

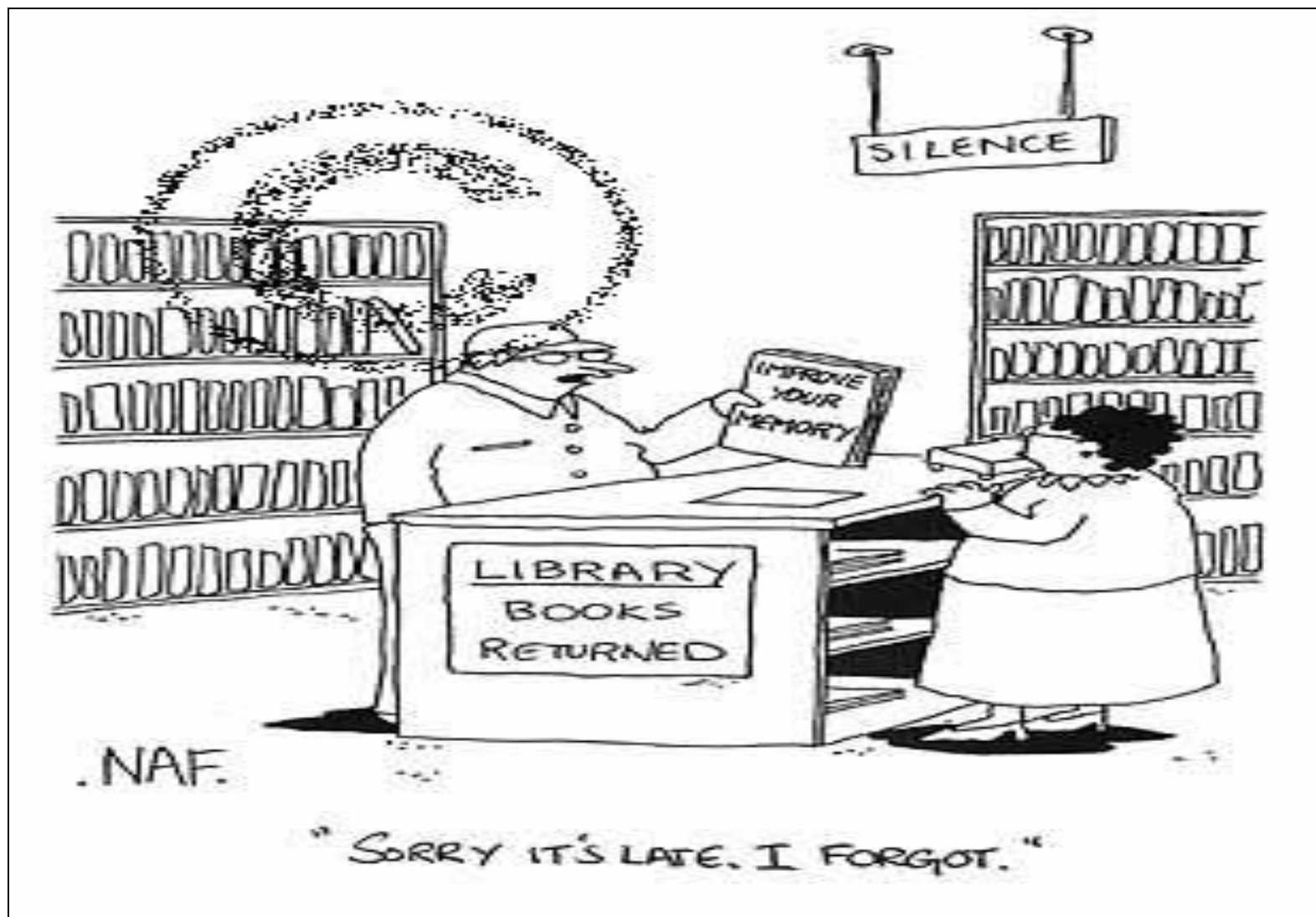
# Cognitive Remediation: Strategies for Memory Problems

- Memory Treatment Program  
Northeast Regional Epilepsy Group

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# Memory

- Complaints about memory are very common, not only among patients with epilepsy or other neurological issues. It's a common complaint amongst people as they get older.

