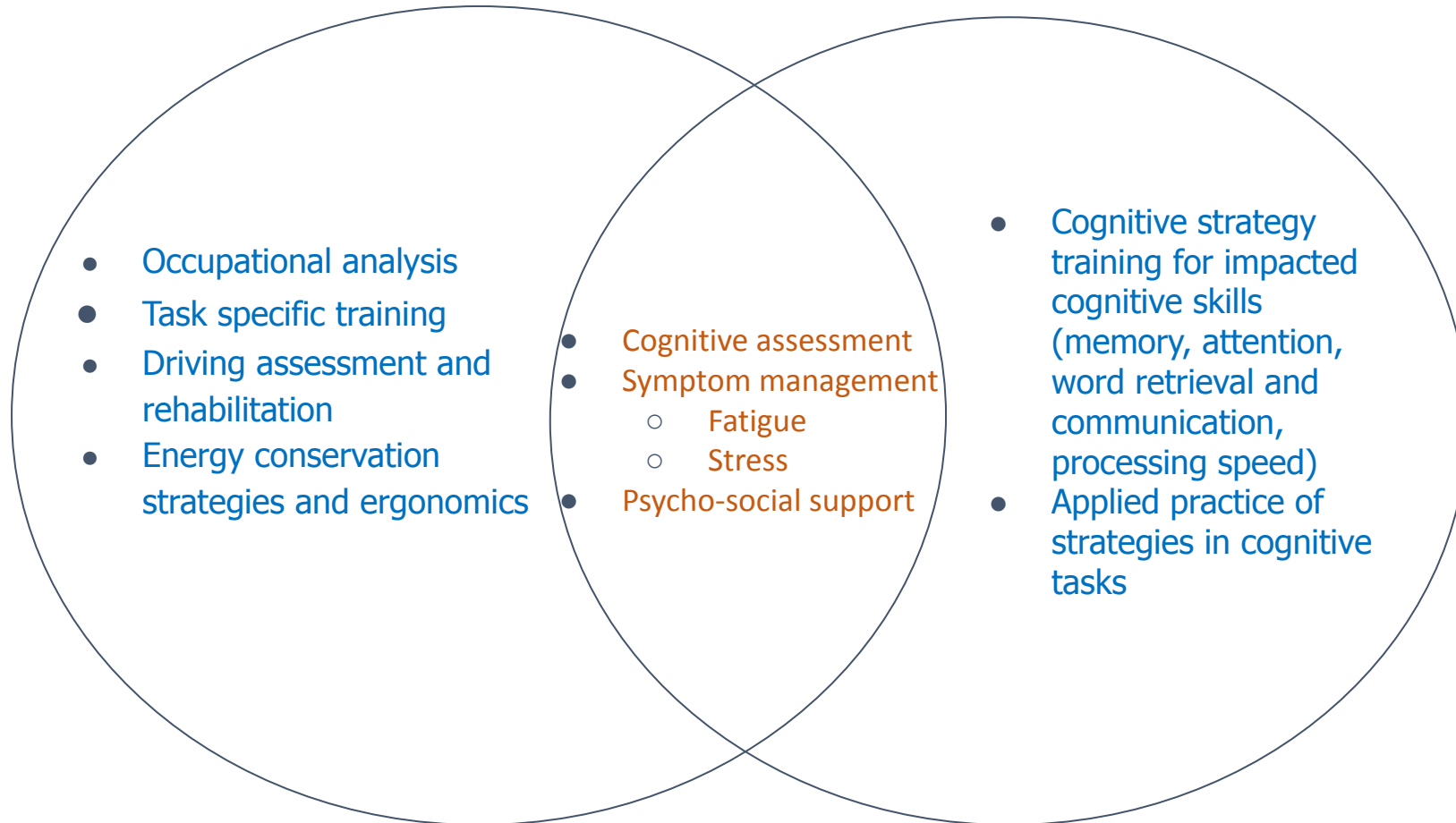
Occupational Therapy and Speech-Language Therapy



- Occupational therapists (OTs) enable individuals to participate in activities that you want to and have to do throughout your daily routine to promote health, well-being and optimal engagement (AOTA, 2024)
- Speech-language pathologists (SLPs) work with individuals across the lifespan who have changes or challenges in the domains of communication, cognition, and swallowing.
 - Cognition includes thinking skills, such as memory, attention, problem solving, organization, and language (ASHA, 2024).



