

SUPPORTING PEOPLE WITH DEMENTIA

# SPACED RETRIEVAL TECHNIQUE

LEARNING INFORMATION & SKILLS



# WHAT IS SPACED RETRIEVAL?

Spaced retrieval is a memory technique that uses **procedural memory** and **errorless learning** to help individuals with cognitive impairment recall information for longer durations. This enables them to carry the information over into their daily life.

It can help a person learn or relearn information and skills, as well as reduce the tendency to ask repetitive questions.

Spaced retrieval is sometimes used by occupational therapists and speech-language pathologists. If additional guidance is needed, ask your doctor for a referral to one of these professionals and inquire about their experience with spaced retrieval.

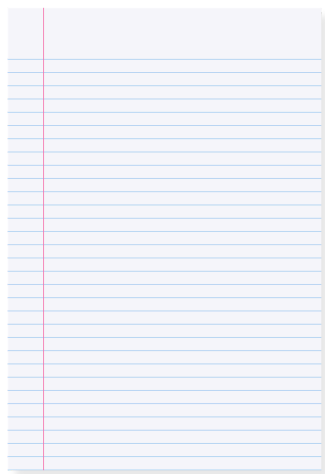
It has been shown effective for people with:

- Dementia
- Mild cognitive impairment (MCI)
- Cerebrovascular Accident (CVA or stroke)
- Traumatic brain injury (TBI)
- Brain cancer
- HIV
- Schizophrenia

**Procedural memory:** A type of long-term memory that enables individuals to perform tasks automatically, without conscious awareness of the steps involved. This type of memory is relatively well-preserved in most forms of dementia.

**Errorless learning:** A way of teaching that aims to prevent mistakes from happening during the learning process. Instead of letting learners try and possibly fail, the learner is given very clear, step-by-step instructions and is guided through the correct actions. This helps the learner remember the right way to do things without making errors along the way.

# SUPPLIES.



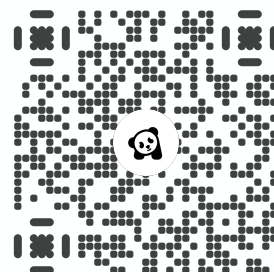
## Paper

or download the template [here](#)



## Timer

DOWNLOAD  
QUICK START GUIDE



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or click [here](#)  
to download guide



## Writing Utensil

# IS SPACED RETRIEVAL A GOOD FIT?

To determine if the Spaced Retrieval Technique is a good method for your partner, conduct a simple 3-trial screen. This involves assessing your partner's ability to recall a target name accurately over three time intervals: immediately, 10 seconds, and 20 seconds. Provide your partner with three opportunities at each interval to correctly remember the target name. Click [here](#) to download screen template.

## Example:

"Let's have some fun with a little memory game. We'll begin by trying to remember the name of this person here."

[Show photograph]

"Her name is Pamela Owens. What is her name?"



If your partner gets the name right, provide positive feedback such as, "That's right. Good job!" Then, move to the next time interval, starting with, "What is her name?"

If they get the name wrong on any trial, provide the correct answer and have them repeat it. Then, return to the previous time interval. If they are incorrect on the third trial of any time interval, thank them and suggest moving on: "Thanks for trying so hard. Let's work on something else!"

Encourage trying again on another day and consider using a card with the name printed on it to aid recall. If they still cannot complete all time intervals successfully, the Spaced Retrieval Technique may not be suitable for them.

# SET YOUR PARTNER UP FOR SUCCESS.

Learning a new skill or relearning an old one is challenging, especially for those with cognitive impairments. We want to support our partner's learning experience by setting them up for success.

## Work in a Quiet, Distraction-Free Environment

Conduct learning sessions in a quiet room with minimal distractions or background noise. This helps your partner focus on the task at hand.

## Ensure Good Lighting

Make sure the room is well-lit to avoid any visual impairments that could interfere with the training process.

## Use Familiar Vocabulary and Language

When creating the **prompt question** and **target response**, use vocabulary and language that is familiar to the individual to facilitate understanding and recall. Collaboration is key!

## Incorporate Visual Cues or Memory Aids

If necessary, use visual cues or memory aids (e.g., pictures, objects, written messages, etc.) to support the learning and recall of the target response.

## Maintain the Individual's Attention

Before asking the prompt question, make sure you have your partner's full attention. You can use their name or a gentle touch to redirect their focus if needed. Also, please be sure they are wearing their glasses and hearing aids, if necessary.

# DEFINE THE GOAL, PROMPT QUESTION, & TARGET RESPONSE.

## THE GOAL

The first step of the Spaced Retrieval Technique is to collaborate with your partner in establishing a goal. This can be a **need-based goal** or a **desire-based goal**.

**For example:** Your partner with dementia may need to consistently use a walker for safety while moving around the house or they may desire to remember their new grandchild's name.