# Is it really memory?

Aspects of cognitive functioning that might be involved in complaints....

- Attention
- Executive Functions
- Language
- Memory

# Is it really memory?

- How do we know it is really a memory problem?

Working with a neuropsychologist to determine strengths and weaknesses, using the results of a comprehensive neuropsychological evaluation.

# Is it really memory?

- Even if it is not a problem with memory per se, a neuropsychologist can work with you to determine ways to compensate for problems with attention, executive functions, or language.

# It is memory!

- Memory is complicated, with multiple types.

-Sensory memory

-Short-term memory \*

-Long-term memory

# It is memory?

- \* Short-Term Memory typically area of complaint for patients –
  - I can't remember what people tell me.
  - I can't remember what I tell people.
  - I can't remember where I leave things.
  - I can't remember what happened over the past few days.

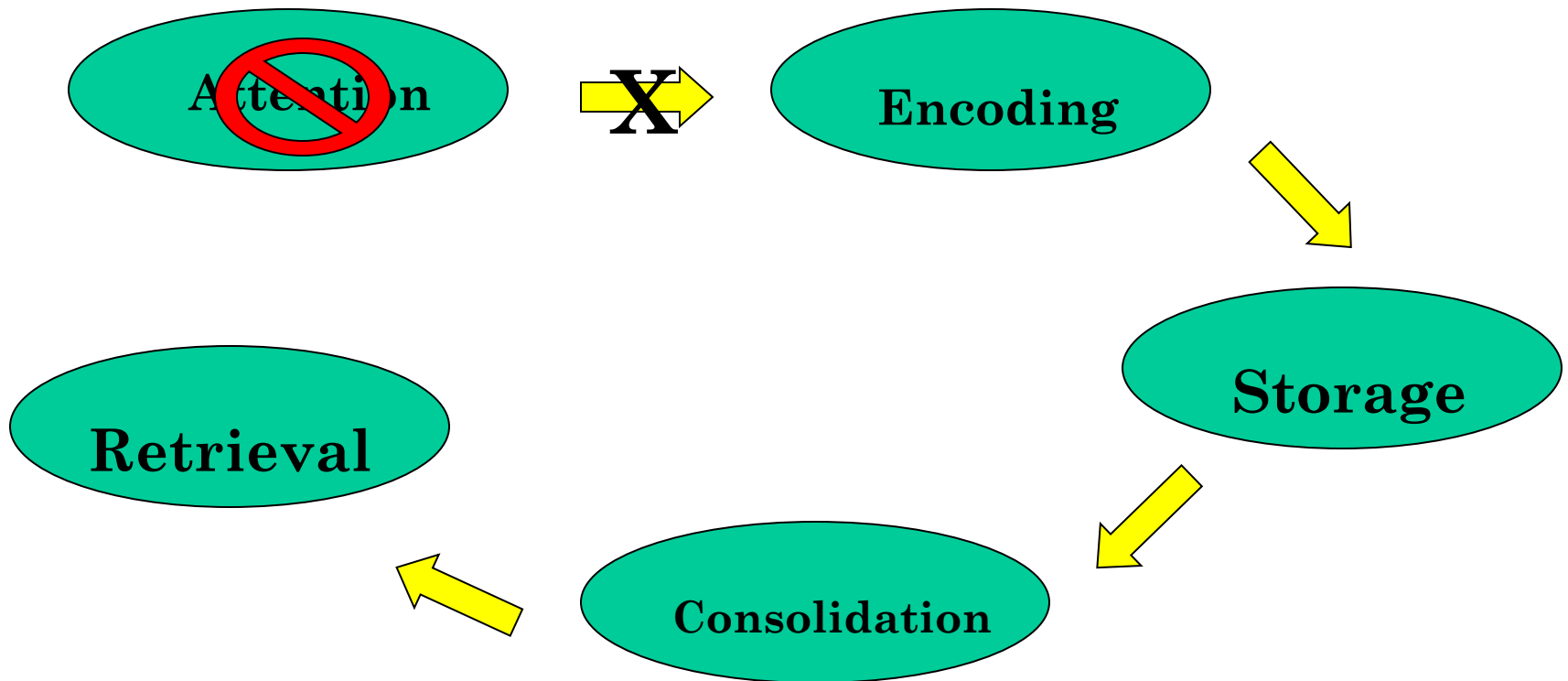
# It is memory!

