

# KEEPING YOUR MIND SHARP

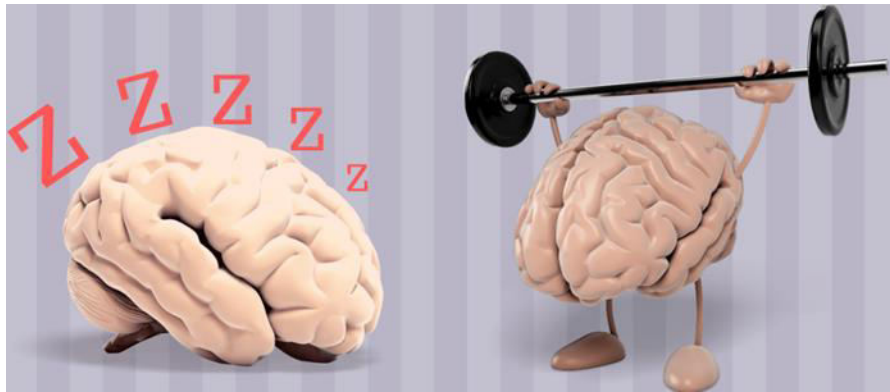


**Click to edit Master subtitle style**

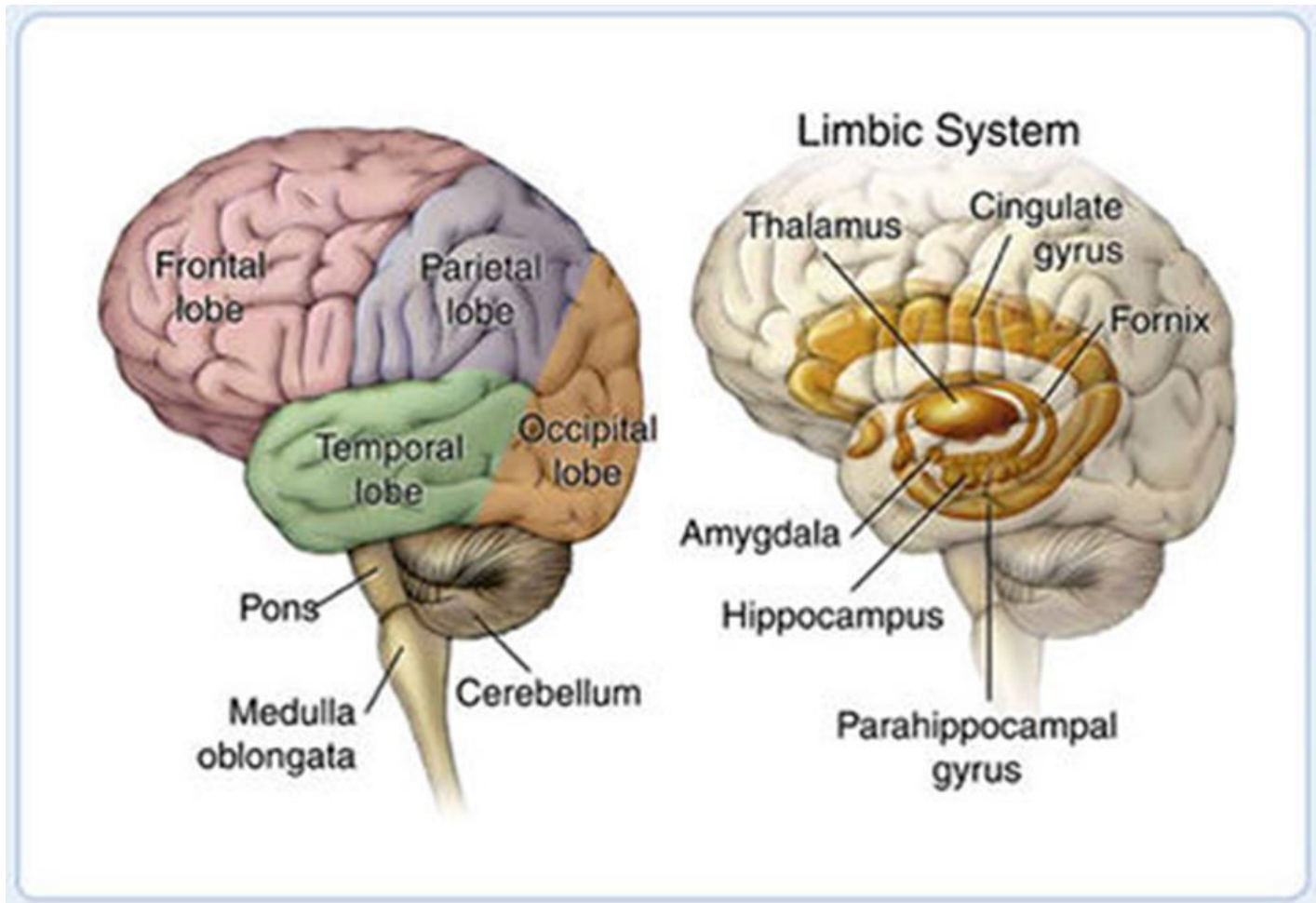
**EXERCISING YOUR BRAIN IS AS  
IMPORTANT AS EXERCISING YOUR BODY!**

Erin E. Aafedt, M.A. C.C.C.-S.L.P.  
Mountain Valley Regional Rehabilitation Hospital