What is the goal of this learning session?

## THE PROMPT QUESTION

Next, a prompt question must be established. A prompt question is a question that will elicit the target response.

**For example:** If the goal is for your partner with dementia to consistently use a walker for safety while moving around the house, the prompt question may be:

“What should you use to help you move around the house safely?”  
or “What should you use when you stand up?”

Remember, we want to use familiar vocabulary and language that is easy for our partner to understand when creating the prompt question.

## THE TARGET RESPONSE

The target response is the correct response to the prompt question.

**For example:** If the prompt question is “What should you use to help you move around the house safely?”, the target response may be:

“My walker.”

Again, the target response should use familiar vocabulary and language, as well as be simple enough for your partner to remember.

If the target response requires both a verbal response and a physical action you will want to make sure your partner does the physical action each time the target response is given.

*See the example on the next page.*

## EXAMPLE

# USING A WALKER

### GOAL:

To consistently use a walker for safety while moving around the house.

1

"What should you use to help you move around the house safely?"

2

"My walker."



3

Takes a few steps with walker.



# INTERVAL PRACTICE

For this technique to be true spaced retrieval, there has to be interval training. The intervals represent the "space" between each recall of the target response. Spaced Retrieval Training will likely need to occur over multiple sessions for carryover into the person's life.

Start by asking your partner the prompt question immediately after introducing it.

## **For example:**

"We are going to work on remembering to use your walker when walking around the house so that you don't fall. I am going to ask you a question and I want you to tell me the answer. The question is, 'What should you use to help you move around the house safely?' And, I would like you to tell me, 'My walker.'"

You then immediately ask them, "What should you use to help you move around the house safely?" They say, "My walker."

Following this, wait 15 seconds before repeating the prompt question. Then, increase the interval duration each time the question is asked, typically doubling the time (e.g., 30 seconds, 1 minute, 2 minutes, 4 minutes, 8 minutes, etc.), although the intervals can be adjusted as needed. Continue increasing the intervals as long as your partner recalls the response correctly and remains engaged, up to 30-60 minutes.

If your partner hesitates or answers incorrectly, provide the correct response and have them repeat it. Then, return to the last successful time interval. For example, if they answered correctly at 1 minute but incorrectly at 2 minutes, revert to the 1-minute interval.

# ERRORLESS LEARNING

Earlier we defined errorless learning as a way of teaching that aims to prevent mistakes from happening during the learning process. Instead of letting learners try and possibly fail, the learner is given very clear, step-by-step instructions and is guided through the correct actions. This helps the learner remember the right way to do things without making errors along the way.

With the Spaced Retrieval Technique, it is important to **limit errors as much as possible in efforts to reduce confusion during the learning process**. Therefore, when you sense that your partner is about to give the incorrect response, you want to gently interject and state the correct target response **BEFORE** they state the incorrect response (when possible).

**So, this may look like:**

Prompt Question (YOU): "What should you use to help you move around the house safely?"

Incorrect Response (THEM): "Ummm....the..."

Interjection (YOU): "My Walker."

Prompt Question (YOU): Let's try again. "What should you use to help you move around the house safely?"

Target Response (THEM): "My Walker."

Feedback (YOU): "Good job!"



check your  
tone!

# MODIFYING THE TASK

If you find that your partner is struggling to remember the target response or perform the associated action. Here are 4 ideas to modify the task:

## 1. MODIFY THE TIME INTERVALS

If your partner struggles to recall the target response with doubling intervals, consider increments of just 15 or 30 seconds instead. Feel free to adjust the time intervals as needed to better accommodate your partner's abilities.

## 2. USE A VISUAL AID

If your partner finds it challenging to recall the target response regardless of the time interval, consider writing it on a flash card or piece of paper. Encourage your partner to refer to it, if necessary. If you try this method, point to the message if your partner hesitates or provides an incorrect response. Remember, to ensure errorless learning, it's best to point to the message before they offer an incorrect response.

## 3. FOCUS ON THE TARGET RESPONSE FIRST

If your partner has difficulty performing the required action after stating the target response, focus on the target response first. Once your partner can easily respond with the correct target response, then you can start practicing the action.

## 4. ELIMINATE THE TARGET RESPONSE

If your partner demonstrates speech difficulties and is unable to provide a verbal target response, you can eliminate the verbal response all together and just have your partner perform the required action after the prompt question. (if applicable)

# THE DONT'S



## DO NOT:

- Try to accomplish too much in one goal.
- Make the goal too difficult for your partner's cognitive abilities.
- Change the prompt question unless absolutely necessary.
- Accept a different target response.
- Shake your head "no" or say things like, "no, that's wrong."
- Use a harsh tone.
- Talk during the waiting period until your partner has at least passed the 2-minute mark.
- Continue training if your partner becomes frustrated or unengaged.