Forming and retrieving memories is a complicated process, with multiple parts:

- Attention
- Encoding
- Consolidation
- Storage
- Retrieval

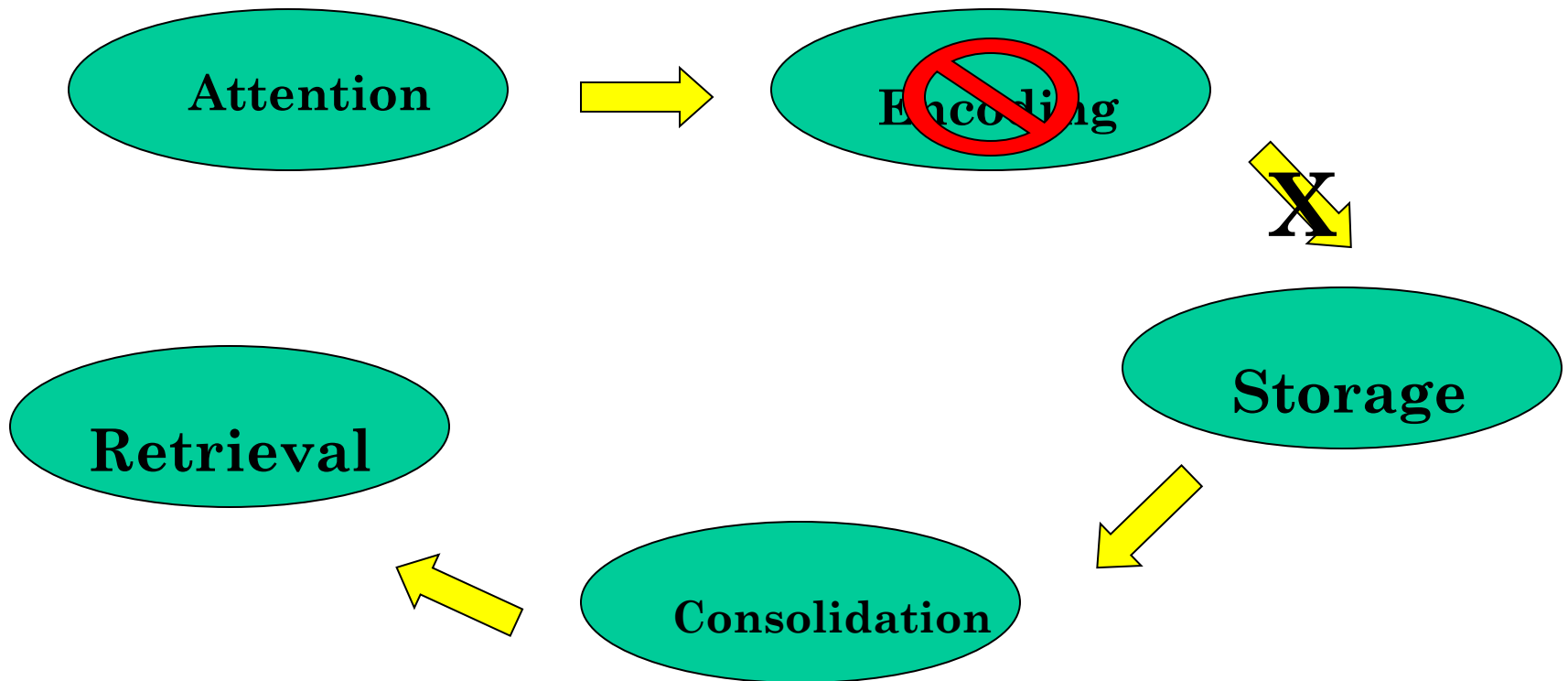
# When memory breaks down

Inattention:



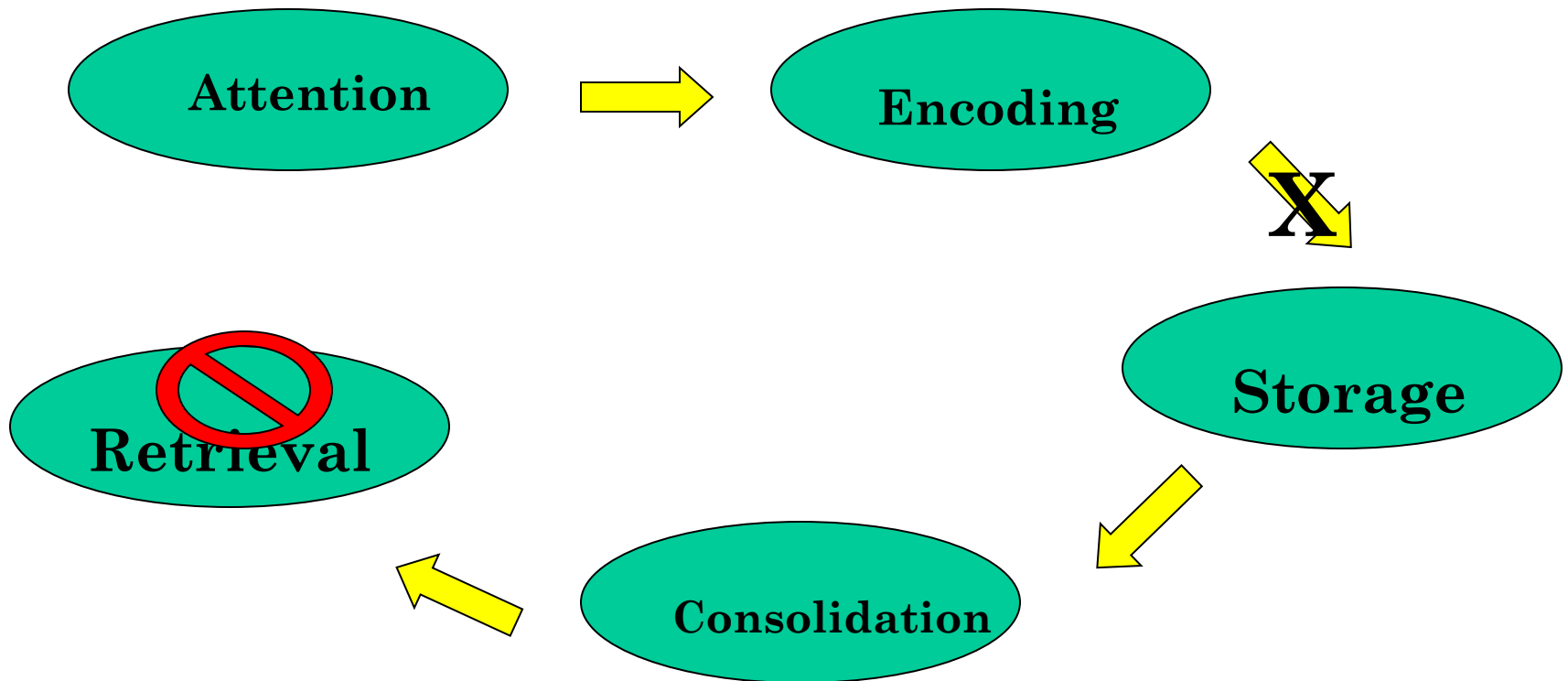
# When memory breaks down (cont'd)

Poor encoding



# When memory breaks down (cont'd)

## Problems with Retrieval



# Memory

- Why don't I remember everything?

# Memory

- Should I be able to remember everything?

# Memory

- Not everything is important.

# Memory

- We just don't need to remember everything.

# Memory

- We just need to know how to recall or find information that is important to us.

# Memory

- What kinds of things are important?