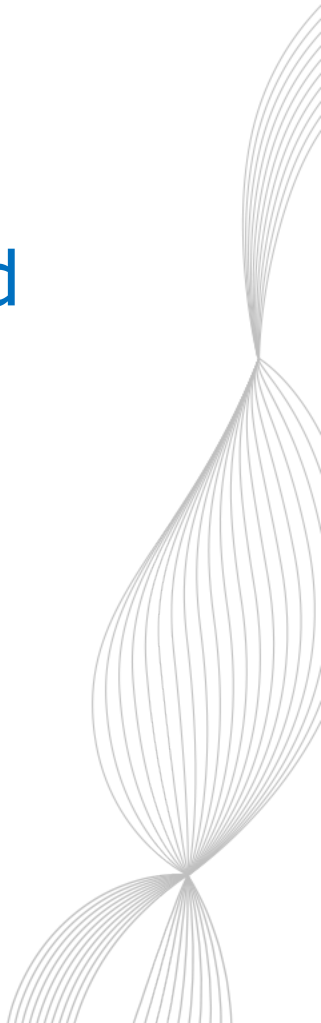
Relationship Between Occupational Therapy and Speech Therapy



Attention Strategies



- Modify the environment to reduce distractions
 - Turn off background noise
 - Decrease clutter
 - Choose public spaces where background noise is reduced
- Reinforce completing **one task a time** and **completing tasks fully** prior to moving on to another task.
- Pre-read and proofread – emails, text messages, forms, daily schedules.
- Follow a task list or daily schedule



Internal Memory Strategies



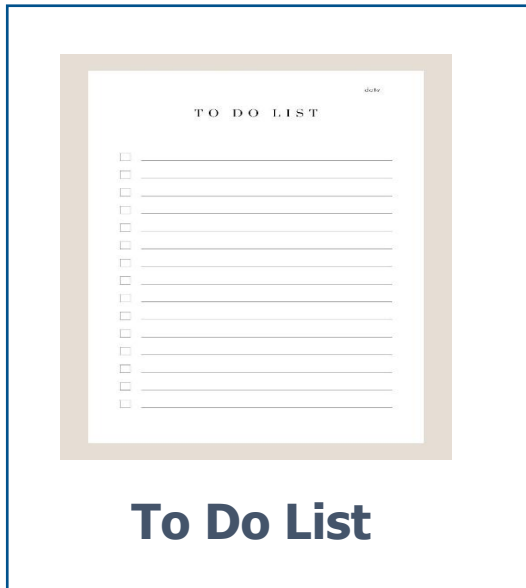
- Repetition: The more information is reviewed/reinforced, the stronger the likelihood a new memory will form
- Association: Relate newly learned information with a familiar topic or long-term memories for support
- Visualization: Encourage visualization of newly learned information to further strengthen learning and recall
- Chunking/Sorting: Organize newly learned information in related groups (e.g., grocery list).



