Compensatory Cognitive Training
July 2016

Elizabeth Twamley, PhD*
VA San Diego Healthcare System and UC San Diego

Marilyn Huckans, PhD*
Portland VA Medical Center

Saw-Myo Tun, PhD
Portland VA Medical Center

Lee Hutson, PhD
Portland VA Medical Center

Sarah Noonan, PhD
VA Boston and Boston University

Gauri Savla, PhD
UC San Diego

Amy Jak, PhD
VA San Diego Healthcare System and UC San Diego

Dawn Schiehser, PhD
VA San Diego Healthcare System and UC San Diego

Daniel Storzbach, Ph.D.
Portland VA Medical Center

* contributed equally
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Session 1: Course Introduction and TBI 101

Class Agenda

1. Introductions: program, instructors, and class members; hand out binders.
2. Course overview and expectations.
4. TBI and concussion education.
5. Introduce lifestyle strategies for managing symptoms.
6. Introduce and practice abdominal breathing.
7. Introduce the principles of cognitive training, including organization and calendar use.
8. Discuss goals for class.
9. Introduce home exercises and explain the first home exercise.

1. **Introductions and distribute binders**

2. **Course overview and expectations**

This class will introduce a variety of mental strategies and external aids designed to help participants manage problems with memory, attention, and organization.

- 10-week course; one meeting per week.
- 2 hour classes with a break after the first hour and brief (2 minute) breaks every 30 minutes.
- Classes focus on improving cognitive abilities.
- You will apply your new skills to your most important real-life problems and goals.
- Feedback encouraged (questions, comments, suggestions, etc.).

Expectations

- **Class Binders:** Please bring your class binders each week.
- **Home Exercises:** Each week, we will ask you to practice using various strategies and aids in your daily life. The more you practice, the better you’ll get at using the strategies.
- **Class Discussion:** Each week, the class will have the opportunity to discuss ideas for managing common cognitive problems. You will also have the opportunity to discuss how the home exercises worked for you.
- **Privacy and Respect:** Please be courteous and respectful of one another. Help others find solutions. Be constructive when offering feedback. Personal information that is shared in the group is not to be discussed with members or persons outside of the group.
- **Class Attendance and Participation:** Please attend all classes. Please arrive on time. Please call instructors if you will be late or absent so we can plan accordingly.
3. Distribute handout on TBI

4. Traumatic brain injuries (TBI), head injury, and concussion
   (also see “Traumatic Brain Injury: A guide for patients”)

How common is TBI?
- 1.4 million cases/year.
- 14-20% of surviving combat casualties.

What causes TBI?
There are many ways people suffer traumatic brain injuries:
- Falling and hitting your head.
- Motor vehicle accidents/crashes.
- Getting assaulted or hit in the head with objects or weapons.
- Explosions or blasts.
- Rapid motion or shaking - acceleration or deceleration.
- Penetrating wounds like bullets.

Not all traumatic brain injuries are obvious! You don't have to fracture your skull or bleed from the head to hurt your brain.

How are TBI symptoms diagnosed?
- Neuroimaging tests often fail to detect injury.
- Neuropsychological testing is more sensitive.
  - May reveal memory or attention difficulties, or slowed processing.
  - These difficulties are often temporary.

What are some common symptoms?
- “Post-concussion syndrome” = frequently co-occurring set of physical, cognitive, and psychosocial symptoms.
  - Physical: headaches, trouble sleeping, fatigue, drowsiness, dizziness, nausea, vomiting, visual disturbances, sensitivity to light and sound, poor balance.
  - Cognitive: poor concentration, memory problems, poor judgment and impulsivity, slowed performance, difficulty putting thoughts into words.
  - Psychosocial: depression, anger outbursts, irritability, personality changes, anxiety.

What is my prognosis? How long do symptoms last after a mild TBI?
- Most people with concussions or mild TBIs fully recover.
- Most symptoms get better quickly, within weeks or months.
- Most rapid recovery happens in the first 6 months.
- However, healing can continue for 2 years or longer.
- Research has shown that approximately 5-20% of people continue to show long-term symptoms (longer than 3-6 months) after a mild TBI.
5. **Lifestyle strategies for managing symptoms**  
(Mark areas needing change with a star or highlighter)

A. **Avoid Head Injury and Re-Injury**
   - Wear a helmet when you ride your bike.
   - Wear a seatbelt when riding in a vehicle.
   - Avoid multitasking while driving (no cell phone conversations or texting!).
   - Avoid situations that could result in blows to the head.
   - If it is shortly after a TBI, avoid high-risk activities such as contact sports, skiing, sky-diving, etc.

B. **Avoid substances that interfere with brain healing and thinking.**
   - Minimize/avoid use of alcohol and illicit drugs.
     - Alcohol or other drugs can slow recovery from TBI and make the problems of TBI worse, such as balance, speech, cognitive difficulties, impulsivity, and problems with mood or anxiety.
     - Using alcohol or other drugs can increase the risk of a second TBI.
   - Minimize use of caffeine.
   - Minimize cigarette smoking.
   - Avoid other stimulants.

C. **Minimize other risk factors for cognitive impairment:**
   - Avoid being around toxic fumes or materials (e.g., paint or stain fumes at home, work exposures).
   - Medications that impair thinking (opiate pain medications, such as Percocet; benzodiazepine anxiety medications, such as Valium; medical marijuana).
   - Medical problems such as diabetes, cardiovascular disease, asthma, lung disease, thyroid dysfunction, seizure disorder.
   - Depression or anxiety – both are highly treatable. If you have post-traumatic stress symptoms or PTSD, this needs to be treated. See the “What is PTSD?” handout for more information, and feel free to ask questions.

D. **Good Nutrition – Give your brain the fuel it needs to work well.**
   - Eat three balanced meals each day.
   - Remember to include lots of vegetables and fruits.
   - Remember your four food groups: protein, carbohydrates, fruits/vegetables, and dairy.
   - Remember to follow your doctor’s advice about special dietary needs, such as if you are diabetic or have high cholesterol.
   - Stay hydrated by drinking plenty of water.
E. Exercise your body.
- Good for stress reduction.
- Circulates blood, including oxygen and nutrients, to your brain.
- Stimulates your brain and strengthens its connections.
- Improves your sleep, mood and physical health, which can in turn help your brain work better.

F. Exercise your mind.
- Puzzles, games, reading, computer games, etc.
- Social and recreational activities that get you talking and thinking.
- Try new activities and change things up from time to time so your brain gets a workout. This helps the brain strengthen its connections.

G. Get plenty of sleep at night.
- Most people need 7-8 hours of sleep.
- People with TBI, cognitive disorder, medical problems, or psychiatric problems may need more.

H. Make time to relax and have fun every day.
- Rest! Your brain needs “downtime” to recover. Trying to “tough it out” can lead to increased symptoms.
- Build in time for relaxation and fun.
- Even if you are busy, try to find at least 20-60 minutes each day to do something that helps you relax or have fun.
  - Everyone is different. Some people like to take walks or baths. Others like to listen to music, watch a movie, socialize, or do other hobbies.
  - What do you like to do?
- Practice tension-reduction techniques to relieve stress.

I. Self-Pacing – Stick to your limits.
- Lighten your work or school load.
- Resume activities and responsibilities gradually.
- Stop activities before you wear out!
  - For example, if you know you will fatigue, get confused, or not feel well after three hours of an activity, stop at two hours.
- Schedule events or activities so that you will not go beyond your limits or energy level.
  - For example, if you know you cannot handle full-time work, schedule half-days. Or, if you are going on an outing with a friend, let them know you need to be home by a certain time.
  - If you know a “big day” makes you tired, schedule the next day as a “rest day” or a “slow day”. Schedule a couple days off after a big week.
- You can keep a diary to help you figure out how much you can handle and how often you need time to rest.
- Simplify your life
J. Take frequent breaks.
- You may be able to handle longer work days, outings, and activities if you just schedule frequent breaks.
- For example, schedule 10 minutes off every hour. Close your eyes, stretch, listen to music, or do whatever feels rejuvenating.
  - Other people benefit from a longer break every few hours. For example, take a 30-minute power nap or go for a walk at lunchtime.
  - Even 30 seconds off can help you re-energize and improve focus. This is what we will practice in each class every 30 minutes. Suggestions include:
    - 30 seconds of neck stretches.
    - Give yourself a neck rub.
    - Close your eyes and count to 30.
    - Physical activity to get your blood pumping and help you feel alert, such as fast walking or jumping jacks.
    - Point and flex your feet.
    - Rest your head on your knees.
    - Look out the window.
    - Shake out your hands.
    - Drink some water.
- Find a private room or quiet space. Close your door. Use eye masks or earplugs. Turn off your phone. Put up a “Do Not Disturb Sign.”

K. Try to follow a consistent daily routine in your life.
- You are more likely to do things you need to do if you have a routine time, place, and system for doing them.
  - Routines simplify and organize your life.
  - Routines help you address priorities.
  - Routines save you time and energy.
  - Routines reduce the need to remember things.
  - Routines reduce errors.
- Recognize that symptoms are a natural part of recovery and will often resolve without treatment. Worry leads to increased symptoms.
- Realize that some “symptoms” may simply be signs of stress.
- Misattribution bias: a tendency to erroneously assign a cognitive lapse to a brain injury when it is possible that other factors could be responsible for the cognitive lapse such as stress, pain, substances, or poor sleep. It is also possible that the cognitive lapse is a normal everyday occurrence that most people in the world experience.
- Monitor your symptoms. If they worsen, you may be pushing yourself too hard.
6. Abdominal breathing

- Abdominal breathing involves two basic components:
  - **Breathing control**
    - Find a quiet, comfortable spot where you won’t be disturbed.
    - Sit in a comfortable chair, or lie down if breathing from the diaphragm is difficult for you.
    - Breathe slowly, from the diaphragm (belly breathing).
    - Breathe in a smooth continuous motion. Do not hold your breath prior to exhaling. Allow your breath in to be smoothly followed by your breath out. If you become dizzy or feel faint, just stop for a little while and then try again.
  - **Concentration**
    - Imagine your breath as a full circle (see below). Imagine your breath in and out to be a smooth, circular process without becoming stuck or jagged (holding patterns).
    - Repeat the following in your mind. Inhale: “In full body.” Exhale: “Out letting go.”
    - If you notice yourself becoming distracted, gently bring your attention back to your breathing. Allow the distracting thought to pass away.
    - Once you start to feel comfortable with counting, you can start to slow the number of breaths you take.

![Diagram of Abdominal Breathing Patterns](image)

- **Trauma breathing pattern (jagged holding pattern)**
- **Relaxed Circle breathing pattern**
7. Principles of Compensatory Cognitive Training

- Abilities and areas of functioning that this course will target:
  - Tension, Fatigue, Sleep Problems, and Headaches
  - Organization and Prospective Memory
  - Attention and Concentration
  - Learning and Memory
  - Goal Setting, Planning, and Problem Solving

- Classes are interactive. The more you practice, the more automatic your new skills will become.

**COGNITIVE TRAINING = IMPROVING COGNITION (THINKING) BY PRACTICING SKILLS AND LEARNING NEW STRATEGIES**

- Exercises:
  - Ball game: Stand in a close circle and pass a ball around as quickly as possible. Record the time it takes for the ball to go around three times. Do this three times; you should be able to get faster each time. In between rounds, discuss the strategies you are using to go faster. Notice that as you try harder, you do better.
    - Time 1: __________
    - Time 2: __________
    - Time 3: __________
  
  - Name game: One person begins by saying his/her name. Each subsequent person in the room says his/her name and repeats all previous names. Note that this is a concentration challenge and that repetition and overlearning can be helpful.

- Key strategies for your toolbox will include organization and calendar use, and we are going to introduce these strategies briefly today.
**Organization strategies include making a “home” for your most important personal items** (e.g., your calendar, keys, wallet, and cell phone). When you get home:

1. Choose a **container**.
   a. e.g., a large bowl, small box, or backpack
   b. If using a backpack, use one section/pocket just for personal items only.

   My container is: ____________________________________________

2. Decide **where** the container will be kept in your home.
   a. e.g., on a table near the front door, on a table near the coat closet, on the desk in the office or kitchen.
   b. It should be a convenient location that you will easily get into the habit of using every time you enter your home.