# EXERCISE THE BRAIN

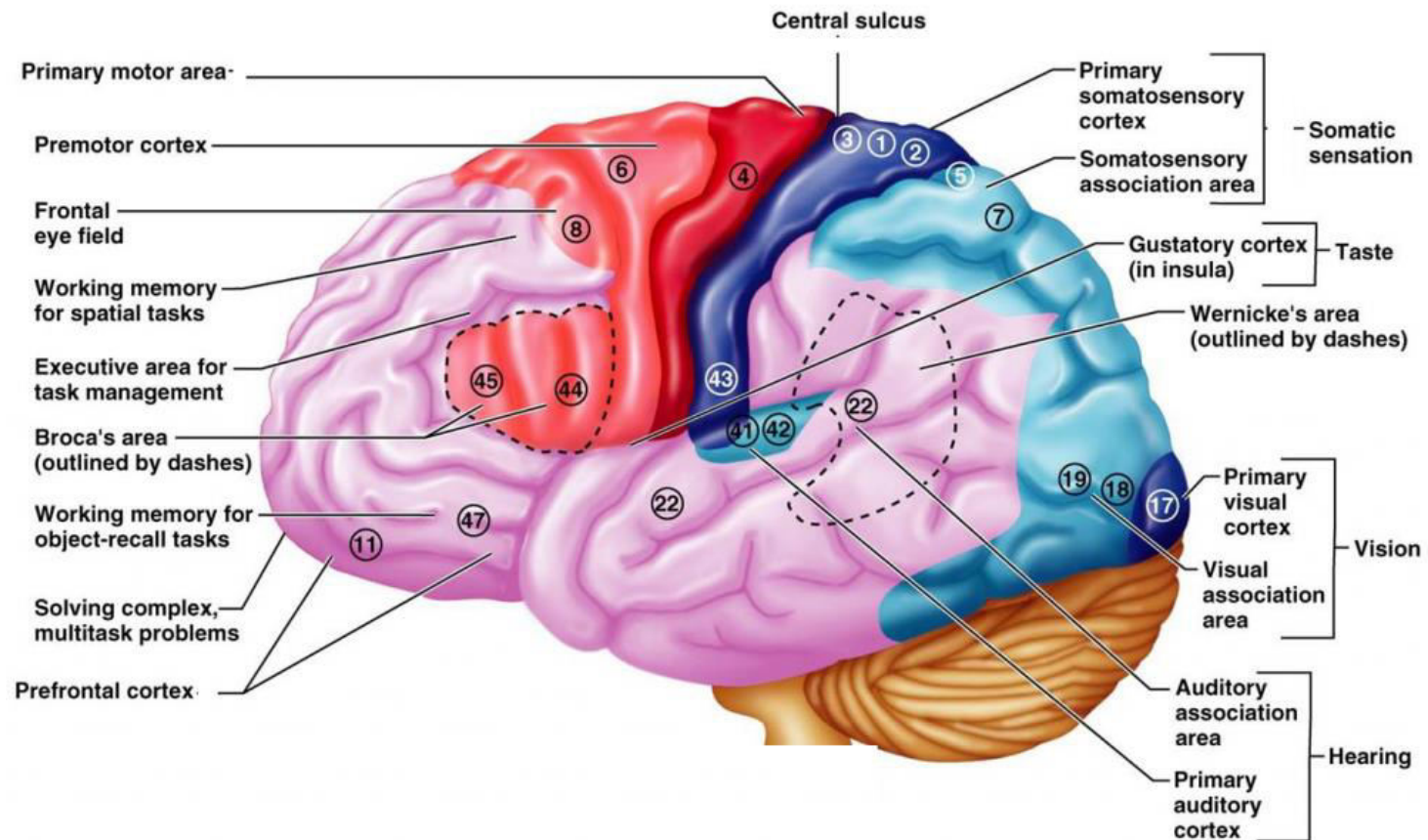


# WHAT YOUR BRAIN LOOKS LIKE




# MORE DETAILS REGARDING YOUR BRAIN

**Brain Diagram**





# LEFT VERSUS RIGHT #1



**Left brain expression  
(Academic)**

- detail oriented
- (Looks at parts)
- Logical
- Sequential
- Rational
- math and science
- can comprehend
- Analytical
- Objective
- uses logic
- facts rule
- words and language
- present and past
- knowing
- acknowledges
- knows object name
- reality based
- forms strategies
- order/pattern perception
- practical/planned
- safe
- cautious

**Right brain expression  
(Creative)**

- 'big picture' oriented
- (Looks at wholes)
- Random
- Intuitive
- Holistic
- philosophy & spiritualism
- can 'get it' (the meaning)
- Synthesizing
- Subjective
- uses feeling
- imagination rules
- symbols and images
- present and future
- believes
- appreciates
- knows object function
- fantasy based
- presents possibilities
- spatial perception
- impetuous/spontaneous
- adventurous
- carefree/risk taking

Illustration by: VaXzine

Written and slide design by Dr C Daniels 2008

# LEFT VERSUS RIGHT #2



## Left brain

I am the left brain.  
I am a scientist. A mathematician.  
I love the familiar. I categorize. I am accurate. Linear.  
Analytical. Strategic. I am practical.  
Always in control. A master of words and language.  
Realistic. I calculate equations and play with numbers.  
I am order. I am logic.  
I know exactly who I am.

## Right brain

I am the right brain.  
I am creativity. A free spirit. I am passion.  