# Memory

The brain's idea of things that are important:

Things that are:

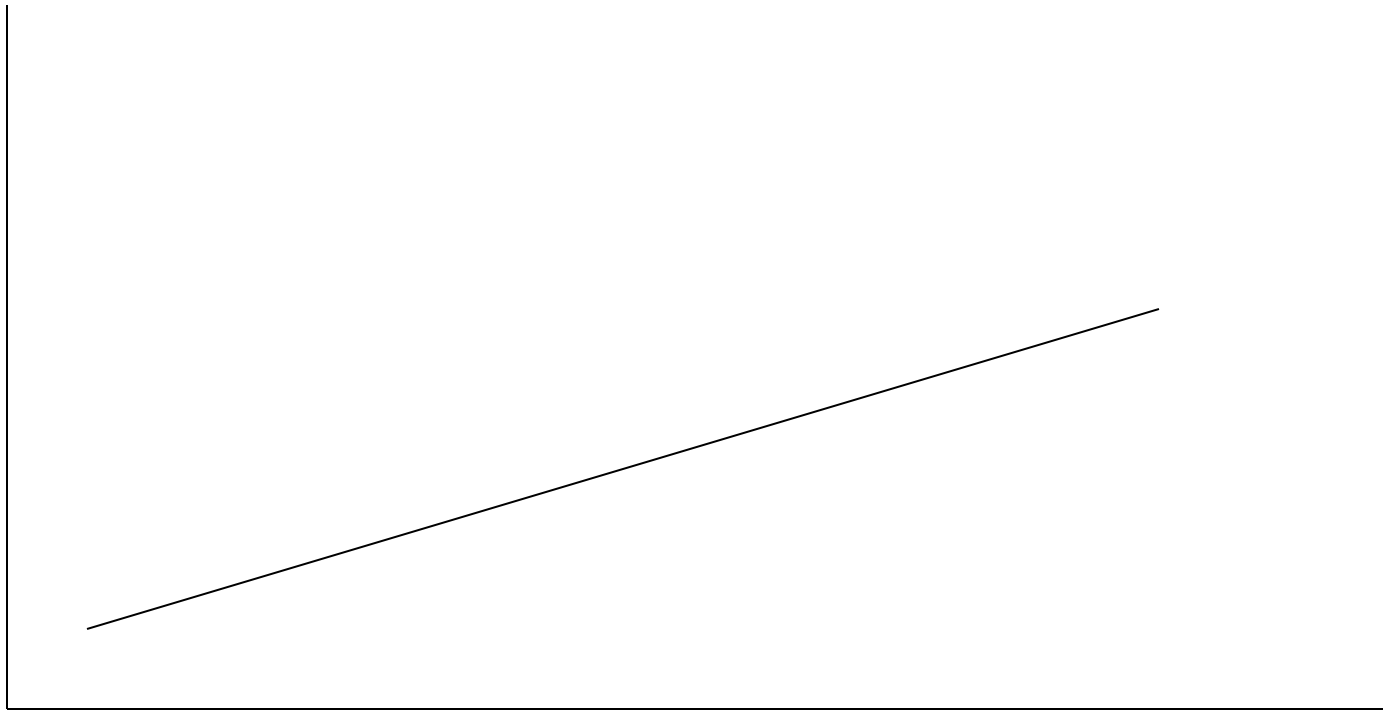
- Interesting
- Related to emotions
- Repeated

# Memory

- But then why can't I remember things that ARE important?

# Memory and Age

Forgetfulness



Age

# Memory

So am I going to have more and more difficulty as I get older?

# Memory

Maybe, maybe not.

# It is memory!

Attention/memory processes  
are susceptible to:

- Fatigue/Energy Level/Illness
- Mood
- Medications
- Stress
- Trying to do too many things at once

# Memory

Improvements in attention/memory functioning are associated with:

- How physically active you are
- How mentally active you are
- How well you can compensate for any problems you are having

# Memory

- The magic bullet/medication/trick question

# Memory

There isn't any.

# Memory

- Improvements in attention/memory functioning are associated with how well you can compensate for any problems you are having.