   I will keep my container: ____________________________________

3. Start using this home for your personal items **every day**.

**Calendar use.** This class will use calendars a lot.

**Benefits to using a calendar:**

- You will need to rely less on your memory.
- You can not only see what’s coming up in your schedule, but you’ll also have a record of what happened in the past.
- Your calendar will help you make use of routines.
- You can use your calendar to schedule events that you have to do or need to do – it will help you complete tasks that you don’t necessarily want to do (e.g., exercise, chores, studying, yard work, gift shopping).
- Special sections for important information, such as phone numbers.
- A place to keep your “to do” list.
- Reducing the number of things you need to remember to do can be helpful.
  - If you use a smartphone or electronic calendar, you can automate certain activities by programming electronic reminders (e.g., water plants every Friday; call sister every Tuesday; neck stretches daily at 2 pm).
  - You can automate your billing by paying your bills online and programming payments to be made automatically.

**What type of calendar will work for you? Paper or electronic?**

- In an ideal world, your calendar will be with you at all times and you will check it every day, perhaps multiple times a day.
- About once a week, it’s a good idea to plan for the week ahead. For example, if you have a party to attend, you might need to bring a gift or some food, and you can plan ahead for that.
• Choose your calendar:
  o If paper, pocket size or larger format? Balance convenience with how much space you need to write.
  o If electronic, what system? Smartphones, Outlook, Google/Yahoo
  o Some can be linked to Outlook/Google Calendar/Yahoo Calendar
  o Google Calendar and Yahoo Calendar can also send reminders to your cell phone if you like

**Paper calendars** of different types and sizes are readily available at grocery stores, drugstores, etc. Be sure to select one you are willing to carry with you at all times.

1. Do you already use a calendar? What kind?
______________________________________________________________________
______________________________________________________________________

2. Do you need to invest in a new calendar? What kind?
______________________________________________________________________
______________________________________________________________________

3. How will you remember to come to class each week?
______________________________________________________________________

4. How will you remember to bring your binder to class each week?
______________________________________________________________________

5. How can family members, significant others, friends, and/or caregivers support you while you take this class?
______________________________________________________________________
8. **Goals for the class**

Think about your goals for the class. All of you are taking this class for a reason – it is likely that cognitive problems are interfering with your ability to optimally manage some important aspects of your life. It is important to be able to identify the specific reasons why you are taking this course because your goals will motivate you to use the tools that you will be learning over the next ten weeks. Throughout this course, you will be reminded about your goals and will be asked to monitor your progress towards achieving these goals.

1. What are one or two **problems with cognition or thinking** that affect you most (e.g., problems remembering things, focusing, poor organization)?

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________

2. What **important life areas do these problems interfere with** the most (e.g., work, family relationships, managing your affairs, taking care of your health)?

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________

3. Identify one or two **important life goals** you would like to work toward during this class (e.g., returning to work or school, being more reliable at work, helping out more at home, remembering medications and appointments).

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________
Session 1: Home Exercise

☐ Make a “Home” for your most important personal items (e.g., your calendar, keys, wallet, and cell phone)
   1. Choose a container.
      a. e.g., a large bowl, small box, or backpack
      a. If using a backpack, designate one section/pocket just for personal items only.
   2. Decide where the container will be kept in your home.
      i. e.g., on a table near the front door, on a table near the coat closet, on the desk in the office or kitchen.
      ii. It should be a convenient location that you will easily get into the habit of using every time you enter your home.
   3. Start using this home for your personal items every day.

☐ Buy a calendar if you don’t already have one that you use regularly.
   • Enter all your upcoming appointments, including this class
   • Do you need to do something else to help you remember to come next week?

☐ Decide how you will remember to bring your class binder and calendar to class next week.
   1. Some examples:
      a. You could put your binder in the “home” you created.
      b. You could put a post-it note on your front-door.
      c. You could ask a significant other or housemate to remind you.
   2. Briefly describe how you will remember these items each week:

☐ Practice abdominal breathing two times over the next week. Consider scheduling this into your calendar.

☐ Read TBI and PTSD handouts. Consider sharing them with friends and family members.
Session 2: Managing Fatigue, Sleep Problems, Headaches, and Tension

Class Agenda

1. Review last week’s home exercise.
2. Discuss TBI-related fatigue, sleep difficulties, and headaches.
3. Introduce and practice tension reduction techniques.
4. Discuss symptoms of depression, anxiety, and PTSD.
5. Discuss setting priorities.
6. Assign home exercise.

1. **Review home exercise**

2. **Managing fatigue, sleep problems, and headaches**
   (Mark areas needing change with a star or highlighter)

These are some of the most common and distressing symptoms experienced after TBI. They are often related to cognitive and emotional concerns.

**Fatigue**

- You may tire more easily and have more difficulty rebounding from busy days.
- Fatigue can intensify other TBI-related symptoms. Examples?
- Reducing fatigue:
  - Exert yourself when you are most energetic.
  - Recognize your limits.
  - Build in downtime, take breaks. What can you do during work breaks?

<table>
<thead>
<tr>
<th>DOWNTIME:</th>
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<tbody>
<tr>
<td>1 HOUR PER DAY</td>
</tr>
<tr>
<td>1 DAY PER WEEK</td>
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<tr>
<td>1 WEEK EVERY 12-16 WEEKS</td>
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Sleep Problems

Sleeping pills and alcohol do not work well in the long run and do not teach your body how to sleep better. They also can be addictive. If you have concerns about your sleep medication, discuss the advantages and disadvantages of your medication with your prescriber. It is never a good idea to discontinue medication without first consulting with your prescriber.

Implement healthy sleep habits:
1. Avoid activities other than sleeping, such as reading, working, lengthy conversations, or watching TV, in bed.
2. Go to bed only when you feel sleepy. This will eventually establish a sleep routine for you.
3. If you do not fall asleep within 20 minutes, get out of bed and sit quietly in the dark. Avoid switching on any overhead lights. Avoid looking at the clock.
4. Try to go to bed at roughly the same time each night.
5. Wake up at the same time each day, and get out of bed as soon as you wake up.
6. Try not to nap longer than 30 minutes (best to avoid naps all together).
7. Avoid exercise, excessive physical activity, or other excitement about 4 hours before you go to bed.
8. Create a sleeping environment that is most comfortable for you.
9. Reduce outside noise (e.g., earplugs, “white noise” machine).
10. Avoid caffeine after noon, and tobacco and alcohol at least 2 hours before you go to bed.
11. Develop “bedtime rituals” (e.g., eating or drinking particular foods, taking a warm shower) before going to bed.

Individuals with combat-related head injuries commonly experience post-traumatic stress symptoms that can impair sleep, such as nightmares and increased arousal. Let us know if these are concerns for you and we can discuss potential treatment options.

Headaches -- 5 main types of headaches associated with TBI

1) Tension headaches (most common type)
   - Band of pressure around head
   - Neck or jaw discomfort
   - Tenderness on your scalp, neck, and shoulder muscles
   - Onset usually late in day, so may prevent sleep
   - Triggers: worry, stress, overwork, poor posture, poor ventilation
2) Migraine headaches
   o Throbbing pain in forehead and temple
   o May have nausea, vomiting, numbness, muscle weakness, and sensitivity to light, sound, and smell
   o Sleep may help symptoms resolve
   o Triggers: emotional stress, physical activity, sleep problems, fatigue, irregular eating habits, and certain foods (e.g., chocolate)

3) Post-traumatic headaches
   o Pain that increases when touched, accompanied by a burning or tingling sensation
   o Similar to tension and migraine headaches
   o Occur months or years after TBI

4) Cluster headaches
   o Intense pain behind the eye and one side of the face, which may move to the other side of the face
   o Similar to migraine headaches, but more severe
   o Lasts between 15 minutes and 3 hours
   o Triggers: Nicotine, alcohol, overwork, emotional stress

5) Withdrawal (Rebound) headaches
   o Result from withdrawal from extended use of pain medications
   o No specific area of pain
   o Symptoms may include nausea, concentration difficulties, depression, irritability, and restlessness

- If you are frequently bothered by headaches, it may be appropriate to consult with a physician (e.g., to discuss medications)

- Triggers/aggravating factors (minimize these if possible)
  - Stress
  - Depression and anxiety
  - Lack of sleep or changes in sleep routine
  - Skipping meals
  - Poor posture
  - Working in awkward positions or holding one position for a long time
  - Medications used for other conditions, such as depression or high blood pressure
  - Overuse of headache medication
  - Jaw clenching and teeth grinding
  - Lack of physical activity
  - Physical activity reduces tension, fatigue, and stress and improves sleep
Which three strategies would you like to try first to help address fatigue, sleep problems, and/or headaches?

(1) _____________________________________________________________

(2) _____________________________________________________________

(3) _____________________________________________________________

3. **Introduce and practice tension reduction techniques**

**TENSION ⇔ ANXIETY ⇔ COGNITIVE DIFFICULTIES**

Tension reduction techniques break this cycle by decreasing tension and anxiety.

**Abdominal Breathing** = breathing from the depths of your abdomen.

- Let’s practice. Inhale through your nose, slowly, until the breath reaches your abdomen, to a count of 5.
- Release, exhaling from your nose or mouth to a total count of 10.
- You can place your hand on your stomach, and if you are doing this correctly, your hand will actually rise and fall with each breath.
- Try to concentrate on your breathing, and clear your mind of anything else.
- Keep this up for 3-5 minutes, and do it as often as you can throughout the day, and in bed, before you go to sleep.

**Practice abdominal breathing for 2 minutes. What did you notice?**

---

**Mindfulness** = **Focusing awareness on the experience of the present moment**

- Pay attention to what is happening in the present mind and body: what you are thinking and feeling.
- Observe these thoughts and feelings without making judgments about them.
- Thoughts are just thoughts – let them come into your consciousness and let them go.
- Can be done anywhere. Examples:
  - Noticing the sensations in your feet when you walk
  - Noticing how tightly or loosely you hold the steering wheel when driving
  - Noticing what happens to your breathing or tone of voice when you are content or angry or sad

- The Raisin Exercise
Practice mindfulness for 2 minutes. What did you notice?

__________________________________

____________________________________

______________________________________________________________________

Grounding Techniques = directing attention to something in your environment.

- Find a quiet room where you can be alone (although you can use this technique anywhere, it is easiest to learn it in a quiet environment).
- Observe and describe objects in the room, by their physical properties.
- Do not attach your opinions to the objects.
- You can also incorporate abdominal breathing.

Practice grounding for 2 minutes. What did you notice?

______________________________________________________________________

Visualization = mental relaxation that generates a peaceful state of being.

- Imagine that you are in a different, peaceful place.
- Enrich the visualization by imagining accompanying sensations (sights, smells, sounds, textures, temperatures).
- The visualization process consists of 3 steps:
  - Preliminary relaxation (abdominal breathing for about 5 minutes).
  - The visualization exercise (see example at whps.sdes.ucf.edu/station).
  - Returning to an alert state of mind.
- Can be done along with PMR or alone. Try practicing at home using the links at whps.sdes.ucf.edu/station.

Progressive Muscle Relaxation (PMR)

PMR: USE AT EARLY SIGNS OF TENSION → DEEP RELAXATION

- Reminds your body what relaxation feels like, trains your body to remain relaxed.
- Helps prevent fatigue, reduce headache severity and frequency, decrease irritability, and promote sleep.
- DO NOT USE PMR WHEN YOU HAVE A HEADACHE!

FIRST TIGHTEN MUSCLE, THEN RELAX

- Find a comfortable place without distractions.
• Tense (5-7 seconds) and then release (15-20 seconds) muscle groups one at a time.
• When tensing muscles, focus on the feeling of tightness.
• When releasing, focus on the feeling of limpness.
• Avoid tightening injured muscles.
• Progress through muscle groups as follows:
  1. Right hand and forearm
  2. Right biceps
  3. Left hand and forearm
  4. Left biceps
  5. Forehead and top of head
  6. Eyes, nose, and top of the cheeks
  7. Mouth, jaw, and the side of the cheeks
  8. Neck
  9. Upper chest, back and shoulders
  10. Abdomen
  11. Right upper leg
  12. Right calf
  13. Right foot (only tense for 2-3 seconds)
  14. Left upper leg
  15. Left calf
  16. Left foot (only tense for 2-3 seconds)
• After releasing final muscle group, relax for 5-10 minutes then slowly awaken.

What did you notice this time while doing PMR?
______________________________________________________________________
______________________________________________________________________

4. Depression, anxiety, and PTSD

These are common problems in people who have experienced TBI or concussion.