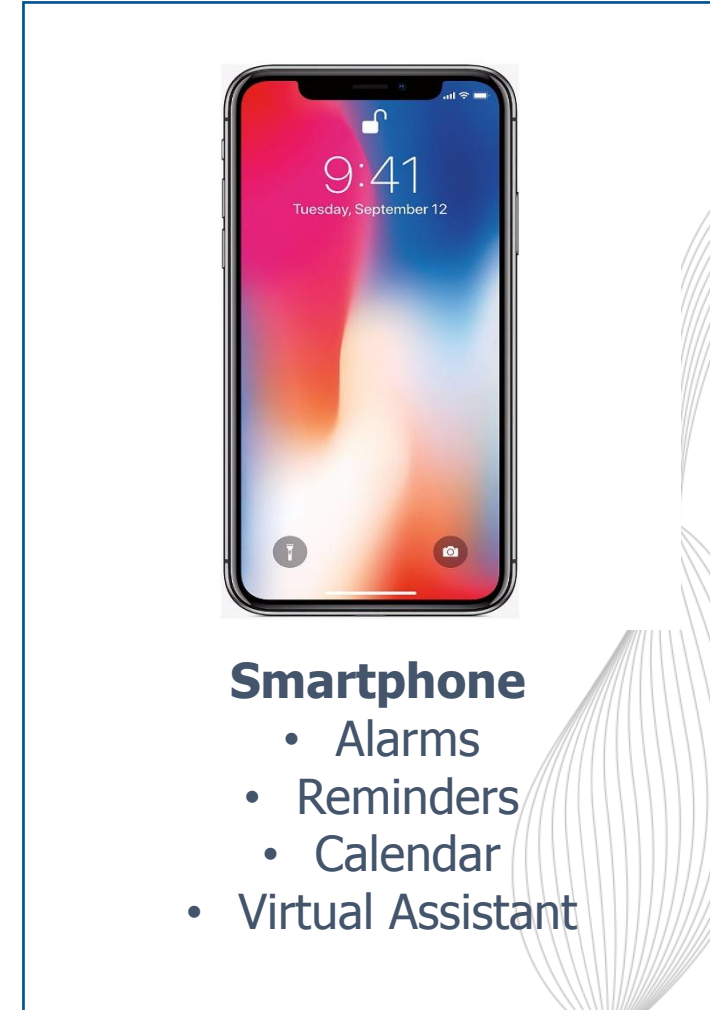
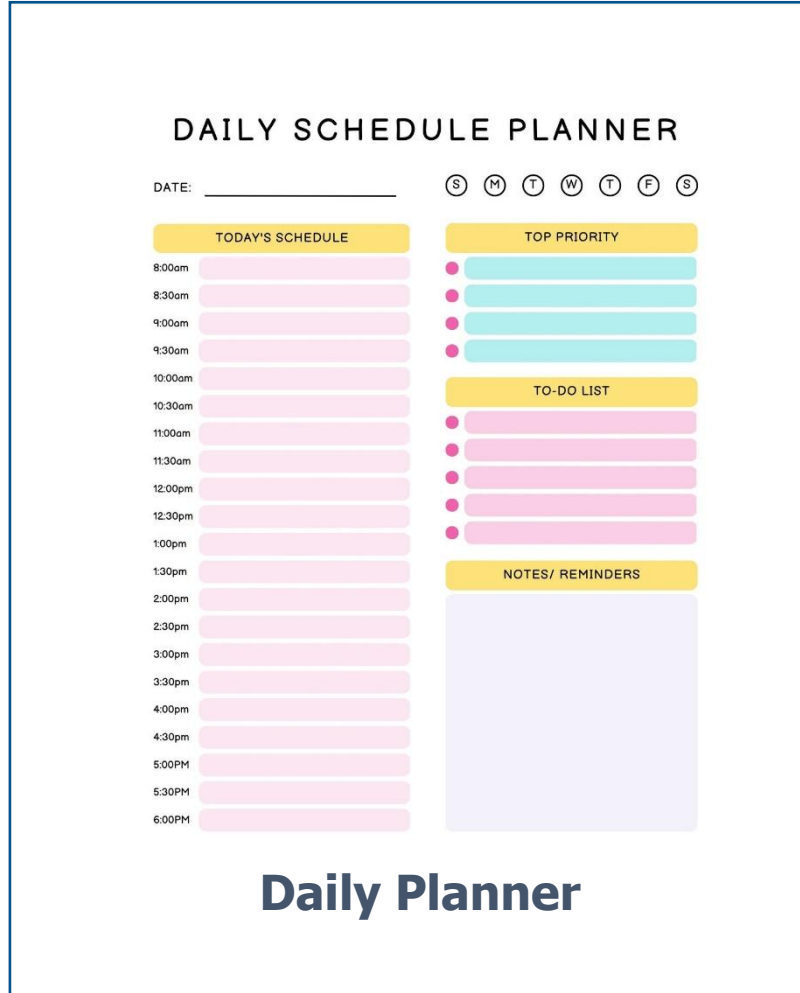
External Memory Strategies



Calendar



To Do List



Word Finding Strategies



- Substitution – Think of a related word or concept to describe your message
 - Example: “easy” for “simple” or “not hard” for simple
- Visualization – Create a mental picture
- Description – Talk around the word. Ask yourself the following questions:
 - What category does it belong to?
 - Where do I see it?
 - What does it do?
 - What does it look like?