Yearning. Sensuality. I am the sound of roaring laughter.  
I am taste. The feeling of sand beneath bare feet.  
I am movement. Vivid colors.  
I am the urge to paint on an empty canvas.  
I am boundless imagination. Art. Poetry. I sense. I feel.  
I am everything I wanted to be.



Mercedes-Benz  
The best or nothing



# “USE IT OR LOSE IT”



- Like your body and physical exercise, you must “exercise” your brain
- Once retired.....
- .....Or if in the hospital for a prolonged amount of time

**Thinking skills MAY get “mushy”**



# THE NUN STUDY



- Since 1986. 678 Nuns involved





# THE NUN STUDY, CON'T



- Scientists know that genes can predispose people to Alzheimer's disease. But as described in nearly three dozen scientific papers, Snowdon's study has shown, among other things, that a history of stroke and head trauma can boost your chances of coming down with debilitating symptoms of Alzheimer's later in life; and that a college education and an active intellectual life, on the other hand, may actually protect you from the effects of the disease.

# THE NUN STUDY, CON'T



- While all the sisters show age-related decline in mental function, those who taught for most of their lives showed more moderate declines than those who spent most of their lives in service-based tasks. And that, says Kemper, supports the commonsense idea that stimulating the brain with continuous intellectual activity keeps neurons healthy and alive.
- Even though plaques and tangles were present on autopsy, there were no significant outward signs of cognitive decline.