• Depression
  o Feelings of sadness/depressed mood or loss of interest or pleasure for at least 2 weeks.
  o Accompanied by significant weight loss/appetite loss, sleep problems, fatigue, feelings of worthlessness or guilt, concentration difficulties or indecisiveness, and/or suicidal ideation.
  o Difficult to dissociate symptoms of TBI from depression.
  o Depression and TBI both cause problems with attention, concentration, memory and problem solving.
• **Anxiety**
  o Excessive anxiety and worry that interferes with functioning.
  o Anxiety can be generalized (i.e., not specific to one thing or a specific situation) or may be due to specific circumstances, such as a fear of social situations or things (i.e., animals, heights, crowds).
  o As with depression, anxiety can cause problems attention, concentration, memory and problem solving.
  o The vicious cycle: You feel anxious about your cognitive problems, and the anxiety makes it harder for you to concentrate and remember; then you feel more anxious, which causes you to have more cognitive problems.

• **PTSD**
  o Is a type of anxiety disorder.
  o After experiencing a traumatic event, one may feel intense fear, helplessness, or horror.
  o After the event is over, one may have recurrent and distressing memories of the event, nightmares, flashbacks, avoidance of things that are associated with the trauma, diminished interest or participation in activities, feelings of detachment from others, sleep difficulties, anger outbursts, concentration difficulties, and hypervigilance.
  o It is difficult to know whether cognitive problems are due to PTSD, TBI or both.
  o It is important to treat PTSD symptoms if you have them, as your cognitive problems may be worsened by this disorder.

• **Do you suspect that you have Depression, anxiety, and/or PTSD and are not currently being treated for your symptoms?**
  o First, talk to your provider at the end of session, especially if you are having suicidal thoughts. We can make a referral to the most appropriate provider.
  o It is best to discuss your treatment options with your doctor. These options may include medications, psychotherapy and/or other treatment recommendations.
  o Eating right, exercising, socializing, and using relaxation strategies may help with your symptoms.
5. **Setting priorities – first things first!**

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**A Time Organization Parable**

A professor stood before his philosophy class and had some items in front of him. When the class began, he picked up a very large and empty jar and proceeded to fill it with large rocks. He then asked the students if the jar was full. They agreed that it was. So the professor then picked up a box of pebbles and poured them into the jar. He shook the jar lightly. The pebbles rolled into the open areas between the large rocks. He then asked the students again if the jar was full. They agreed it was.

The professor next picked up a box of sand and poured it into the jar. Of course, the sand filled up everything else. He asked once more if the jar was full. The students responded with a unanimous "yes." The professor then produced 2 cups of water from under the table and poured the entire contents into the jar, effectively filling the empty space between the sand.

The students laughed.

"Now," said the professor, as the laughter subsided, "I want you to recognize that this jar represents your life. The large rocks are the important things—your family, your children, your health, your friends, and your favorite passions—things that if everything else was lost and only they remained, your life would still be full. The pebbles are the other things that matter like your job, your house, your car. The sand is everything else—the small stuff."

"If you put the sand into the jar first," he continued, "there is no room for the pebbles or the large rocks. The same goes for life. If you spend all your time and energy on the small stuff, you will never have room for the things that are important to you. Pay attention to the things that are critical to your happiness. Take care of the large rocks first, the things that really matter. Set your priorities. The rest is just sand and water."

---

*We frequently under-prioritize health and self-care. But, if we take care of ourselves, we will have more energy for other areas of our lives. Our health should be our biggest “rock.”*

*Take a moment to schedule some healthy lifestyle activities into your calendars for the week ahead.*

*What are some other priorities for you right now?*
Session 2: Home Exercise

☐ Remember to bring your calendar and class binder to class next week.
  - Continue to use the home you created for your most important personal items. Use it for your calendar. Do you need to do anything else to help you remember to bring your binder and calendar next week?

☐ Practice checking your calendar three times a day.

☐ Practice scheduling regular breaks.

  - Think of an activity you will do this week that might be hard for you to finish. Try to choose an activity that is important to you and your life goals. Think about how you could remind yourself to take breaks during this activity and what this break will look like.
  - For example, if you plan to help clean the house this week, you could set an alarm on your watch to take a break after 45 minutes. You could decide you will wash your face and do deep breathing for 10 minutes during this break.
  - Briefly describe how you plan to take breaks during your activity:

    ___________________________________________________________
    ___________________________________________________________
    ___________________________________________________________

☐ Practice PMR two times over the next week; you can use the link at whps.sdes.ucf.edu/station.

☐ Practice visualization (guided imagery) using the link at whps.sdes.ucf.edu/station (schedule a time in your calendar while you are thinking about it).

☐ If sleep is a problem for you, track your sleep using the chart on the next page.
TWO WEEK SLEEP DIARY

INSTRUCTIONS:
1. Write the date, day of the week, and type of day: Work, School, Day Off, or Vacation.
2. Put the letter “C” in the box when you have coffee, cola or tea. Put “M” when you take any medicine. Put “A” when you drink alcohol. Put “E” when you exercise.
3. Put a line (I) to show when you go to bed. Shade in the box that shows when you think you fell asleep.
4. Shade in all the boxes that show when you are asleep at night or when you take a nap during the day.
5. Leave boxes unshaded to show when you wake up at night and when you are awake during the day.

SAMPLE ENTRY BELOW: On a Monday when I worked, I jogged on my lunch break at 1 PM, had a glass of wine with dinner at 6 PM, fell asleep watching TV from 7 to 8 PM, went to bed at 10:30 PM, fell asleep around Midnight, woke up and couldn’t get back to sleep at about 4 AM, went back to sleep from 5 to 7 AM, and had coffee and medicine at 7:00 in the morning.

| Today’s Date | Day of the week | Type of Day | Noon | 1PM | 2 | 3 | 4 | 5 | 6PM | 7 | 8 | 9 | 10 | 11PM | Midnight | 1AM | 2 | 3 | 4 | 5 | 6AM | 7 | 8 | 9 | 10 | 11AM |
|--------------|----------------|-------------|------|-----|---|---|---|---|-----|---|---|---|----|------|-------|----|---|---|---|----|---|---|---|---|-----|
| sample       | Mon.           | Work        | E    | A   | I |   |   |   |     |   |   |   |    |      |      |    |   |   |   |    |   |   |   |   |     |

week 1

week 2
Session 3: Organization and Prospective Memory

Class Agenda

1. Review last week’s home exercise.
2. Discuss prospective memory.
3. Organizing your time and establishing routines.
4. Organizing your space to promote routines.
5. Organizing your calendar use.
6. Calendar exercise.
7. Remembering to check your calendar.
8. Practice entering appointments and tasks into the calendar.
9. Discuss next week’s home exercise.

1. **Review home exercise**

2. **Prospective memory**

   **PROSPECTIVE MEMORY =**
   THE ABILITY TO REMEMBER TO DO THINGS IN THE FUTURE

Forgetting to do things is a very common memory problem.
- Examples: forgetting to go to an appointment, a study session, a meeting at work; forgetting to send a birthday card to a relative; forgetting to return a tool you borrowed from a neighbor.
- Using routines, organization, and a calendar system will be the best way to avoid these problems.

3. **Organizing your time and establishing routines**

   **Routine** – Doing an activity regularly.
   - You are more likely to complete an activity if you establish a routine time, system, and/or space for it.

   **Why are routines especially helpful to people with cognitive problems?**
   - Routines simplify your life.
   - Routines help you address your priorities regularly.
   - Routines require less attention.
   - Routines require less energy.
   - Routines rely less on memory.
   - Routines reduce the risk of errors.
   - Routines can help with mood and self-care.
What kinds of activities can be made into routines and how?

1) **Mundane Routines**: Getting ready in the morning, meals, getting to and from work/school, chores, bills, using your calendar daily, having a weekly planning session with your calendar.
   - The idea is for these activities to take up less of your energy so you can save your energy for the more important stuff. If you do these tasks the same way each time, it will eventually be automatic and therefore simpler.

2) **Important Activities**: Exercise, relaxation, studying, important work projects, spending time with family and friends.
   - The idea is to make sure you carve out enough time for these important activities to happen regularly. If you do not schedule a routine time for these activities, you may neglect them.

3) **Annual/Seasonal Routines**: Yardwork, holidays, special occasions.
   - Because these activities do not happen that often, they can feel disruptive or overwhelming. Developing routines for them can make them easier (e.g., setting aside one Saturday in October and another in November for raking leaves) and/or more meaningful (e.g., cooking a steak dinner at home every year for your anniversary).

**Organizing Your Time – Prioritizing the Important Things**

80:20
We spend 80% of our time doing 20% of the tasks in our life that are least important to us. Often we do the easiest tasks first because we can cross them off our list.

The goal is to reverse this pattern. Schedule chunks of time to work toward your most important life goals and priorities, and allow no interruptions. The lesser items will fit in. This is like filling your bucket with large rocks first, then filling the rest in with pebbles, then sand, then water.
## Time Management Matrix

<table>
<thead>
<tr>
<th></th>
<th>Immediate/Deadline</th>
<th>Not Immediate/No Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Important</strong></td>
<td>Large Rocks/Pebbles</td>
<td>Large Rocks/Pebbles:</td>
</tr>
<tr>
<td></td>
<td>Emergencies</td>
<td>Health/Exercise</td>
</tr>
<tr>
<td></td>
<td>Important appointments</td>
<td>Prevention</td>
</tr>
<tr>
<td></td>
<td>Important deadlines</td>
<td>Important relationships</td>
</tr>
<tr>
<td></td>
<td>Pressing problems</td>
<td>Planning</td>
</tr>
<tr>
<td></td>
<td>(car dies, roof is leaking)</td>
<td>Recreation and self-care</td>
</tr>
<tr>
<td><strong>Not As Important</strong></td>
<td>Sand:</td>
<td>Water:</td>
</tr>
<tr>
<td></td>
<td>Interruptions</td>
<td>Some chores</td>
</tr>
<tr>
<td></td>
<td>Phone is ringing</td>
<td>Some mail, phone messages,</td>
</tr>
<tr>
<td></td>
<td>Someone is knocking on door</td>
<td>or meetings</td>
</tr>
<tr>
<td></td>
<td>Popular activities (TV shows, shopping)</td>
<td>Unimportant relationships</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trivia, busywork, time wasters</td>
</tr>
</tbody>
</table>

The goal is to move toward spending most of our time in the Important/Not Immediate quadrant. These are the large rocks/pebbles.

If you spend more time on planning and prevention, you will not need to spend as much time in the Important/Immediate quadrant.

What are *your* big rocks, pebbles, sand, and water? How do they fit into your time management matrix?

<table>
<thead>
<tr>
<th></th>
<th>Immediate/Deadline</th>
<th>Not Immediate/No Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Important</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Not As Important</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. Organizing your space to promote routines

You can use systems and spaces to help promote important routines and activities. You are more likely to complete activities regularly if you know how and where they will happen.

**Systems** – How you do a routine activity; an organized method.
- Calendar/planner/appointment systems.
- Mail/billing/filing systems.
- Medication systems (pill container).
- Phone/family message systems (white board).
- Grocery/meal planning system (pre-made grocery lists).

**Functional Spaces** – Where you do a routine activity; a designated place in your home. This does not need to be a whole room. It can be a desk, a corner, a couch, a table, etc.
- A Home for Your Important Personal Items.
- Work/Important Projects – A quiet, non-distracting space in your home, like an office or a desk in a quiet room.
- Personal Recreation Space – If you like woodworking, a work bench in your garage. If you like music, a guitar next to a comfy chair. If you like reading, a bookshelf and chair under a reading lamp. What do you like to do?
- Family/Friend Time – Perhaps this is where you watch movies or play games together, or where you sit for dinners and discussions.
- Exercise – Perhaps you have a weight bench, or a space in a room for a yoga mat. Or perhaps you have a spot near the door where you keep your running shoes, rain coat, and dog leash.
- Medication/Healthcare Station – A place where you keep your medications (where you can see them) and other healthcare items you use regularly.

5. Organizing your calendar use

Your calendar use will be more efficient when you develop routines for:
- Carrying it with you always
- Writing down all appointments and commitments
- Checking it regularly
- Using to-do lists in your calendar to cue you about tasks needing your attention
- Having a planning session about once a week to plan tasks for the week ahead

First, we will focus on writing it all down in the next exercise.
6. Calendar exercise

Based on the following scenario, enter these things to do on your calendar. (Use the next page for calendar entries.)