# USE CASES

The Spaced Retrieval Technique can be used to help people with cognitive and memory impairment learn a variety of new or previously learned skills and information.

- Activities of daily living (ADLs) (e.g., sequencing steps, maintaining safety, energy conservation techniques, referring to a daily schedule, etc.)
- Basic finances (e.g., using ATM, paying for groceries, writing a check, etc.)
- Leisure activities and hobbies
- Face-name associations
- Face-role associations
- Object naming
- Object-location associations
- Wayfinding
- Safety procedures (e.g., turning off water, turning off stove, using microwave properly, locking doors, calling 911, pressing button on emergency device, etc.)
- Using an adaptive device for safety and mobility (e.g, walker, cane, grab bar, bed rail, etc.)
- Using safe swallowing strategies recommended by Speech Therapist
- Using a memory book or wallet
- Using a clock or calendar
- Using personal devices (e.g., hearing aids, phone, tablet, etc.)
- Using the radio or TV
- Conversation starters and social norms
- Relaxation and coping techniques
- Limiting repetitive questions

## EXAMPLE

# APPLICATION IDEAS

**Goal:** To remember name of new grandchild.

**Prompt Question:** "What is your grandchild's name?" [Show picture]

**Target Response:** "Emily."

**Goal:** To be able to follow daily schedule to complete ADLs and eat meals throughout the day.

**Prompt Question:** "Where should you look to find your daily schedule."

**Target Response:** "At the paper on the fridge."

**Action:** Walk over to fridge and look at daily schedule.

**Goal:** To limit overfeeding of the dog.

**Prompt Question:** "What should you do before feeding the dog?"

**Target Response:** "I should check the feeding chart above the dog bowls."

**Action:** Walk over to dog bowls and check feeding chart.

**Goal:** To be able to call daughter on cell phone.

**Prompt Question:** "How do you call your daughter?"

**Target Response:** "I click the photo of Karen on my phone."

**Action:** Click the shortcut to call Karen on phone.

**Goal:** To independently turn on the TV.

**Prompt Question:** "How do you turn on the TV."

**Target Response:** "I press the red power button on the remote."

**Action:** Pushes red power button on remote.

## EXAMPLE

# APPLICATION IDEAS

**Goal:** To limit questions about the time.

**Prompt Question:** “Where do you look if you want to know what time it is?”

**Target Response:** “At the clock by the TV.”

**Action:** Looks at the clock by the TV and reads the time. It is “\_\_\_\_\_.”

**Goal:** To keep track of wallet.

**Prompt Question:** “Where do you put your wallet when you are finished with it?”

**Target Response:** “On the green tray by the front door.”

**Action:** Walk over and place wallet on green tray by the front door.

**Goal:** To locate bedroom.

**Prompt Question:** “How do you know which bedroom is yours?”

**Target Response:** “My bedroom has my name and picture on the door.”

**Action:** Locate bedroom.

**Goal:** To locate the bathroom in timely manner and reduce accidents.

**Prompt Question:** “Where is the bathroom?”

**Target Response:** “Down the hall to the right.”

**Action:** Walk to the bathroom.

**Goal:** To flush the toilet after using bathroom.

**Prompt Question:** “What should you do after using the toilet?”

**Target Response:** “Flush the toilet.”

**Action:** Flush the toilet

## EXAMPLE

# APPLICATION IDEAS

**Goal:** To wash hands after using the bathroom.

**Prompt Question:** “Before leaving the bathroom what should you always do?”

**Target Response:** “Wash my hands with soap and water.”

**Action:** Wash hands with soap and water.

**Goal:** To facilitate proper disposal of dirty briefs.

**Prompt Question:** “Where should you place your dirty briefs?”

**Target Response:** “In the trash can by the toilet.”

**Action:** Place a brief in the trash can by the toilet.

**Goal:** To facilitate safe shower transfers after bathing.

**Prompt Question:** “Before you get out the shower, what should you do.”

**Target Response:** “Shout for Maria and wait for help.”

**Action:** Shout “Marrriiaaaa!” and wait for Maria to help.

**Goal:** To facilitate independent dressing.

**Prompt Question:** “Which items do you put on first when getting dressed?”

**Target Response:** “My bra and panties.”

**Action:** Hold up bra and panties.

**Goal:** To adhere to safe swallowing strategy recommended by Speech Therapist.

**Prompt Question:** “What should you do after you swallow each bite of food?”

**Target Response:** “Take a drink.”

**Action:** Eat a bite of food, swallow, then take a drink.

# REFERENCES

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DO YOUR BEST.  
THEN REPEAT.

# THE END

MAY YOU EMBRACE THE JOURNEY AHEAD OF YOU.

**For More Dementia Tips:**