# THE NUN STUDY, CON'T



- Snowdon found that the sisters expressing negative emotions did not live as long as the sisters conveying more positive ones.
- A strong positive association between idea density in early life and presence of dementia later in life. Many of the women who had high idea density scores had also received secondary education, and in many cases, had earned their Master's degree or had spent several years working as teachers.
- **These findings highlight the importance of higher education and cognitive sharpening throughout life by engaging in reading, writing, and other activities that involve focus**

# SO....WHAT CAN YOU DO



- Learn something new each year
  - New game
  - New phone
  - New computer operating system
  - New hobby





- Boggle
- Scrabble



- Bananagrams

# GAMES



- More Word Games

- Crossword Puzzles
- Word Searches

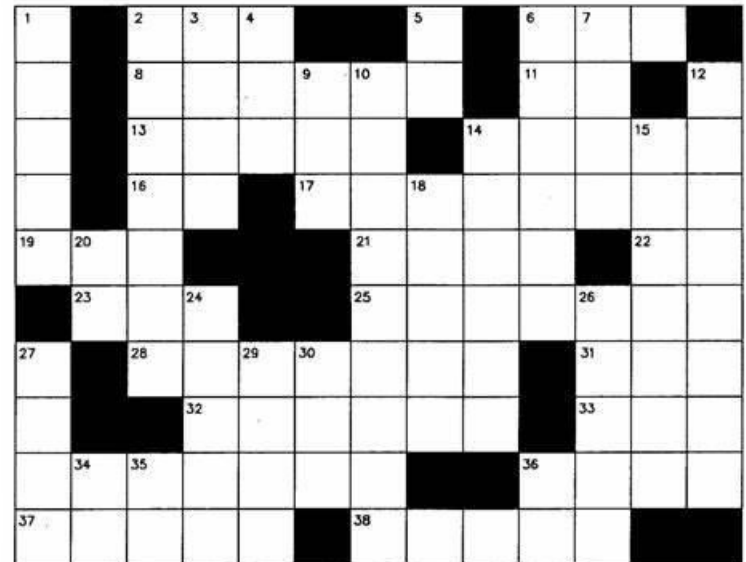
US States

No. 1

S	P	A	E	K	W	Y	B	R	G	T	S	P	T	K
R	A	Y	N	P	F	K	E	R	A	W	A	L	E	D
M	S	W	I	S	C	O	N	S	I	N	N	K	N	K
P	S	B	C	A	L	I	F	O	R	N	I	A	N	Y
U	P	E	S	R	T	M	Z	L	H	E	G	W	E	K
U	G	A	P	A	A	O	O	F	O	D	J	R	S	C
K	E	S	T	V	R	D	K	N	K	R	B	W	S	U
L	O	U	I	S	I	A	N	A	T	R	I	R	E	T
T	R	I	Y	U	Z	R	E	G	D	A	Q	D	E	N
L	G	U	I	K	O	O	B	I	W	H	N	L	A	E
A	I	D	T	I	N	L	R	H	M	F	T	A	Q	K
D	A	J	I	B	A	O	A	C	W	A	O	R	P	A
G	I	P	V	I	L	C	S	I	Y	Y	Q	I	O	I
O	S	U	F	I	P	O	K	M	E	R	A	P	A	N
A	U	S	T	E	G	X	A	L	A	B	A	M	A	E

ALABAMA  
ARIZONA  
CALIFORNIA  
COLORADO  
DELAWARE  
FLORIDA  
GEORGIA  
KENTUCKY

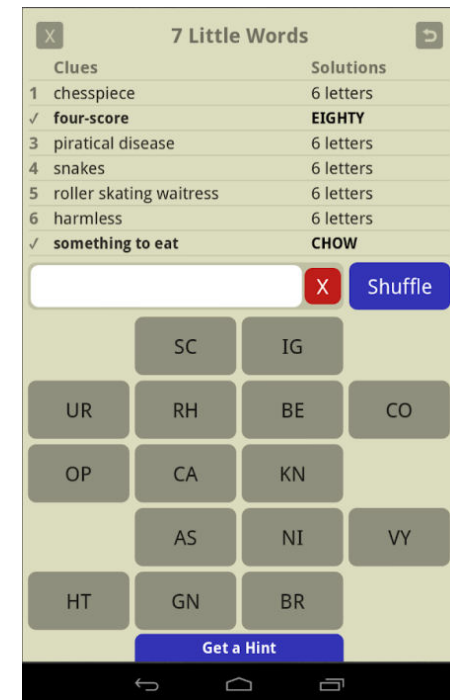
LOUISIANA  
MICHIGAN  
MONTANA  
NEBRASKA  
NEW JERSEY  
NORTH DAKOTA  
TENNESSEE  
WISCONSIN