Occupational Analysis and Breakdown



Goal-Plan-Do-Check:

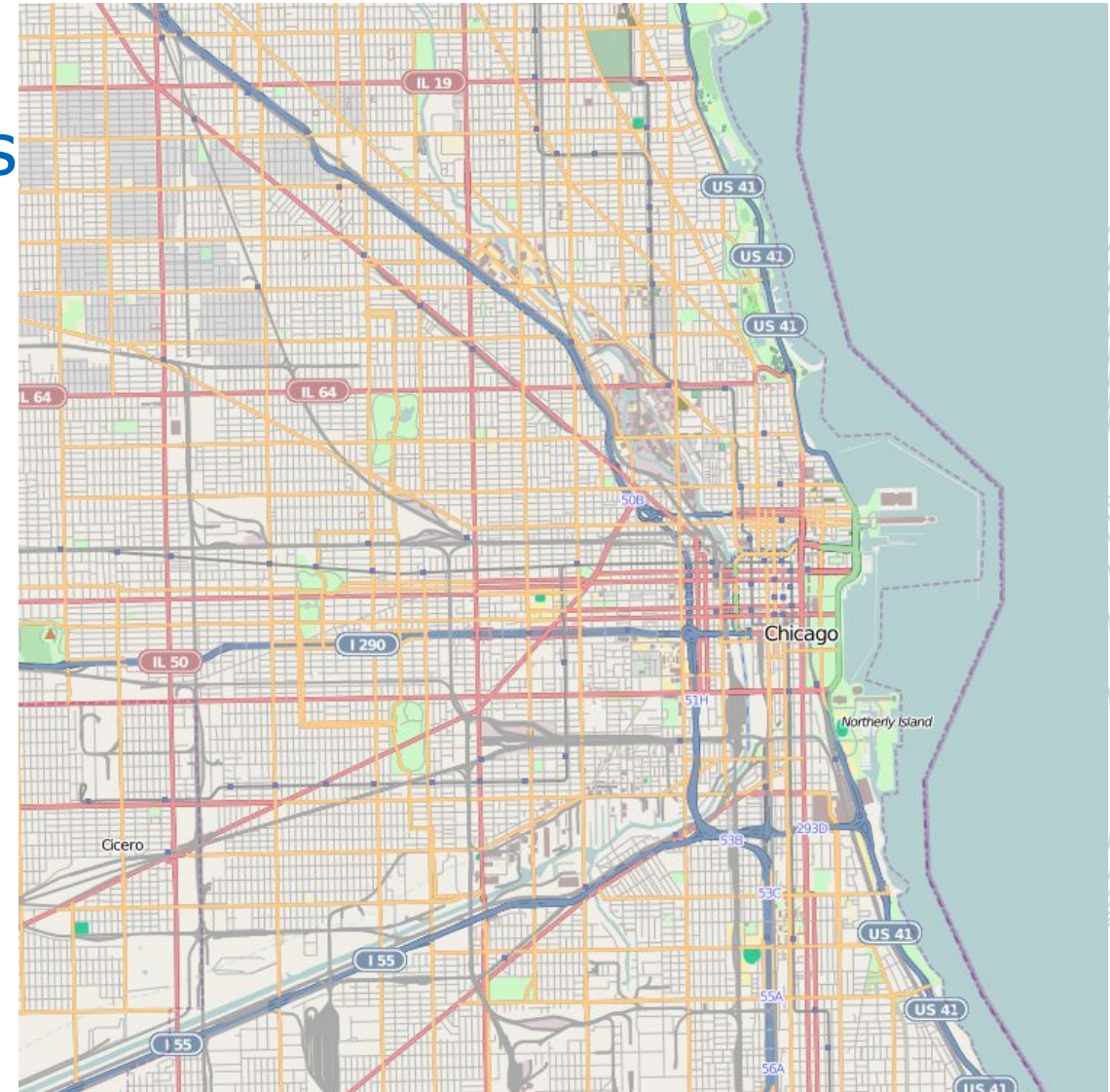
1. Goal: What do I want to do?
2. Plan: How am i going to do it?
3. Do: Carry out the plan.
4. Check: How well did my plan work out?