YOUR TUESDAY:

- Sometime during the day, you need to call your friend, Scott, and remind him about the party at the Recreation Center this Saturday at 7:00 p.m.
- Sometime between 9:00 and 10:00 a.m., you need to drop off your job application at Betty’s Diner.
- At 11:00 a.m., you have a doctor’s appointment with your physician, Dr. Stevens, and you want to ask about the side effects of amoxicillin. You also want to report that you have been having severe headaches about once a week and even threw up because of one of them last Tuesday.
- Before you visit the doctor, you need to stop at Rite Aid to buy deodorant and shampoo (someone suggested a new brand called Aveeno), and to pick up a refill of amoxicillin.
- At 1:30 p.m., you are due at your geography class.
- At 4:00 p.m., you need to meet with the social worker, Jane Dunne, to discuss your housing options.
- You want to meet Joe for dinner at a new restaurant, Dominic’s, at 7658 Poway Rd (858-748-1265) at 7:00 p.m.
- You still need to do your class homework before going to bed.

What kind of reminders might you want to enter before this day occurs?

- What would you need to do ahead of time, before picking up your refill of amoxicillin? (e.g., call in refill request to pharmacy)
- What would you need to do ahead of time, before going to your geography class? (e.g., make sure homework is done and in your bag)
- What would you need to do ahead of time, before meeting with Jane Dunne? (e.g., make copies of financial information)
<table>
<thead>
<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 am</td>
<td>7 am</td>
<td>7 am</td>
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<tr>
<td>8 am</td>
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<td>10 am</td>
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<td>11 am</td>
<td>11 am</td>
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<tr>
<td>12 noon</td>
<td>12 noon</td>
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<td>1 pm</td>
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<tr>
<td>7 pm</td>
<td>7 pm</td>
<td>7 pm</td>
</tr>
</tbody>
</table>
7. Remembering to check your calendar

Your calendar will be much more helpful if you check it!

Now that you have mastered writing in your calendar, let’s focus on checking it regularly. Plan to check it at least three times a day or more if you are busy or tend to forget things. Remember to have it with you always. These strategies will help you remember to check your calendar, but they are useful for remembering to do other tasks, too.

**LINKING TASKS** = FORMING A HABIT BY ADDING A NEW TASK TO SOMETHING YOU ALREADY DO

- How are you going to remember to check that calendar?
- Link it to something you already do using a back-up note to remind you, and soon it will become automatic.
  - Waking up (back-up note on alarm clock, light switch, or something you have to touch).
  - Eating breakfast (back-up note on cereal box, kitchen cabinet handle, coffee maker, or something you have to touch).
  - Other morning rituals? What automatic activity and back-up system will you use?________________________________________________

**AUTOMATIC PLACES** = PLACES YOU WILL SEE SOMETHING YOU NEED TO REMEMBER

- One additional strategy is to use an “automatic place” where you will see your calendar every morning and remember to check it.
- Some people might use automatic places already – Do you have a place where you always put your keys? A place where you always keep your glasses? A place where you always keep your medications? Hopefully all these things are in their “homes” by now.
- In what automatic place could you keep your calendar so you will see it?
  - Examples: in your “home for your stuff,” sticking out of bag, with bag on kitchen table; on top of doorknob; on top of alarm clock; sticking out of shoes.
  - Where do you keep your calendar? ________________________________
8. **Practice entering tasks and appointments into the calendar**

- Enter all the upcoming appointments for the following week. Are there tasks that need to be completed before the appointments?

- What are some of the tasks needing your attention the following week?

- Thinking back on the time management matrix, are there some “big rocks” that you want to start incorporating into your days? (e.g. exercising, eating healthier, spending time with family)

9. **How organization, establishing routines, and calendar use can help with long term goals**

Think back to the goals you wrote down on page 10. How can some of the strategies discussed today help you reach those goals?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Session 3: Home Exercise

☐ Come to class next week with your binder and calendar.

- Schedule the rest of the classes into your calendar, if not already done.
- Do you need to do anything else to help you remember to come to class and do your home exercise each week? How can you make this a weekly routine?
- Briefly describe your class and home exercise routine:

☐ Set up your calendar so you can use it for appointments, important activities, and routines. Think about your class goals and use your system to address these goals first.

☐ Practice using your calendar every day and start a to-do list (or lists).

- Continue to look at your calendar at least three times a day.
- Add new appointments at the time they come up. Don’t wait to write them down later.
- Add tasks to your to-do lists when they occur to you (so you don’t forget them). Decide whether you should put them on the calendar for a certain day or whether they should go on your to-do list.
- When you check your calendar in the evening, plan the next day’s schedule:
  - Think about what you need to do tomorrow and schedule these items in your calendar.
  - Review your to-do list and make any necessary additions. Cross off the things you got done.
  - Do you need to schedule time to work toward other important life goals? Did you schedule time for healthy life strategies and breaks?

☐ This Saturday, call and leave a message at _____-_____ - ______. This is a challenge to see how the calendars are working for you, so put a reminder note in your calendar right now to call on Saturday.
Session 4: Organization and Prospective Memory (continued)

Class Agenda

2. Review last week’s home exercise.
3. Behavioral analysis of barriers that interfere with use of calendar and strategies.
4. Discuss weekly calendar planning sessions.
5. Prioritizing and to-do lists.
6. More things you can do with your calendar.
7. Short-term prospective memory strategies.
8. Discuss how organization and prospective memory strategies can help with long term goals.
9. Discuss next week’s home exercise.

1. **Relaxation exercise: visual imagery**

In order to encourage your use of and familiarity with relaxation techniques, we are going to practice visual imagery together. Has anybody used it? Has anyone found it helpful or unhelpful? Let's now do the exercise together, using the recording at whps.sdes.ucf.edu/station.

2. **Review home exercise**

3. **Behavioral analysis of barriers**

   **Definition**: A detailed assessment of all the factors that can interfere with one's ability to use the calendar, use strategies, make lifestyle changes, and establish daily routines.

   **Common barriers**: Highlight or place a mark next to the barriers that apply to you

   - When learning about the strategy in session, I didn't think it would work.
   - The strategy was not relevant to my life.
   - I forgot everything I learned in session as soon as I left to go home.
   - I lost my class handouts which contained the homework assignment.
   - I stuck my calendar and binder in a drawer and forgot about it since it was "out of sight."
   - I was too busy.
   - I was too tired.
   - I didn't feel like it.
   - I wanted to do something fun like watch TV or play video games instead.
   - I didn't schedule a time in my day to use the calendar or strategies.
   - The assignment was too difficult.
I didn't understand the assignment and what was expected of me.
It was hard for me to break my old habits.
My family didn't support my use of the strategies.
I don't like carrying the big planner around.
My emotional distress (i.e. anxiety) prevented me from using the strategies.
Others?

Questions to ask myself:

- When I learned the strategy in session, did I think it was a good idea?
- When I learned the strategy, did I plan on using it?
- When did I stop thinking about using the strategy?
- What are some reasons why I didn't use the strategy?

Solution:

What can I do this week to improve my chance of using the strategies? Write down specific steps.

4. **Schedule a weekly planning session**

Sometime toward the end of each week, or perhaps on the weekend, set aside some time to sit down with your calendar for 5-10 minutes and plan for the upcoming week. Make sure that all of your appointments are entered and that you have everything you need in place for the coming week. This process will usually remind you of things to do, and these can go on your to-do list.

My weekly planning session will be ________________________________

Exercise: Enter your weekly planning session into your calendar.

5. **Prioritizing and to-do lists**

You are becoming a calendar master now. There is one more thing that is helpful to have in your calendar, and that is your to-do list. We have already discussed prioritizing activities (your big rocks, pebbles, sand, and water). Now we will introduce a system to remind you to get some of those important things done.
Things that need to get done on a certain day should go in your calendar for that day. Other to-do items should go on your to-do list.

- If you need ideas, look on the next page.
- Consider the time management matrix as you think about what is important versus unimportant.

Exercise:

1. Fill in the to-do list.
2. Enter high priority items into your calendar.

TO DO:

<table>
<thead>
<tr>
<th>High Priority (today or tomorrow) Enter into calendar</th>
<th>Medium Priority (within a week or so)</th>
<th>Low Priority (within a month or so)</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
</tr>
</tbody>
</table>
### TO DO List Categories
*(Keep in calendar)*

<table>
<thead>
<tr>
<th>APPOINTMENTS</th>
<th>KITCHEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheduling</td>
<td>Mop floors</td>
</tr>
<tr>
<td>Preparing Materials</td>
<td>Clean stove/oven</td>
</tr>
<tr>
<td>Transportation</td>
<td>Clean out cupboards (toss old food, clean shelves, organize)</td>
</tr>
<tr>
<td>Social outings</td>
<td>Scrub trash can/under sink</td>
</tr>
<tr>
<td>Exercise (more likely to happen if it’s an appointment!)</td>
<td>Clean refrigerator (throw out old food, clean shelves, clean outside)</td>
</tr>
<tr>
<td>TRANSPORTATION</td>
<td></td>
</tr>
<tr>
<td>Schedule Rides</td>
<td>Wipe down cabinets</td>
</tr>
<tr>
<td>Bus Pass/Schedules</td>
<td>Wipe down top of refrigerator and other appliances</td>
</tr>
<tr>
<td>Automobile Maintenance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BATHROOM</td>
</tr>
<tr>
<td></td>
<td>Clean out medicine cabinet (throw out all expired medications)</td>
</tr>
<tr>
<td>WORK</td>
<td></td>
</tr>
<tr>
<td>Job search</td>
<td>Clean shower curtains/stall doors</td>
</tr>
<tr>
<td>Job interviews</td>
<td>Organize items under sink/on shelves</td>
</tr>
<tr>
<td>Follow-up calls</td>
<td>Launder bath mats</td>
</tr>
<tr>
<td>Work schedule</td>
<td>Mop floor/vacuum carpet</td>
</tr>
<tr>
<td>File pay stubs</td>
<td>Scrub sink/counters</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>BEDROOM</td>
<td></td>
</tr>
<tr>
<td>ERRANDS</td>
<td></td>
</tr>
<tr>
<td>Grocery shopping</td>
<td>Collect and complete mending (lost buttons, rips, hems, etc.)</td>
</tr>
<tr>
<td>Bank</td>
<td>Shoes: polish or get repaired</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>Reorganize dresser drawers</td>
</tr>
<tr>
<td>Clothing/Shoes</td>
<td></td>
</tr>
<tr>
<td>Post Office</td>
<td>LIVING ROOM</td>
</tr>
<tr>
<td></td>
<td>Clean carpet spots</td>
</tr>
<tr>
<td>PAPERWORK</td>
<td></td>
</tr>
<tr>
<td>Pay bills/balance check book</td>
<td>Wash windows</td>
</tr>
<tr>
<td>Correspondence (letters, cards, email)</td>
<td>Clean hanging lamps/chandeliers</td>
</tr>
<tr>
<td></td>
<td>Test smoke alarm</td>
</tr>
<tr>
<td>HOUSEHOLD CHORES</td>
<td></td>
</tr>
<tr>
<td>Cooking</td>
<td>OFFICE</td>
</tr>
<tr>
<td>Cleaning</td>
<td>Organize files</td>
</tr>
<tr>
<td>Laundry</td>
<td>Organize desk/supplies</td>
</tr>
<tr>
<td></td>
<td>Catch up on correspondence</td>
</tr>
<tr>
<td>SCHOOL/LEARNING</td>
<td></td>
</tr>
<tr>
<td>Homework</td>
<td>Redo/Update Address book</td>
</tr>
<tr>
<td>Reading</td>
<td>Complete a will</td>
</tr>
<tr>
<td></td>
<td>Arrange photos in albums</td>
</tr>
<tr>
<td></td>
<td>Organize craft/art/hobby supplies</td>
</tr>
<tr>
<td>PHONE CALLS</td>
<td></td>
</tr>
<tr>
<td>Appointments, Doctors, etc.</td>
<td>Organize computer files</td>
</tr>
<tr>
<td>Friends</td>
<td></td>
</tr>
<tr>
<td>Family</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sync cell phone, iPod, etc., with computer</td>
</tr>
<tr>
<td></td>
<td>Print photos</td>
</tr>
</tbody>
</table>
6. **More you can do with your calendar**

- You will have your calendar with you all the time, so it is a good place to keep information you need frequently, such as:
  - Commonly used phone numbers.
  - Commonly used addresses or transportation routes.
  - A list of your medications and their dosages.
  - Medical information that you want to have handy (e.g., questions for your doctor).