# iPAD APPS – WORD GAMES



- Scrabble
- Boggle/Word Shaker
- 7 Little Words
- Crosswords
- Word Searches
- Word Brain

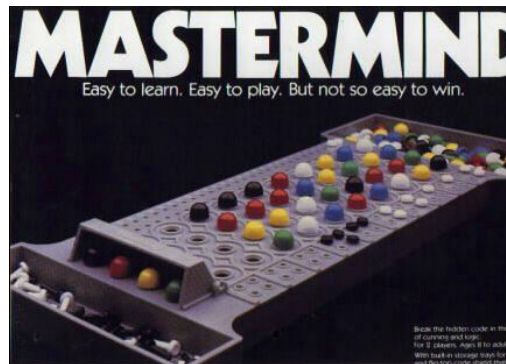


# GAMES



## ● THINKING GAMES

- Rummikub
- Sequence
- Mastermind
- Yahtzee
- Chess

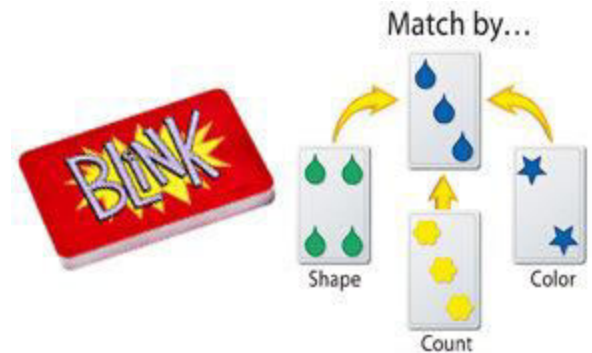




# VISUAL-PERCEPTUAL GAMES



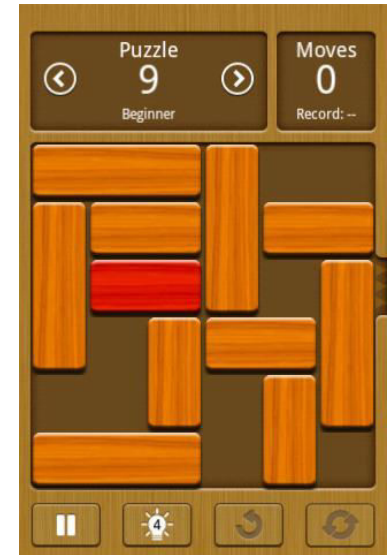
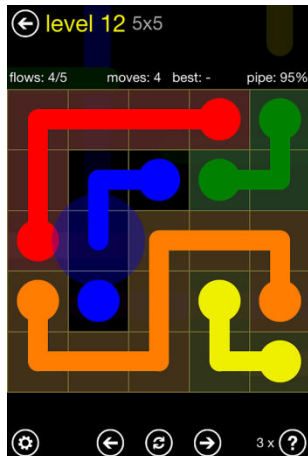
- SET
- BLINK
- Rush Hour
- Qwirkle
- Jigsaw puzzles



# iPAD APPS -THINKING GAMES



- UnblockMe
- Factory Balls
- Free Flow
- Woody



# EVEN THESE APPS



- Angry Birds Apps
- Cut the Rope
- Jigsaw Puzzles
- Logic Puzzles

○ (as an app or in a book)



## LOGIC PUZZLE

One Saturday five friends visited the zoo. Each wore a different colour t-shirt and each rushed to see their favourite animal upon arriving at the zoo. Using the clues provided, can you name each child's favourite animal and the colour t-shirt they wore?

1. One of the children wore the t-shirt that was the same colour as their favourite animal.
2. Steven, who was not wearing red, went to the Australian pavilion and Ashlee, who did not visit the lions, wore the yellow shirt
3. While visiting the King of the Jungle, Chase saw the girl with the red shirt at the monkey exhibit.
4. Paul, who did not like elephants, heard the boy in the purple t-shirt roaring.
5. On her way to visit the monkeys, Michelle passed Steven who was wearing the black t-shirt.

