

*Dementia,  
Alzheimer's Disease;  
The Brain Explained*  
*by Paul Schanfield, MD\**

*\*[amigraineinroom3.com](http://amigraineinroom3.com)*

“ Even as a Neurologist, you  
will have a big task just to find  
my brain today.” 🤔 🤨

*To become “senile” is not inevitable 😊*

*Old age is not an illness 👉,  
although disease*

*becomes more common as we age 😞*

# *Today's Outline*

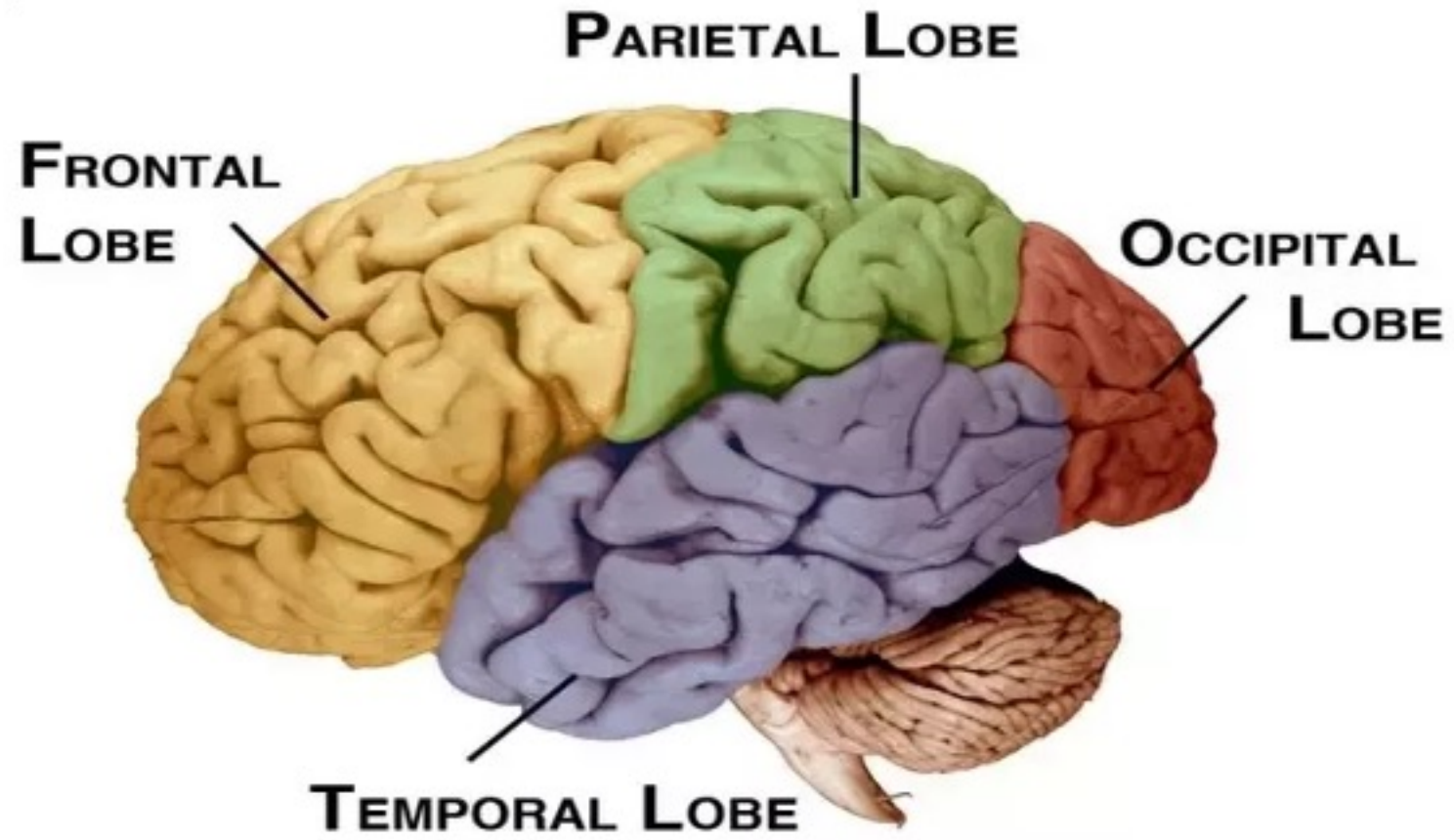
- 1] The Brain explained*
- 2] Memory defined*
- 3] Normal age-related cognitive changes*
- 4] Pseudo-dementia of Depression*
- 4] Minimal Cognitive Impairment [MCI]*
- 5] Dementia*

# *Central Nervous System [CNS]*

*Cerebral hemispheres [lobes]:* 

- frontal [motor],*
- parietal [sensory],*
- temporal [hearing, short term memory],*
- occipital [vision]*