- Make one or more “to do” lists to help you remember to do things.
  - Shopping lists.
  - School tasks.
  - Work tasks.
  - Home tasks.
  - Things you would like to fit into your schedule (e.g., exercise, outings).
  - Or just one list if there is not much to do.
7. **Short-term prospective memory strategies**

- It is not always feasible to use your calendar to remember everything.
- Short-term situations call for different strategies.
  - One of the easiest strategies is to **write a reminder on your hand** so you are sure to see it.
    - Examples: “Call Katy,” “Mail taxes,” “Get milk”.
  - **Leave yourself a message** on your voicemail or answering machine, so you will hear it later.
  - **Send yourself an email with the reminder in the subject line.** Leave it “unread” so it will stand out when you look at your inbox later.
  - **Use visual imagery.**
    - The weirder, funnier, and more elaborate, the better.
    - Example: You need to call your friend Violet when you get home. Visualize a pay phone attached to your front door, with a vase of violets on top of it. You open the front door and the violets fall down, spilling dirt all over the floor. When you get home and see your front door, you are more likely to remember to call your friend Violet.
  - **Can’t miss reminders** are sort of like automatic places. They are reminders that you can’t miss seeing.
    - Items you need to take with you when you leave the house can be on your front doorknob or hanging in a bag on the front doorknob. You can’t turn the doorknob without seeing the bag.
    - A sticky note on your cell phone screen is hard to miss.
  - **Talk to yourself about the consequences of forgetting to do something.**
    - Examples: “If I don’t call Violet when I get home, she will think I forgot her birthday, and I would feel awful if that happened.” “If I don’t mail that bill when I leave, my payment might be late and I might get a late charge.” “If I don’t get the laundry out of the dryer right away, it will sit there and get wrinkled, and then I’ll have to iron the clothes, and I hate ironing!”

8. **How organization and prospective memory strategies can help with long term goals**

Think back to the goals you wrote down on page 10. How can some of the organization and prospective memory strategies you’ve learned help you reach those goals?

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
Session 4: Home Exercise

☐ Come to class next week with your binder and calendar.

- Schedule the rest of the classes into your calendar, if not already done.
- Do you need to do anything else to help you remember to come to class and do your home exercise each week? How can you make this a weekly routine?
- Briefly describe your class and home exercise routine:

  ____________________________________________________________
  ____________________________________________________________
  ____________________________________________________________

☐ Have a planning session (5-10 minutes) with your calendar at the end of the week to plan for the upcoming week.

☐ This Saturday, call and leave a message at _____ - _____ - ______. This is a challenge to see how the calendars are working for you, so put a reminder note in your calendar right now to call on Saturday.
Session 5: Attention and Concentration

Class Agenda
1. Review last week’s home exercise.
2. Discuss attention and concentration.
3. Introduce and practice strategies to improve attention abilities.
4. Introduce and practice additional strategies to improve attention abilities.
5. Discuss even more attention strategies.
6. Introduce and practice strategies for paying attention during conversations.
7. Discuss how attention strategies can help with long-term goals.
8. Discuss next week’s home exercise.

1. Review home exercise

2. Attention and concentration
   - **Attention = focusing on something** (e.g., something you are doing, something someone is saying, your own thoughts).
   - **Concentration = prolonged or sustained focus.**
     - Attention and concentration are essential for completing daily tasks.
     - Attention and concentration underlie successful memory.
     - While passive attending may have been sufficient prior to your TBI, you likely need to apply more effort to attending now (that is, you need to pay attention to paying attention).

3. Strategies to improve attention abilities

   **Mindfulness improves focus.** Mindfulness exercises help us to minimize distracting thoughts or intrusive emotions and re-focus our attention. You can also do a mindfulness exercise prior to engaging in an important task.

   - Mindfulness is most effective when you can incorporate it into your daily routines.
   - Choose one routine activity in your daily life and make a deliberate effort to bring moment-to-moment awareness to that activity each time you do it. This is similar to what we did with the raisin in class a few weeks ago.
   - Possibilities include getting out of bed in the morning, brushing your teeth, showering or bathing, drying your body, getting dressed, eating meal, drinking a cup of tea, and driving.
   - When doing the activity, notice what you are doing. Notice your physical movements. Pay attention to what you see, hear, smell, and feel. Notice when your mind drifts from the activity, and gently bring it back. There is no “right way” to do this.
   - The point is not to try to create a certain kind of experience or state of mind, but to be fully aware of what you are experiencing. Simply notice if you have any difficulties, and cultivate curiosity, not judgment.
- To get a sense of what this looks like, let's practice it for a couple of minutes in session, and let's observe our experience of being here, in this room, right now.
- What is that like? How is your body feeling as it sits here? Do you notice the points of tension? Do you notice where your body touches the seat? What does it feel like? What else do you notice in this moment?

4. Additional strategies to improve attention abilities

**Acronyms:** Acronyms are a memory strategy. They are words that are made up of initials that stand for a series of words. For example, ROYGBIV for the colors of the rainbow – red, orange, yellow, green, blue, indigo, violet. Acronyms reduce the amount of information you have to recall because each letter is a cue. We are going to use acronyms to help you remember attention strategies.

**FOUR PRINCIPLES:**

1. Preparation
2. Energy Conservation (STEP BACK)
3. Active Effort
4. Self-talk

**Preparation**
- Break a task into simpler parts, understand the steps it will entail.
- Rehearse the steps mentally or write them down.
- Visualize completing the task.

**Energy Conservation**
- Remember to **STEP BACK** and conserve energy to avoid fatigue and its effects on cognition.

**TIPS FOR CONSERVING ENERGY**

<table>
<thead>
<tr>
<th>Self-Care</th>
<th>Be open to help</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take breaks</td>
<td>Avoid interruptions</td>
</tr>
<tr>
<td>Exercise</td>
<td>Cut distractions</td>
</tr>
<tr>
<td>Pace yourself</td>
<td>Keep it simple</td>
</tr>
</tbody>
</table>
• **Self-Care:** sleep enough and take care of yourself—eat well, stay hydrated, and avoid alcohol/drugs.

• **Take breaks when you need to re-focus**—even 30 seconds off can help you re-energize.
  - 30 seconds of neck stretches.
  - Give yourself a neck rub.
  - Close your eyes and count to 30.
  - Physical activity to get your blood pumping and help you feel alert.
    - Such as fast walking or jumping jacks.
  - Point and flex your feet.
  - Rest your head on your knees.
  - Look out the window.
  - Shake out your hands.
  - Drink some water.

• **Exercise regularly for better relaxation, sleep, and blood flow to the brain.**

• **Pace yourself and do your most difficult work when you are most alert.**

• **Be open to help and ask for help when you are struggling with a task.**

• **Avoid Interruptions, which make tasks take longer.**
  - Turn off your phone ringer; consider a “Do Not Disturb” sign.

• **Cut distractions, which use up cognitive energy you need for the task**
  - Turn off radios and TVs, close curtains, use earplugs, and mask sounds with a fan or white noise machine.

• **Keep it simple and avoid multi-tasking.** Do one thing at a time, particularly when one of the things you are doing is potentially dangerous. Example: If you are driving, just drive. No talking on the cell phone, no texting, no map-reading, no distractions!

**Active Effort**

- Consciously attending to details, closely analyzing.
- Be prepared to work more slowly than you might usually work.
- When reading, allow time for re-reading sections.
- Check your work for errors.

**Self-talk during tasks**

- Repeat the steps of the activity to yourself as you complete them.
- Talk to yourself about your progress.
- Helps you remember completing the task.
- Examples: simple (e.g., programming contacts into your phone), and complex activities (e.g., rebuilding an engine; troubleshooting a computer problem).

**Self-talk exercise:** Self-talk makes tasks easier. Try this sequence:
  - Tap your fist on the table, then the side of your hand, then your palm.
  - Keep going for 30 seconds.
  - Now try talking to yourself while you do it. Say out loud, “Fist, Side, Palm.”
  - Does self-talk make it easier to stay on track?
What kinds of activities could you use self-talk for in your life?

5. **Even more attention strategies** (mark those you want to try)

<table>
<thead>
<tr>
<th>Problem</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Internal Distractions:</strong></td>
<td></td>
</tr>
<tr>
<td>Hunger, thirst, fatigue, pain.</td>
<td>- Make sure you have eaten properly, get a glass of water, and go to the</td>
</tr>
<tr>
<td></td>
<td>bathroom.</td>
</tr>
<tr>
<td></td>
<td>- Take all medications as prescribed. Do you need any medications for pain</td>
</tr>
<tr>
<td></td>
<td>or discomfort?</td>
</tr>
<tr>
<td></td>
<td>- Get enough rest each night.</td>
</tr>
<tr>
<td></td>
<td>- If you are tired, throw some water on your face, do some jumping jacks,</td>
</tr>
<tr>
<td></td>
<td>or take a vigorous walk.</td>
</tr>
<tr>
<td><strong>Internal Distractions:</strong></td>
<td></td>
</tr>
<tr>
<td>memories, stress</td>
<td>- Deep breathing.</td>
</tr>
<tr>
<td></td>
<td>- Mindfulness exercises.</td>
</tr>
<tr>
<td></td>
<td>- Quickly write down things you want to attend to later (if you keep thinking</td>
</tr>
<tr>
<td></td>
<td>about what you need to do later) and then return to the task at hand.</td>
</tr>
<tr>
<td><strong>Forgetting what you are</strong></td>
<td></td>
</tr>
<tr>
<td>supposed to be doing.</td>
<td>- Use your calendar to prioritize and schedule the task. Refer to your</td>
</tr>
<tr>
<td></td>
<td>calendar to make sure you are on task.</td>
</tr>
<tr>
<td></td>
<td>- Before you begin an important task, post a sign near you that reminds you</td>
</tr>
<tr>
<td></td>
<td>what task you are on. For example, “Bills.”</td>
</tr>
<tr>
<td><strong>Difficulty multi-tasking.</strong></td>
<td>- If you find yourself not completing any one task, or failing to do tasks well, do one thing at a time!</td>
</tr>
<tr>
<td><strong>External distractions,</strong></td>
<td></td>
</tr>
<tr>
<td>interruptions.</td>
<td>- Turn off unnecessary noises like TV or radio.</td>
</tr>
<tr>
<td></td>
<td>- Use a fan or white noise machine to drown out street noise or nearby</td>
</tr>
<tr>
<td></td>
<td>conversations.</td>
</tr>
<tr>
<td></td>
<td>- Use earplugs.</td>
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<tr>
<td></td>
<td>- Remove visually distracting items like computer screen savers or</td>
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<td></td>
<td>interesting magazines or pictures.</td>
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<tr>
<td></td>
<td>- Find a quiet room and close the door.</td>
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<tr>
<td></td>
<td>- Think about creating a “quiet space” in your house or work setting that</td>
</tr>
<tr>
<td></td>
<td>you can use regularly.</td>
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<tr>
<td></td>
<td>- Try to be alone, or ask others to be quiet.</td>
</tr>
<tr>
<td></td>
<td>- Use a DO NOT DISTURB sign.</td>
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<tr>
<td></td>
<td>- Ask others not to interrupt.</td>
</tr>
<tr>
<td></td>
<td>- Decide not to answer phone calls or emails until after the task is</td>
</tr>
<tr>
<td></td>
<td>complete.</td>
</tr>
<tr>
<td><strong>Losing focus/ fatiguing.</strong></td>
<td>- Take regular breaks! If frequent, they can be quite short (e.g., do three</td>
</tr>
<tr>
<td></td>
<td>jumping jacks or a quick stretch).</td>
</tr>
<tr>
<td></td>
<td>- Break tasks down into smaller steps, and take breaks in between steps.</td>
</tr>
<tr>
<td><strong>Losing track of what you are</strong></td>
<td></td>
</tr>
<tr>
<td>reading.</td>
<td>- Index cards, rulers, or paper to track what line you are on.</td>
</tr>
<tr>
<td></td>
<td>- Use a highlighter to underscore important points.</td>
</tr>
<tr>
<td></td>
<td>- Take notes or make an outline as you read. Make it more interactive.</td>
</tr>
</tbody>
</table>
6. Paying attention during conversations

We often get in trouble with bosses, teachers, or significant others when we have trouble paying attention during conversations. These four strategies can help.