Driving Assessment/Rehabilitation



- Assess cognitive and motor functions associated with driving
 - Executive functioning
 - Decision making
 - Comprehension
 - Higher level attention
- Intervention
 - Determine ease of pathfinding or navigation
 - Identify scheduled optimal driving time
 - Review safety measures
 - Work on visual and motor skills/reaction time



Energy Conservation and Ergonomics



- Pace yourself
- Plan ahead and be organized
- Simplify your task and set realistic goals
- Avoid fatigue
- Avoid unnecessary motion
- Use good posture
- Use proper body mechanics



Symptom Management



Activity Traffic Light A Guide to Movement Safe Symptom Management

Strategies When Symptoms are Elevated:

Ex. Decrease screen time, mental "brain" breaks, relaxation and stress relief strategies, low lighting, etc.

1. _____
2. _____
3. _____
4. _____

RED LIGHT
Reevaluate
Activity

Symptom(s) Behavior:

1. Spike in symptom(s) greater than 6 points above baseline that stops you from performing the activity or daily routine.
2. Newly elevated symptom(s) persists for > 24 hours without relief.

Action Plan: Discuss activities that related to elevated symptom(s) with your therapist. Refer to strategies for elevated symptoms listed above.

YELLOW LIGHT
Too Much Too Fast

Symptom(s) Behavior:

1. Symptom(s) spikes during the activity greater than 3 points above baseline.
2. New symptom(s) elevation persists for about >1 to 24 hours without relief.

Action Plan: Decrease intensity and / or duration of activity by 25%. Refer to strategies for elevated symptoms listed above.

YELLOW LIGHT = SAFE SYMPTOM(S)

GREEN LIGHT
Activity Tolerated

Symptom(s) Behavior:

1. Symptom(s) spikes during the activity by 3 points or less.
2. After activity, symptom(s) are back to baseline within about 1 hour.

Action Plan: Continue with recommended activities and report positive responses to therapist.

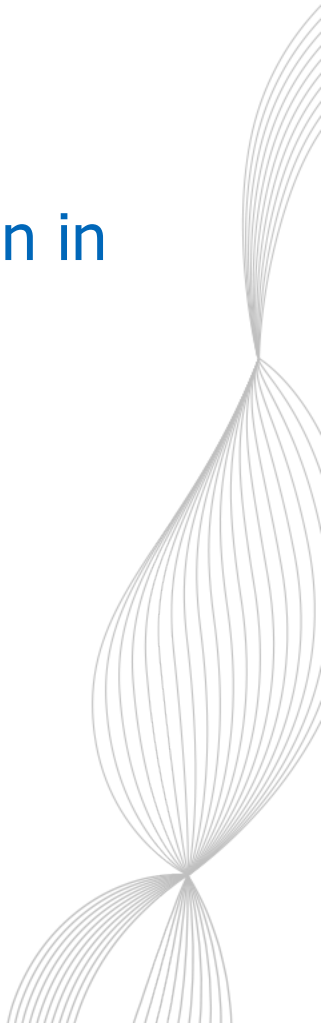
GREEN LIGHT = SAFE SYMPTOM(S)

- *Push to, but not through*
- Establish strategies that help alleviate symptoms (for example – limit screens, brain breaks, relaxation techniques/deep breathing, low lighting)
- Establish goals for amount of cognitive activity you want to accomplish and gradually increase across weeks with more mindful symptom management

Conclusion



- OTs and SLPs can help educate and train individuals with cognitive changes secondary to chemotherapy by:
 - Teaching techniques and strategies to support cognitive skills
 - Developing external supports to increase memory and organization in daily activities
 - Training strategies to prioritize energy conservation
 - Progressively increasing activity levels and engagement in valued areas of everyday living



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