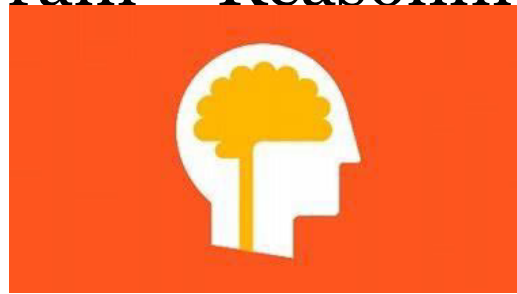
	Elephants	Kangaroos	Lions	Monkeys	Polar Bears	Black	Purple	Red	White	Yellow
Ashlee										
Chase										
Michelle										
Paul										
Steven										
Black										
Purple										
Red										
White										
Yellow										



# OTHER THINKING GAME APPS



- Train Your Brain – Attention Games
- Train Your Brain – Memory Games
- Train Your Brain – Visual Skills Games
- Train your Brain – Reasoning Games



- Memory Concentration Games (various ones)
- iSays (like the old Simon game for visual/auditory memory)



# CARD GAMES



- More than Solitaire, please. But if you like Solitaire games, learn new ones to challenge yourself
- Bridge and other similar card games: some planning and reasoning strategies are used, and players need to utilize what we call working memory

# BRAIN TRAINING SYSTEMS



- Lumosity
- Brain HQ (from Posit Science)
- Peak
- iBrain
- Clockwork Brain
- Elevate Brain Training

\*\* most of these are subscription based

# OTHER THINGS TO DO



- TED Talks ([www.ted.com/talks](http://www.ted.com/talks))
- Osher Lifelong Learning Institute (OLLI) at Yavapai College
- Get outdoors
- Yavapai College courses



# OTHER POINTS



- Reading is good....but.....
- Writing is good
- Be creative
- Even coloring is better than watching some reality show
- Challenge yourself





# OTHER POINTS



- DON'T watch TV all day. Keep it to a minimum
- DON'T sleep too much
- DO get up each day at same time
- DO go to bed at relatively the same time
- DO drink lots of water
- Take a walk
- Limit alcohol
- No smoking



# PHYSICAL EXERCISE



- “Physical activity should enhance cognition as cardiovascular fitness increases cerebral blood flow and oxygen delivery to the brain, increasing neuron formation and maintaining brain volume” (Etnier, Nowell, Landers & Sibley, 2006)
- Several other studies linking physical exercise associated with less cognitive decline were outlined in the paper “Exploring Interventions to Reduce Cognitive Decline in Aging” (Williams and Kemper, 2010)

# PHYSICAL EXERCISE, CON'T



- Lifting weights: a new study out of Australia showed that 6 months of strength training led to cognitive improvement with people with MCI

**NeuroImage: Clinical 2020**

**Hippocampal plasticity underpins long-term cognitive gains from resistance exercise in MCI**

Kathryn M. Broadhouse, Maria Fiatarone Singh, ChaoSuo, Nicola Gates, Wei Wen, Henry Brodaty, Nidhi Jain, Guy C. Wilson, Jacinda Meiklejohn, Nalin Singh, Bernhard T. Baune, Michael Baker, Nasim Foroughi, Yi Wang, Nicole Kochan, Kevin Ashton, Matt Brown, Zhixiu Li, Michael J. Valenzuela

# SOCIALIZATION



- More and more research in other countries (Japan one of them) is finding that a key to cognitive wellness and happiness is SOCIALIZATION
- This point of maintaining social connections was also discussed multiple times in the aforementioned paper (“Exploring Interventions to Reduce Cognitive Decline in Aging,” Williams and Kemper, 2010)



# NUTRTION



- Vitamin B6 and B12 and Folate may reduce homocysteine, which is implicated in abnormal cognitive decline and dementia.
- Diets with polyunsaturated fats and omega 3 fatty acids are associated with maintained cognition in older adults, while trans fats and saturated fats are associated with cognitive decline

\*\* “Exploring Interventions to Reduce Cognitive Decline in Aging”  
(Williams and Kemper, 2010)

# OVERALL



- Older adults may also be advised to add new cognitive, physical, and social activities, and improved nutrition to support successful cognitive aging and to improve neuroplasticity, increased neuronal connections in the brain, that increase cognitive reserve, the ability to respond successfully to changing environmental stimuli (Vance & Wright, 2009)

# QUESTIONS?