**FOUR PRINCIPLES:**
1) Listen Actively
2) Eliminate Distractions
3) Ask Questions
4) Paraphrase

**LEAP into conversations**

**Listen actively**
- Use nonverbal behaviors to convey that you are listening.
  - Turn toward the speaker.
  - Open your posture, relax, avoid “closed” body language.
  - Lean toward the speaker.
  - Maintain adequate eye contact.

**Eliminate distractions**
- What sorts of distractions affect your conversations? Phones? Kids? TV? Pets? How can you reduce these distractions?

**Ask questions**
- Ask questions for clarification.
- Ask the speaker to slow down, repeat information, or explain something in a different way.

**Paraphrase**
- Repeat information back in your own words, which will help you understand, pay attention to, and remember the information later.
- Helps ensure that you have heard correctly and understand; gives the speaker a chance to correct any misunderstandings.

Here is an example of how paraphrasing and asking questions can help you pay attention during conversations.
Let’s say that you are at your doctor’s office, and the doctor says, “I’ve been looking over your records, and I’m a little concerned about your cholesterol level. It’s been high in the past – it was over 230 back in August of last year. It’s 205 right now, but your goal should be to get it down to 200 or below. Sometimes we prescribe medication to lower cholesterol, but in your case, I think you can take some steps to lower it without medication. Be sure to limit your dietary fats, including meats, eggs, butter, cheese, and ice cream. Exercising three times a week should also help lower your cholesterol. I want to keep a close eye on it, so let’s continue to check it every six months to see how you’re doing.”
That is a lot of information the doctor just gave you, and you want to make sure you understand everything. So you can paraphrase what the doctor said, and say back, “Okay, let me make sure I understand you. My cholesterol is a little high right now, but if I cut back on the eggs, butter, and fatty foods, and if I exercise three times a week, I can lower it without taking any medication. We’re going to check it in another six months and see how I did. Does that sound right?”

If the doctor was speaking too quickly, you may need to ask for repetition, or you may have to ask the doctor to slow down. You could say, “That was a lot of information, and I want to be sure I heard you right. Could you tell me again what I shouldn’t eat, and could you say it a little more slowly?”

**Exercise:** Let’s practice using the LEAP principles. Pick a topic and speak to the group for 1-2 minutes about one of the sample topics below. Everyone should try to **L**isten actively, **E**liminate distractions, **A**sk questions, and **P**araphrase what was said by the speaker.

| The worst weather I’ve ever experienced. | My favorite teacher. |
| Why it’s important to help people who need it. | A challenge I overcame. |
| The most important thing I learned in the past year. | The music I like best. |
| Why it’s important to take care of your health. | My favorite movie. |
| The last time I went out of town. | My hobby. |
| My favorite part of the city (or country). | My favorite TV show. |

7. **How attention strategies can help with long-term goals**

Think back to those life goals that you wrote down on page 10. How will the attention strategies we have covered help you achieve those goals?
Session 5: Home Exercise

☐ Take at least 2 short breaks during each day. Use a different one of the suggested break exercises each time.

  • Briefly describe your break exercises:

    __________________________________________

    __________________________________________

    __________________________________________

☐ Use at least one of the other attention-improving techniques per day. Remember PEAS and STEP BACK.

  • Briefly describe your attention strategy experience so you can share:

    __________________________________________

    __________________________________________

    __________________________________________

☐ Practice active listening at least once per day. Remember LEAP.
Continue to practice the conversational attention skills that we learned about today. All this week, practice reducing distractions in your environment whenever you talk to someone, whether it’s face-to-face or on the telephone. In your face-to-face conversations, practice nonverbal listening behaviors. Finally, practice paraphrasing and asking questions about what you hear in conversations.

  • Briefly describe the active listening strategies you used:

    __________________________________________

    __________________________________________

    __________________________________________

☐ Continue to use your calendar on a daily basis. Make sure to schedule a weekly planning session to enter your appointments for the week. Use the calendar to prioritize and make to-do lists.
Session 6: Learning and Memory

Class Agenda

1. Relaxation exercise: Yawn and stretch.
2. Review last week’s home exercise.
3. Learning and memory overview.
4. Memory strategies.
5. Memory exercise and discussion.
6. Discuss next week’s home exercise.

1. Relaxation exercise: yawn and stretch

We are going to do a quick relaxation technique that involves yawning. Did you know that yawning triggers relaxation and focus? That’s why Apolo Ohno does it before races.

- Rotate your shoulders and shake out your arms to loosen up your muscles.
- Open your mouth and begin to take a breath.
- Open your mouth wider and wider. Feel the back of your throat open, too.
- As you continue to inhale, you will notice that you begin to yawn. Finish the yawn by breathing out with a loud sigh.
- Take a few slow deep breaths. In and out. In and out.
- Yawn again. While you are yawning, stretch your arms up as you inhale and drop them to your sides as you exhale with a loud sigh.
- Notice how your body feels after this exercise. Calm? Relaxed?

2. Review home exercise

3. Learning and memory overview

Memory: Your ability to store and retrieve information.

- Think of it like a filing cabinet in your mind. Different files are organized according to various topics (e.g., childhood memories, names of people you know, how to do something).
- Each type of file is likely to get stored in a different location in the brain. So, depending on what area of the brain a cognitive disorder or brain injury affects, a different type of memory may be more or less affected.
- Through effort and organization, you are more likely to file a memory well, so that it can be more easily retrieved later. You need a good memory strategy (like a good filing system)!

Memory Requires Attention: You cannot remember something if you do not first attend to it!
Memory Terminology:

\[
\begin{array}{ccc}
\text{ENCODING} & \rightarrow & \text{STORAGE} & \rightarrow & \text{RETRIEVAL} \\
\text{Info goes in} & \rightarrow & \text{Info gets stored} & \rightarrow & \text{Info comes out}
\end{array}
\]

- Cognitive training focuses on encoding and retrieval, but not storage (which is not under our control).
- Strategies will help you:
  - Decide what is important enough to remember and simplify information to be remembered.
  - Reduce the amount of information to be remembered.
  - Make information personally meaningful to you in order to remember it more easily.
- Storage is most efficient when you are alert and well-rested.
- Alcohol and drugs interfere with encoding and retrieval, as well as storage.
- Everyday memory problems are usually due to encoding problems or not paying attention in the first place.
  - Again, you have to pay attention to something first to remember it later!

4. Memory Strategies

Attention strategies remain critical – you need to actively attend to information to move it into memory. Better attention → better encoding → better memory.

- Simplify, prioritize, reduce distractions, do one thing at a time.
- Attention skills:
  - Enhancing attention to the situation with self-talk (e.g., “I’m putting my keys on the kitchen counter,” “I’m closing the garage door,” or “I’m taking my vitamins”) → better encoding → better remembering → less worry and more energy.
  - Pay better attention to conversations by actively Listening to the person speaking, Eliminating distractions in the environment, Asking questions as needed, and Paraphrasing what the other person says (remember LEAP).
Mindfulness remains critical – to commit information to long-term memory, you must process information actively. Use the following steps (RITA):

R “Remember” – Tell yourself to remember the information.
I “Image” – Take a mental image of the information. Try to learn as many visual details as you can, to help cue you later.
T “Time” – Take time to consciously rehearse and study the material.
A “Active” – Work with the material in different modalities (e.g., read, write, listen, and do), and at higher levels of processing (e.g., re-organize, outline, creativity, discussion, experience, teach). Use internal memory strategies, too.

<table>
<thead>
<tr>
<th>WHAT WE REMEMBER:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read only</td>
</tr>
<tr>
<td>Hear only</td>
</tr>
<tr>
<td>Observe only</td>
</tr>
<tr>
<td>Observe and Hear</td>
</tr>
<tr>
<td>Discuss</td>
</tr>
<tr>
<td>Experience</td>
</tr>
<tr>
<td>Teach</td>
</tr>
</tbody>
</table>

Committing information to long-term memory takes energy, time, and effort. Since energy and time are limited, try to reduce the number and complexity of things you want to remember. Routine and organization may be more important than memory!

Internal Memory Strategies: These are some Active strategies – the “A” in RITA.

- **Association**
  - Linking new information with information you already know.
  - Focus on the similarities and differences between the new information and the old information.
  - Association works well when you meet new people. Let’s say you are meeting someone new, and her name is Jane. You could remember her by comparing her to your friend Jane (e.g., “This new Jane has blue eyes, but my Jane has brown eyes. Both Janes are tall, though.”)
  - **Exercise:** Try it yourself. How would you use association to learn the names of your classmates?
• **Categorizing or Chunking**
  o Dividing a large amount of information into smaller groups or chunks to be remembered.
  o **Chunking** is typically used for remembering numbers.
  o The most common example of chunking is a 10-digit phone number (6—1—9—2—9—9—3—5—1—0 versus (619) 299-3510.
  o **Categorizing** puts information together in a logical way.
  o **Exercise:** For example, let’s say that you want to get ice cream, ketchup, toilet paper, mustard, shaving cream, popsicles, soap, relish, and frozen pizza at the grocery store. That’s 9 items, and it probably would be hard to remember all those items without a list. But if you organize the items in a logical way, they are easier to remember, and if you wrote them down in a certain way on your list, you might get to the grocery store and not even need to look at your list. How could you categorize these 9 items into 3 groups? Categorizing the 9 items into 3 categories makes it so we only need to remember 3 things instead of 9.
    
    Group 1: ________ Group 2: ________ Group 3: ________
    
    ________ ________ ________
    ________ ________ ________
    ________ ________ ________

• **Acronyms**
  o Acronyms – like RITA – are words that are made up of initials that stand for a series of words.
  o Acronyms reduce the amount of information you have to recall because each letter is a cue.
  o **Exercise:** What other acronyms do you know? Any from the military?

• **Creativity** – Turn the information into something catchy and easy to remember. Using your creativity will also elaborate the information, which leads to better encoding and memory.
  o **Catchy phrases:** Like remembering someone’s name by imagining their catchy phrase (e.g., “Marilyn Marathon.”).
  o **Stories:** Turn the information into an exciting or interesting story.
  o **Rhymes:** Turn the information into a rhyme (songs are easy to memorize because lyrics usually rhyme).
  o **Songs:** Turn the information into a song.
• **Visual Imagery**
  - **Pictures**: Turn the information into a memorable picture. Draw this picture out. The weirder or funnier, the better. This strategy works well to remember people’s names. **Example**: Your new doctor is Dr. Burns, who has dark, stubbly hair, as if there had been a big brush fire (burn) on top of his head! Once you create that image, you are much more likely to remember “Burns.” Or let’s say you are meeting your new neighbor, Sandy Reese. You can picture her eating Reese’s peanut butter cups on a sandy beach.
  - **Movies**: Turn the picture into a visual story or movie, and imagine the movie in your mind. Again, the weirder or funnier, the better.
  - **Acting**: Even better, act out the information yourself.
  - **Graphs/Charts/Maps**: Incorporate the information into a graph or chart or map, if this makes sense.

**External Memory Strategies**

Is it really important to memorize information? If not, this is an opportunity to use an aid or routine to reduce effort, energy, and time demands. Can you instead build this into a routine to reduce its attention and memory demand? Once you have a routine or habit, you don’t need to remember the associated items again.

• **Calendars**: To remember appointments and events. Instead of having to remember each individual appointment, all you have to do is remember to use your calendar effectively each day (a routine).

• **Note Taking and Filing**: The #1 way to remember something is to write it down. Consider using a section of your calendar. Instead of having to remember each piece of information, all you have to remember is to file the information appropriately each day (a routine).
  - Don’t trust your memory! Write it down!
  - Writing helps encode information in multiple ways, multiple times – hear it, write it, read it as you write, say it out loud after you write.
  - Easy, works every time.
  - Shopping lists, sticky notes in calendar, section in your phone or computer, writing on your hand, any other system that is easily accessible.

• **Voice Recorders**: Good for lectures or talks. Also for instructions from doctors or bosses. You can then review and actively process later.

• **Visual Cues and Signaling Devices**: Sticky notes, string on your finger, other “can’t miss reminders” (e.g., placing what you need to bring with you in front of the door). Remember, it really helps if you have to touch the reminder.
• **Timers, Alarms, and other Auditory Cues:** Alarms on your cell phone or watch. Also, consider buying a device capable of multiple or complex alarms – there are ones you can attach to your keychain (see epill.com for ideas).

• **Automated/Computerized Prompts:** e.g., Automated billing; Outlook reminders to water plants once a week, call Mom every Sunday, check tire pressure once a month, etc.