*Basal ganglia, Cerebellum, Brain Stem*  
*Spinal Cord*



# *Cerebral Hemispheres* 🧠🧠

- *Left & Right*
- *Dominant & Nondominant*

# ***Dominant hemisphere***

- *Language centers:  
comprehension, formulation and expression*
- *controls the opposite side of the body  
[usually right body, occasionally left]*



# ***Non-dominant hemisphere***

*creativity*

*spatial information integration*

*3-dimensional awareness*

*artistic skills*

*opposite side of the body [usually left]*

# **MEMORY**

**Immediate:** *a few seconds*

**Short term:** *<30 seconds; frontal lobes; “RAM”*

**Long term:** *temporal lobes [hippocampus]*

*forms new connections/synapses*

*then stored throughout the brain*

*“I realize I recalled only 3 of 4 things  
you asked me to memorize,  
but you should be happy  
with that, doc. I am.”*

# *Memories*

*episodic: events recalled*

*semantic: general knowledge*

*implicit: automatic skills/habits*

*explicit: intentionally stored*

*“I can’t remember anything  
that I have  
forgotten recently”*

*The worried 🤔 well*

*“You told me to stop worrying.  
I appreciate that, doc,  
but you might as well tell me  
to stop breathing.”*




*Note: a person must  
memorize* 🤔

*to*

*forget* 🌀 😞



# *Normal age-related cognitive changes:*

- 1] proper nouns/names retrieval slows*
- 2] processing speed diminishes* 
- 3] quantitative memory ability* 
- 4] better qualitative memory/reasoning* 

# DEPRESSION

*[common cause of **pseudo-dementia**]*

*Depression symptoms: disturbance of  
mood, vegetative function &  
cognition*

# *Minimal Cognitive Impairment*

*[MCI]\** 🙋🏻 🙋🏻

*cognitive loss with  
preserved activities of daily living*

*\*6-12 months progression common*

*“I am not confused really; my  
brain works fine;  
I just can’t find the set of  
directions.”*

# *Dementia* 🐱 😐 😞

*impairment of cognition  
that interferes with daily living*

*clinic tests: MMSE, MOCA, Psychometrics  
history: from relatives, coworkers, friends*

# *Symptoms of Dementia*

- *Memory loss characteristic but not early*
  - *Early signs:* 🧑💻 📱 🤔  
*attention span loss*  
*“executive” functioning declines*  
*diminished judgment, spatial orientation*  
*\*lack of insight\**
  - *typical cognitive decline follows*

*Treatable* causes of cognitive impairment [1]: 😊👉😊

- *Low thyroid function*
- *Vitamin deficiencies [B12, B1-thiamine]*
  - *Sleep disorders [sleep apnea]*
  - *CNS infections*

## *Treatable causes of cognitive loss [2]*

- *Benign space occupying masses:  
subdural hematoma,  
brain cyst, benign tumor*
- *Normal Pressure Hydrocephalus*



# *Common Dementia types* 🙄

*Alzheimer's Disease*

*Frontotemporal Dementia*

*Vascular Dementia*

*Korsakoff's syndrome*

# *Alzheimer's Disease:* 🙄🤔😲

*most common dementia  
increased % with advancing age  
~ 50% @ 90 years old  
earlier onset in familial cases*

*"I'm not so bad off; so I probably have Half-zheimers disease, not All-zheimer's"*

# *Alzheimer's Disease Prevention* 😊👍

*Avoid isolation & remain active*

*Improve hearing, vision & sleep*

*Lifelong curiosity, education, hobbies*

*Treat vascular risk factors*

*Healthy diet: low salt, Mediterranean diet*

*“The secret to living 89 years old,  
is to always  
move your butt.”*



# *Alzheimer's Disease Meds [1]* 🤔

*Aricept [donepezil]*

*Exelon [rivastigmine]*

*Razadyne [galantamine]*

*Namenda [memantine]*

*“After starting Aricept,  
my husband will now  
answer the phone and take a  
message.”*

## *Caregiver advice:*

- *avoid arguing, identifying mistakes & upsetting topics*
  - *don't ask if they remember..*
  - *don't remind them a loved one has passed*
  - *expect: aggression, agitation, sundowning*

*Caregivers need support, respite and understanding*



# *Alzheimer's Disease meds [2]*

*- Anti-amyloid antibody infusions:*

*Aducanumab [Aduhelm] - being discontinued*

*Lecanemab [Leqembi] – FDA approved if  
enrolled in a CMS-run registry*

*Donanemab - delayed release*

# *Alzheimer's Disease meds [3]*

*Don't forget symptomatic relief 🙌*

*and*

*?over the counter treatments? 🤔*

# *Alzheimer's Disease Support*

*Alzheimer's Foundation  
Minnesota Senior Federation  
Elder Voice Family Advocates*