- Improvements fall on the patient and the patient's family – a matter of practicing new techniques and following through with them day after day

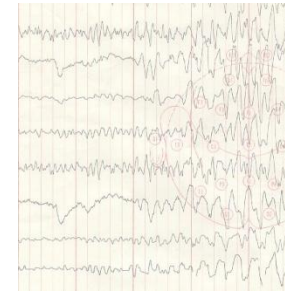
# Facts and Figures about Epilepsy and Memory

- Memory deficits are the most frequently-measured cognitive impairments in epilepsy patients. (1)
- The prevalence of memory problems in patients with refractory epilepsy has been estimated to be as high as 20 to 50%. (2)
- More than 50% of the patients who are referred for neuropsychological assessment report memory difficulties in daily life. (2)
- Localized dysfunction, related to epileptic focal activity in the temporal areas of the brain, is one of the key factors for memory impairment. (3)

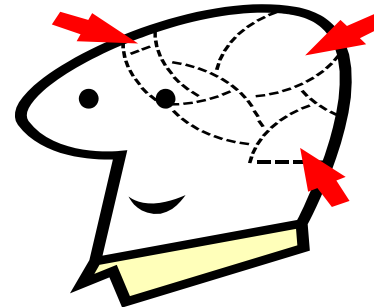
- 1 Hendriks, M., Aldenkamp, A. Van der Vlugt, H., Alpherts, W., & Vermeulen, J. (2002).
- 2 Halgren, E, Stapleton, J., Domalski T., Swartz B., Delgado-Excueta A., & Walsh G. (1991).
- 3 Giovagnoli, A. & Avanzini, G. (1999).

# Memory Problems in Patients with Epilepsy: The “Triple Whammy Effect”

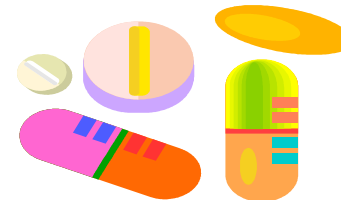
1) Ictal and interictal activity



2) Location of seizure focus



3) Anti-epileptic drug side effects



# Ictal and interictal activity

- During a seizure, memory may be affected because a loss of consciousness can interfere with normal brain processes, disrupting the encoding and storage of information. Memories formed prior to a seizure can be lost, as they have not been fully incorporated into the memory systems. The confusion that can occur following a seizure can also prevent memory from working properly.

# Ictal and interictal activity

- Some people with epilepsy can experience unusual electrical activity within the brain between seizures and this can also affect attention and memory functioning.

# Location of seizure focus

- Whatever the physiological cause of seizures is (tumor, lesion, fever), seizures often originate from the part(s) of the brain that is important for memory. Over time, seizures can cause damage to these areas, resulting in greater and greater difficulty with cognitive functioning.

# Location of seizure focus

- Temporal lobe, hippocampus—“seat of memory”
- Frontal lobes—organization, attention—important for memory

# Anti-epileptic drug side effects

- Some anti-epileptic medications may interfere with memory functioning as they can affect the speed at which the brain can process information.

# Anti-epileptic drug side effects

- On the other hand, these medications are prescribed because they reduce seizure frequency which, as we just discussed, can cause memory impairment.

# A fourth side effect?

- Mood and anxiety symptoms

# Common Memory Complaints

- My problem is with short-term memory. I can remember things from years ago, but I can't remember things from yesterday or last week

# Common Memory Complaints

- Learning versus retrieval

# Common Memory Complaints

- Keeping a diary
- Looking for new experiences

# Common Memory Complaints

- I forget appointments –  
where and when I have to be somewhere  
during the day.

# Common Memory Complaints

A matter of prospective Memory –  
Remembering to remember.

# Common Memory Complaints

- Write down appointments on calendar/in organizer ASAP
- Remember to check calendar each morning as well as the evening before
- Set alarms – cell phone

# Common Memory Complaints

- People say it seems like I don't listen to things they say. They say it seems to go in one ear and out the other.