• **Navigational Systems:** To help you remember directions as you drive.

5. **Memory exercise and discussion**

Which strategies would you use to remember information in these scenarios?

<table>
<thead>
<tr>
<th>Use one or more of these strategies:</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEAP</td>
</tr>
<tr>
<td>ASSOCIATION</td>
</tr>
<tr>
<td>CATEGORIZING</td>
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<tr>
<td>PARAPHRASING</td>
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<tr>
<td>STORIES</td>
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</table>

1. You call information to get a telephone number.

2. You are given these directions to get to Ralphs: Take La Jolla Village, left on Villa La Jolla, Left after 3rd signal.

3. You want to memorize your neighbors’ names: Nicole, Penny, Ann, Susie, Tom.

4. You want to memorize your doctor’s name: Dr. Robert Ying.

5. You want to remember your next doctor’s appointment.
6. Your roommate reminds you that it’s your turn to clean the kitchen today. She tells you that “the dishwasher needs unloading, there are dishes in the sink, the floor’s a mess, and the pizza that you baked last night leaked melted cheese all over the bottom of the oven.” She says she also “noticed a couple of yogurt containers of yours in the refrigerator that are past their expiration date.”

7. Information you need to memorize for work because it slows you down to look it up every time you need it (fruit and veggie codes if you are a cashier at a grocery store; steps for using a piece of machinery; information about products that customers often ask you about).

8. Names of all the medications you take and the reason why you take it.

9. Types of food you can and cannot eat because of medical concerns.

10. Contents for an exam that you are taking for a class.
Answers:
2. Paraphrasing, note-taking, association (it’s the same way one would go to the AMC Theatre or Trader Joe’s).
3. Acronym PANTS, note-taking.
4. Acronym DRY, note-taking, association, rhymes (Robert Ying likes to sing, wears a ring, stands on the wing of an airplane).
5. Note-taking, preferably in calendar!
6. Paraphrasing, acronym D-FOY or FLOYD, note-taking.
7. All of the strategies!
8. Note-taking, acronyms. categorizing
9. Note-taking, pictures, acronyms, rhymes/songs
10. All of the strategies!
Session 6: Home Exercise

☐ Practice using Memory Strategies each day.

- Spend 10-15 minutes re-reading the memory strategies from this week.

- Practice using one or more of the active memory strategies each day this week, focusing on activities that are relevant to your class goals and life priorities. Make a point to try out some strategies that are new to you.

☐ Continue to use attention-improving techniques every day. Remember that memory requires attention. You first need to be able to attend to something in order to remember it.

☐ Practice using a timer/alarm once a day to help you remember to do something.

- Figure out what timer/alarm you will use. One on a cell phone? One on a watch? Buy one to attach to your key chain? Other ideas?

- Spend time figuring out how to set the alarm.

- Practice setting an alarm once a day to remember to do something relevant to your class goals and life priorities. For example, set an alarm to remind you to look at your calendar, take medications, call your spouse, get to class, etc. (use the alarm for activities other than just waking up in the morning or from naps).

☐ Continue to use your calendar on a daily basis. Make sure to schedule a weekly planning session to enter your appointments for the week. Use the calendar to prioritize and make to-do lists.
Session 7: Learning and Memory (continued)

Class Agenda

1. Review last week’s home exercise.
2. Review memory strategies from last session.
3. Class exercise.
4. Discuss and practice overlearning.
5. Discuss name learning strategies and class exercise.
6. Discuss and practice retrieval strategies.
7. Discuss how learning and memory strategies can help with long-term goals.
8. Class exercise.
9. Relaxation exercise.
10. Discuss next week’s home exercise.

1. Review home exercise

2. Review memory strategies from last session
   - See materials from last session.

3. Class exercise

Remembering a list of words.

List 1: Listen to the list and then write the words down on the next page.

List 2: Read and study the list.

List 3: Read and categorize the list.

List 4: Read, categorize, and use visual imagery.
List 1: Listen to the entire list of words, then write them down. How many did you remember? _____
List 1:
Hammer
Monkey
Toyota
Jazz
Saw
Zebra
Country & Western
Honda
Drill
Giraffe
Rock n' Roll
Ford
Screwdriver
Classical
Lion
Cadillac
List 2: Study the following list of words for one minute, then turn the page and write them down.

Falcon
Spark Plug
Elm
Eagle
Diamond
Hub cap
Pine
Maple
Hawk
Owl
Alternator
Ruby
Emerald
Oak
Sapphire
Wheel
List 2: Now write them down. How many did you remember? _____
List 3: Read the following list of words. Put the words into categories to help you remember them, then turn the page and write them down from memory.

Cat
Carrot
Broccoli
Bread
Mop
Hose
Asparagus
Milk
Sponge
Eggs
Vacuum
Dog
Bird
Juice
Hamster
Onion

Category 1:__________

Category 2:__________

Category 3:__________

Category 4:__________
**List 3:** Now write them down. How many words did you remember?______
List 4: Read the following list of words. Put into categories and use visual imagery to help you remember the categories or words. Then turn the page and write down the words from memory.

Grass
Chair
Stapler
Lawnmower
Tree
Eraser
Pick
Table
Pen
Rake
Ruler
Shovel
Flower
Sofa
Shrub
Bed

Category 1:__________ Image:

Category 2:__________ Image:

Category 3:__________ Image:

Category 4:__________ Image:
List 4: Now write them down. How many words did you remember? _____
Did this exercise convince you that some of these strategies will help you remember more information? What did you notice? What worked best for you?

____________________________________________________________

____________________________________________________________

____________________________________________________________

____________________________________________________________

____________________________________________________________
4. **Overlearning**

- Learning what you need to remember over and over.
- Things we overlearn: facts, our names, our birthdays, the names of our siblings and parents, the name of our high school, the name of our street, the name of our pets, the order of the letters in the alphabet, the happy birthday song, how to tie our shoes, etc.
- Anything can be overlearned.
- Overlearned information is very resistant to forgetting.
- Strategies for overlearning: **Flashcards** that you carry with you and study throughout the day. Works well for learning facts for school exams.
- If you are having trouble, break the learning task down into smaller chunks and learn one chunk at a time.
- **Overlearning example:** Let’s say you have to memorize the steps of a new task at work. You could write each step on a separate card, then shuffle the cards and put them back in order. You would not stop after getting it right once though – overlearning means you keep going over and over the material, even after you know it. In addition to using the flashcards, you would also want to actually do the task repeatedly, in the right order, to memorize it.
5. Name learning strategies

BEFORE you meet new people, mentally PREPARE yourself to remember their names by reviewing your strategies. WHEN you meet new people, do the following:

1. OBSERVE THEM:
   - Look people in the eye when you meet them.
   - Notice their physical characteristics; look for cues/links to their names.

2. LISTEN to the actual sound of the person’s name when you hear it.

3. REQUEST REPETITION of the name if it is noisy or the name is unusual.
   - I’m sorry, it’s so loud in here, would you mind repeating your name? Could you say your name again, I’ve never heard it before.
   - This way you hear the name again (even if you heard it the first time!).

4. VERIFY PRONUNCIATION if it is noisy or the name is unusual.
   - Let me see if I’m saying that right. Is it ____________?

5. REQUEST SPELLING (You can also do this with common names which often have multiple spellings, such as Terri, Terrie, Terry, Teri).
   - Visualize the spelling in your head; imagine the name written down.

6. REQUEST DERIVATION of the name by asking suitable questions:
   - About the name’s nationality (“What kind of name is Anu?”).
   - About the person’s preference for a nickname (“Is Bob short for Robert? Do you prefer Bob or Robert?”).
   - About the “history” or story behind the name if it is unusual (“It sounds like there is a story behind the name “Brick”).

7. REPEAT THE NAME in the initial conversation, either by asking questions about the name and/or using the name in questions such as, “What do you do for a living, Richard?”, “Do you have any children, Robin?”, etc.

8. REPEAT THE NAME when saying goodbye (“Nice to have met you, Sam”).

9. REHEARSE the name & QUIZ yourself.

10. USE ASSOCIATION to think about similarities and differences between the new person and other people you know who have the same name.

11. USE IMAGERY.
    - Sandy Brown has light brown (sandy-colored) hair.
    - Dr. Burns is bald, as if his hair burned off.

12. USE RHYMES (and Imagery).
    - Sandy Brown wears a frown. (Picture her frowning.)
    - Bobby Knight starts a fight. (Picture him throwing a punch.)
    - Dr. Burns always learns. (Picture him in the library with lots of books.)

13. WRITE DOWN names of new people (e.g., in your calendar or smartphone).

14. RE-INTRODUCE YOURSELF to the person and they will introduce themselves back to you!

Class Exercise: Which of these strategies would you use to remember each of your classmates’ names? Certain names call for certain strategies. Have a classmate tell you five names of people who are important to them. Use some of these strategies to remember those names.
6. Retrieval strategies

Think back to our memory model: Encoding → Storage → Retrieval.

All strategies thus far will help with encoding. The next ones will help with retrieval. Retrieval problems mean that a piece of information is in your brain somewhere, but you have difficulty getting it out (e.g., a name that is “on the tip of your tongue”).

Relax
- Anxiety leads to difficulty retrieving information.
- Using relaxation strategies can enhance memory.

Mental Retracing
- To retrieve a lost item.
- Mentally retrace your steps and reconstruct the events leading up to when you last had the item.

Alphabetic Searching
- To remember a word or a name.
- Go through the alphabet, starting with A, and ask yourself, “Does it start with A? Does it start with B?” and so on. If you can identify the first letter, use the same process to get to the second letter, and so on.

Recreating the Context
- Good strategy when you can remember where you were or what you were doing when you learned the information.
- For example, if you remember that you were eating at a certain restaurant when your friend told you about a class that you wanted to take, recreate that context. Either imagine the restaurant or actually go there, and it will be easier for you to remember the details about the class.

Organization
- Great strategy for encoding, storage, and retrieval.
- Organization in your environment and in your daily routines will help you remember things more easily.
- “Automatic places” for things: locations in your environment where you always keep certain things – that way you will always know where to find them.
- **Plan automatic places for:**
  - Valuable papers.
  - Important phone numbers.
  - Your calendar/smartphone/iPod etc.
  - Your keys.
- Stick to a structured schedule: Identify your daily routine and schedule things you want to do but often have difficulty remembering to do or motivating yourself to do (e.g., medications, exercise, etc.).
Now use your retrieval strategies to remember those 5 names you learned earlier.

7. **How memory strategies can help with long-term goals**

Think back to those life goals that you wrote down on page 10. How will the learning and memory strategies we have covered help you achieve those goals?

8. **Class exercise:**

- Schedule in the day planner the strategies you would like to practice using next week. For example, if you know that you are attending a social event on Saturday, plan on using some of the name learning strategies. Or, you may want to schedule in a time for creating automatic places.

9. **Relaxation exercise:**

- Brief Combination Technique
- Advantages of a brief combined technique
  - It is quick and convenient.
  - It can increase the effectiveness of the technique by drawing you deeper into relaxation.
Session 7: Home Exercise

☐ Practice using Memory Strategies each day.
  
  • Spend 10-15 minutes re-reading the memory strategies from this week.
  
  • Practice using one or more of the active memory strategies each day this week, focusing on activities that are relevant to your class goals and life priorities. Make a point to try out some strategies that are new to you.

☐ Continue to use attention-improving techniques and memory strategies learned in prior sessions.

☐ Continue to use your calendar on a daily basis. Make sure to schedule a weekly planning session to enter your appointments for the week. Use the calendar to prioritize and make to-do lists.
Session 8: Planning, Goal Setting, and Brainstorming

Class Agenda

1. Review last week’s home exercise.
2. Discuss and practice goal setting and planning.
3. Introduce and practice brainstorming.
4. Discuss next week’s home exercise.

1. **Review home exercise**

2. **Goal setting and planning**

   **Class Exercise:** Identify and re-evaluate priorities regularly.

   - Review the priorities/goals (“large rocks”) you previously listed. Do these truly reflect what you believe to be most important to you in your current life? If not, revise your list.
   - Priorities shift in life, so it is important to re-evaluate your priorities on occasion (monthly, yearly, etc.).

   **Class Exercise:** Plan out your day and week with your priorities in mind.

   - Review the large rocks on your list. Do your calendar and to-do list allot enough time to your priorities/goals? If not, schedule in time to address these large rocks.
   - Review the **lifestyle strategies** you highlighted in Session 1. Are you allotting time to incorporate these strategies in your calendar? If not, schedule more time toward these lifestyle strategies.