# *Levels of assistance:*

*Homecare,*

*senior living,*

*assisted living,*

*respite care &*

*institutional [non-profit]:*

*safety versus independence*

# *Vascular Dementia*

*“hardening of the arteries”*

*step-wise course*

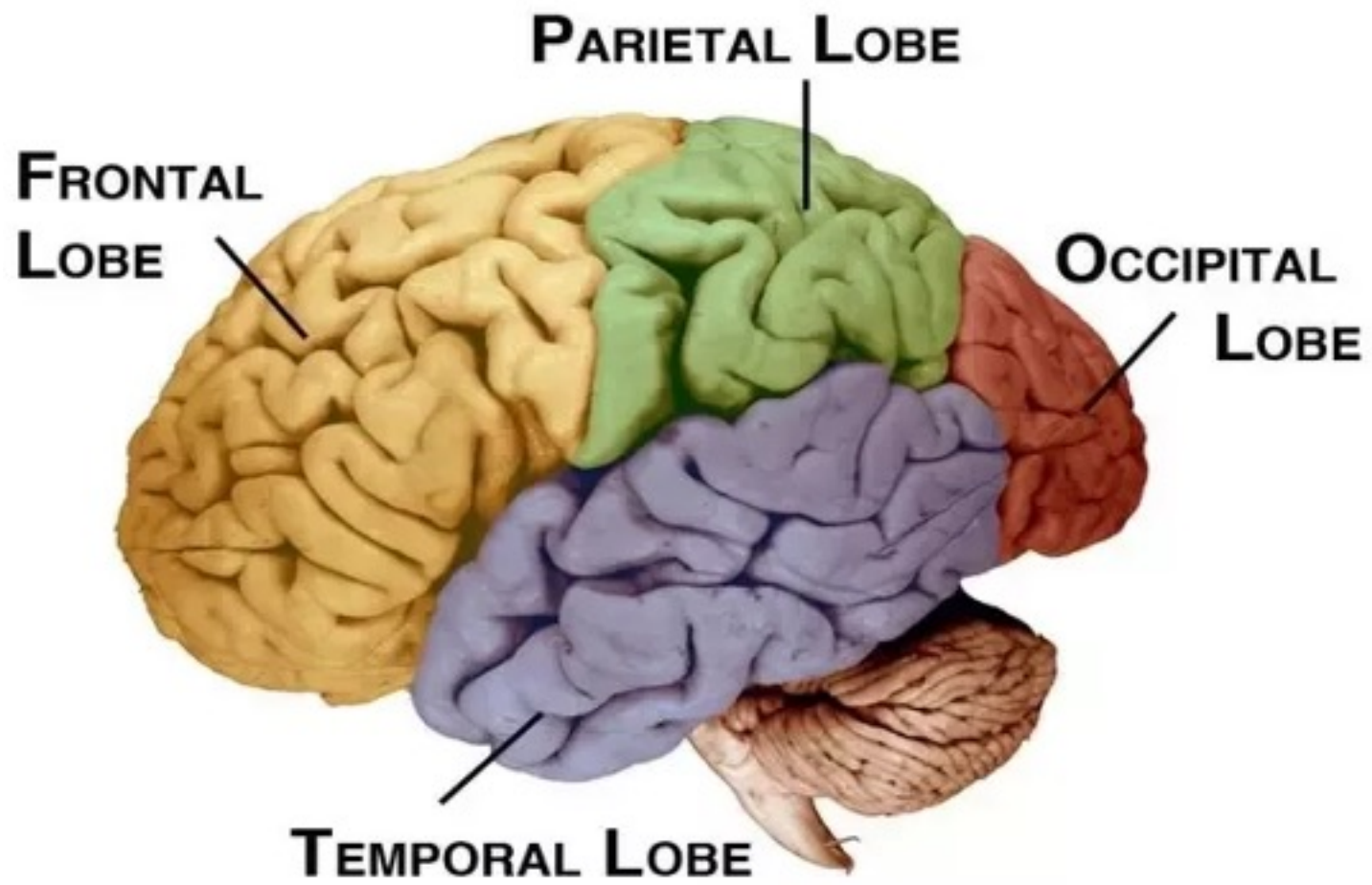
*often accompanied by widespread*

*vascular disease*

*common*

# *Frontotemporal Dementia* 🧠

*behavior changes*  
*younger onset*  
*Parkinsonian signs*  
*uncommon*



# *Korsakoff's Dementia* 🍺🍷🍸

*isolated recent memory loss*

*retained cognitive skills*

*confabulation*

*alcoholism/vitamin deficiency*

*post-traumatic*



# Questions & Today's takeaways:

- *Worried Well* 🤔
- *Normal consequences of Aging* 👉
- *Alzheimer's common: 50% by 90 y. o*  
[senile state is not inevitable]
- *Tactics to delay Dementia* 😊
- *Treatments available but no cures*