# Common Memory Complaints

- A matter of attention

# Common Memory Complaints

Removing distractions

- Noise
- Other people
- Other tasks

# Common Memory Complaints

- Checking senses – eyesight, hearing

# Common Memory Complaints

- Asking people to slow down, repeat

# Common Memory Complaints

- Sometimes I have trouble getting the words out. Sometimes it comes back to me later, but then that's too late.

# Common Memory Complaints

A matter of language:

Working around a word

# Common Memory Complaints

Build up vocabulary

- Read challenging material
- Do crosswords
- Play scrabble

# Common Memory Complaints

- I go to the store and forget what I was supposed to get. Or I remember some things but then get home and realize I forgot a few.

# Common Memory Complaints

- Rehearsal
- Visualization
- Lists

# Common Memory Complaints

- I walk into a room and forget why I went in there.

# Common Memory Complaints

- Usually a matter of distractibility
  - Mindfulness
  - Retracing steps

# Common Memory Complaints

- I forget the names of friends I have known for years. And sometimes I have trouble learning new names.

# Common Memory Complaints

- Wait for the person to mention their name
- Wait for enough information to figure it out
- Ask someone afterwards
- Ask the person, admitting, “I’m bad with names”

# Common Memory Complaints

- With new names, taking time to learn it in the first place.
  - Pairing the name with some attribute about the person
  - Using the name a few times with the person at times of new meetings
  - Writing new names down

# Common Memory Complaints

- I have trouble when reading –I read and the words don't sink in. Or I can read a paragraph or a page and then realize I don't remember any of what I just read.

# Common Memory Complaints

Is this a matter of too many distractions?

Find a quiet place to read. Or wear earphones to block distractions out.

# Common Memory Complaints

Is this a matter of energy?

Pick the best time of day to read.

# Common Memory Complaints

Is the information still not sticking?

- Take notes as you read on a bookmark, separate piece of paper, in the margins.
- Refer to notes as necessary. But you may find that by writing you may not need to go back.

# Common Memory Complaints

- I forget about things I need to get done during the day. Or I remember them later when I'm in the car and then forget when I get home.

# Common Memory Complaints

- Keep a list, checking it during the day.
- Ask others to leave notes in a regular place.

# Common Memory Complaints

- I can't remember where I parked my car.

# Common Memory Complaints

Take notes:

Take a picture with cell phone

Write down parking notes

# Common Memory Complaints

- I leave the house without the things that I need.

# Common Memory Complaints

- Get organized – put things out the night before by the front door, by your keys.

# Common Memory Complaints

- I put things down or put things away and then can't remember where I put them.

# Common Memory Complaints

- Get organized:

Put things away ASAP

Put things where they belong.

Papers in labeled folders, labeled boxes

# A word about family and friends

- Patience

# A final word about memory

The need to practice and follow through on these strategies

# Conclusions: General Principles of Memory Strategies

# Attention

# Preparedness

# Organization

# Mindfulness



FORGETFULNESS  
CLINIC,  
A SUBSIDIARY OF  
WHATCHAMACALLIT  
WELLNESS GROUP

SCHWADRON



# Purpose of Memory Treatment Group

- *We don't necessarily need to remember everything in our lives—we just need to know where the information we need is, how to get to it, and how to use it efficiently.*
- To enhance understanding of memory processes and the ways that epilepsy can affect it
- To develop and consistently use compensatory memory techniques
- To clarify understanding of personal strengths and weaknesses in cognition
- To improve planning, organization, and time management skills

# Weekly Topics

- How memory works
- Improving attention
- Memory strategies
- Improving organizational skills
- Patients will be asked to do homework that will be discussed the following week.
- Patients will also be provided with handouts to reinforce concepts discussed during the sessions.

# Who Should Be Referred?

- Patients who express concerns regarding their memory functioning can be referred to the group
- Patients should be seen for neuropsychological evaluation first in order to obtain a baseline
- Memory Treatment Groups are currently being offered at HAKO and OVLK
- By January of 2011 (or before), treatment sites will also include MDO, STAO, and WPO
- Dr. Vazquez-Casals will also provide a Spanish Memory Treatment Group