   **Plan to meet goals and deadlines.**

   - Set aside time to think about your goal or deadline. Have your calendar handy.
   - Define the goal or deadline in measurable, concrete terms (e.g., “By December 10, I will have all of my holiday cards mailed out”).
   - Brainstorm the steps needed to meet the goal or deadline – it may help to “work backwards” from your goal.
   - Make sure all the steps are in the right order and figure out when each step must be completed by in order for you to meet the goal or deadline.
   - Schedule times in your calendar to complete the steps. Allow a bit more time than you think you need to accomplish each step; urgent matters may come up and interfere with your progress, so allow some leeway.
   - Review the timeline at each step to make sure it is realistic. You may have to re-order your steps or add additional steps.
**Example Goal:** By December 10, I will have all of my holiday cards mailed out.

<table>
<thead>
<tr>
<th>Target Date</th>
<th>Step</th>
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<tbody>
<tr>
<td>11/1</td>
<td>Make a list of card recipients and addresses.</td>
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<tr>
<td>11/5</td>
<td>Purchase holiday cards.</td>
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<tr>
<td>11/10</td>
<td>Start writing cards, 30 minutes per night.</td>
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<tr>
<td>11/20</td>
<td>Have 50% of cards written.</td>
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<tr>
<td>11/25</td>
<td>Obtain any missing addresses.</td>
</tr>
<tr>
<td>12/1</td>
<td>Have all cards written and addressed.</td>
</tr>
<tr>
<td>12/5</td>
<td>Purchase stamps.</td>
</tr>
<tr>
<td>12/10</td>
<td>Mail cards.</td>
</tr>
</tbody>
</table>

**Planning exercise:**

Use the worksheet on the following page to plan out an important goal. Transfer tasks/dates into your calendar.
Define the goal or project:

<table>
<thead>
<tr>
<th>Target Date</th>
<th>Step</th>
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<tbody>
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3. **Brainstorming**

**BRAINSTORMING = COMING UP WITH AS MANY IDEAS AS POSSIBLE ON A PARTICULAR TOPIC**

- Think of as many ideas as possible without making judgments about them.
- Don’t edit out any ideas because they seem silly or bad. Just let the ideas keep coming because you never know when a “silly” idea will trigger a good one.
- Brainstorming is key to cognitive flexibility and problem-solving, which will be the focus of the next session.
- Brainstorming practice exercises: Try to come up with at least 30 ideas for each of the following scenarios.
All the items you would need for painting a room.

1.
2.
3.
4.
5.
6.
7.
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9.
10.
11.
12.
13.
14.
15.
16.
17.
18.
19.
20.
21.
22.
23.
24.
25.
26.
27.
28.
29.
30.
All the ways to get a cat out of a tree.

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30.
Session 8: Home Exercise

☐ Practice using memory and attention strategies.

- Spend 10-15 minutes reviewing the handouts on attention and memory strategies from previous weeks. Pay close attention to the attention and memory strategies you highlighted for yourself in each section.

- Think about the most important class goal you established for yourself for this class and its relevance to your life right now.

- Practice using one memory strategy and one attention strategy each day this week.

☐ Use your calendar and the worksheet on the next page to work toward an important life goal.

- Think of a goal that is relevant to your class goal and/or your life priorities. Remind yourself of your “big rocks.”

- Transfer the target dates and tasks into your calendar.

- Extra worksheets are provided for you to use in the future. Consider making copies and using them toward future goals or projects.
Define the goal or project:

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<th>Target Date</th>
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Session 9: Problem Solving and Cognitive Flexibility

Class Agenda

1. Review last week’s home exercise.
2. Discuss cognitive flexibility.
6. How problem solving and cognitive flexibility strategies can help.
7. Discuss next week’s home exercise.

1. Review home exercise

2. Cognitive flexibility

   COGNITIVE FLEXIBILITY = THE ABILITY TO THINK FLEXIBLY

   - Sometimes, people who have had TBIs have trouble with problem solving because their thinking style can be rigid. For example, they may see only one way to solve a problem, when in fact there are many ways. They may get “stuck” on an idea.
   - We will use a problem-solving method that will help you think as flexibly as possible.

3. The 6-step problem-solving method

   The 6-step problem solving method (DBESTE)

   1. Define the problem.
   2. Brainstorm solutions to the problem.
   3. Evaluate each solution in terms of ease of implementation, costs and benefits, and likely consequences.
   4. Select a solution to try.
   5. Try the solution.
   6. Evaluate the solution: Did it work? Do you need to try another one? If so, go back to step 4.

   - Your goal is to use the 6-step problem solving method quickly when you need it. Being able to do this requires practice it until it becomes automatic.

   Practice the steps of the 6-step problem solving method with these scenarios and worksheets that follow. Once you have the hang of it, try it with your own real-world problem.
### 6-Step Problem Solving Worksheet

**Define the problem:** You want to get back in touch with a good friend from high school that you have not heard from in 8 years.

**Brainstorm solutions below**

<table>
<thead>
<tr>
<th>Evaluate solutions</th>
<th>Easy?</th>
<th>Cost OK?</th>
<th>Likely to work?</th>
<th>Other notes</th>
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**Select one or more solutions to try**

**Try out solution(s)**

**Evaluate again. Is your problem solved? If not, try a new solution or solutions.**
**6-Step Problem Solving Worksheet**

**Define the problem:** You have a new job that you enjoy, but one of your coworkers unfairly criticizes you often in front of the supervisor.

**Brainstorm solutions below**

<table>
<thead>
<tr>
<th>Evaluate solutions</th>
<th>Easy?</th>
<th>Cost OK?</th>
<th>Likely to work?</th>
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**Select one or more solutions to try**

**Try out solution(s)**

**Evaluate again. Is your problem solved? If not, try a new solution or solutions.**
6-Step Problem Solving Worksheet

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| Select one or more solutions to try |

| Try out solution(s) |

| Evaluate again. Is your problem solved? If not, try a new solution or solutions. |

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4. **Self-talk**

- Self-talk while you are solving a problem helps you generate alternatives, keep your mind on the task, remember the steps you have done or alternatives you have tried, and catch errors in thinking.
  - Examples: troubleshooting a software problem on a computer, trying to figure out which remote control button to use to change a setting on your TV, getting a large couch through a small doorway.
  - Self talk practice: Use self talk while solving the first two puzzles in the pages ahead.

5. **Self-monitoring**

- Step 6 of the problem solving method is “Evaluate”.
- Self-monitoring is a way of taking a step back and evaluating your problem solving strategy to make sure it is effective.
  - If a strategy is working, you want to keep using it.
  - If a strategy is not working, you want to shift strategies.
- If something is not working or you find yourself frustrated, it is a good time to take a step back.
- Be sure to gather evidence that you are wrong, as well as evidence that you are right.
- Real-world example: Your physical therapist prescribed neck stretches for you to do every 4 hours. Your first strategy for remembering to do your stretches was to schedule the stretching sessions on your calendar. You found that you were stretching once a day with this method. Evaluating your strategy, you found evidence that it was not working as well as it should because you were not meeting the goal of stretching every 4 hours. Then, you decided to try a different strategy. You tried linking stretching to every meal and found that you were able to remember to stretch 3 times a day (about every 4 hours). This strategy worked, so you stuck with it.

- **Class Exercise:** Self-monitoring practice: Solve the remaining two puzzles, this time using both self-talk and self-monitoring. Be sure to look for evidence that your answer is wrong by examining the answers you are not selecting.

- **Class Exercise:** What situations come to mind at home, school, or work that could be helped by some of these self-monitoring strategies?
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Which of the items below fits in the blank space above?

A. 15
B. III
C. six
D. three
E. nine
F. 3
6. **How problem solving and cognitive flexibility strategies can help with long-term goals**

Think back to those life goals that you wrote down on page 10. How will the problem solving and cognitive flexibility strategies we have covered help you achieve those goals?
Session 9: Home Exercise

☐ Practice Problem Solving with two current life problems.
  
  - Pick two problems in your life that need to be solved. (If you can’t think of any right now, try asking a friend or family member for ideas, or think of problems you have had in the past.)
  - Use the 6-step problem-solving method for these life problems.

☐ Practice Problem Solving with two life goals.
  
  - Think about a goal that you would like to accomplish within the next few years. Use the 6-step problem solving method to brainstorm all the ways you could reach your goal.
  - Plan the target dates and steps to reach this goal.

☐ Remember, your family members can attend the last session!
6-Step Problem Solving Worksheet

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Session 10: Skills Integration, Review, and Next Steps

Class Agenda

1. Review last week’s home exercise.
2. Review key concepts and skills.
3. Applications of strategies to everyday life and progress toward goals.
4. Resources and referrals.

1. Review home exercise

2. Review key concepts and skills

- Lifestyle strategies for managing tension, fatigue, sleep problems, and headaches (Session 1 and 2)
- Organization, routines, calendars, prospective memory (Session 3 and 4)
- Attention strategies to improve focus on tasks and during conversations (Session 5)
- Learning and memory strategies (internal and external) (Session 6 and 7)
- Planning, goal-setting, and problem-solving strategies (Session 8 and 9)

3. Application of strategies to everyday life and progress toward goals

Think back to the goals you wrote down at the start of class. What strategies are you using that will help you reach your goals? What other strategies could you use that would be helpful? How will you use these new strategies in your life?

Lifestyle strategies
Name one lifestyle strategy you are using:
___________________________________________________________________
Name one lifestyle strategy you would like to focus on over the next month:
___________________________________________________________________

Organization or prospective memory strategies
Name one organization or prospective memory strategy you are using:
___________________________________________________________________
Name one organization or prospective memory strategy you would like to focus on over the next month:
___________________________________________________________________
**Attention strategies**
Name one attention strategy you are using:
___________________________________________________________________

Name one attention strategy you would like to focus on over the next month:
___________________________________________________________________

**Memory strategies**
Name one memory strategy you are using:
___________________________________________________________________

Name one memory strategy you would like to focus on over the next month:
___________________________________________________________________

**Planning or problem solving strategies**
Name one planning or problem solving strategy you are using:
___________________________________________________________________

Name one planning or problem solving strategy you would like to focus on over the next month:
___________________________________________________________________

In the future, if you find you are having significant problems related to cognitive issues, what can you do to address them?
___________________________________________________________________

What do you think your friends, family, and support persons can do from here on out to best support you as you continue to work on skills to help you manage your cognitive disorder?
___________________________________________________________________

What final questions or feedback do you or your support persons have for the instructors?
___________________________________________________________________
4. Resources and referrals – where do we go from here?

- **Other problems associated with TBI:**
  - Post-traumatic stress disorder (PTSD)
  - Depression
  - More severe levels of anxiety
  - Substance use
  - Pain
  - Sleep difficulty
  - Problems adjusting to civilian life (school, work, family)

- **Referral Information – Available Resources at the VA:**
  - Individual therapy
  - Therapy/Support/Peer-run Groups
  - Marital/Family therapy
  - Pain clinic
  - Physiotherapy
  - Vocational rehabilitation
  - Assistance with education

*For additional assistance with education, visit the [www.studentveterans.org](http://www.studentveterans.org) website. They have a resource called the Military to College Guide which addresses issues related to returning to school. The guide can be found in the website’s resource library at [http://www.studentveterans.org/resourcelibrary/](http://www.studentveterans.org/resourcelibrary/)*

- **TBI resources**
  - Several groups help people with concussion or mild TBI and their families. They provide information and put people in touch with local resources, such as support groups, rehabilitation services, and a variety of health care professionals.

  - The Brain Injury Association (BIA) has a national office that gathers scientific and educational information and works on a national level to help people with concussion or mild TBI. You can reach the BIA office by calling the toll-free BIA National Help Line at 1-800-444-6443. You can also get information through the national BIA Website at [www.biausa.org](http://www.biausa.org)
General information about TBI is also available through the following sites:

- Centers for Disease Control and Prevention (CDC)  [www.cdc.gov/ncipc/tbi](http://www.cdc.gov/ncipc/tbi)
- The Neurology Channel [www.neurologychannel.com/tbi](http://www.neurologychannel.com/tbi)
- The Defense and Veterans Brain Injury Center [http://www.dvbic.org/index.html](http://www.dvbic.org/index.html)

Thank you for participating in this program and for your feedback!