Welcome to Mind Matters

An Introduction to Memory Loss

Memory loss: Normal vs Abnormal???

Age-Appropriate Memory Change

- Mild decline in memory is normal as we age
- “Senior moments”
- Usually does not affect daily function
- Due to mild loss of some neurons (**brain cells**).

Use of lists, calendars, and other reminders are helpful and encouraged.

Mild Cognitive Impairment (MCI)

More pronounced memory deficits than normal,
but the ability to function in daily life is still preserved.

Why is it important to identify MCI?

- ✓ Studies have shown that 1/3 of patients improve, 1/3 remain stable, and 1/3 will develop Dementia.
- ✓ To find and treat reversible causes and decrease the risk of developing permanent decline in brain function
- ✓ To provide education, preventive interventions, and lifestyle modifications which may **improve quality of life for patients and families.**

MCI: Reversible Causes

- Untreated depression or other psychiatric disorders
- Vitamin B-12 deficiency
- Electrolyte abnormalities (sodium, calcium, magnesium)
- Abnormal thyroid function
- Sleep disorders (including obstructive sleep apnea)
- Alcohol toxicity
- Certain medications (including sedatives and opiates)
- Unaddressed issues with hearing or vision

Depression/Anxiety May Mimic Dementia

People with Depression…

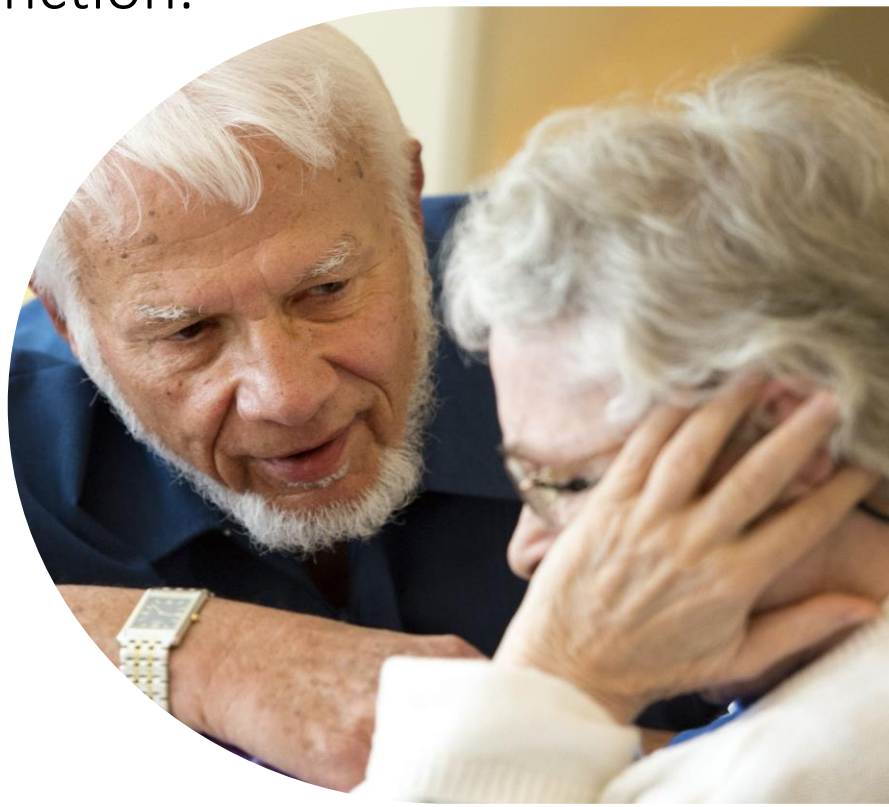
- **Are more likely to complain about memory loss** than those with dementia.
- Demonstrate signs of **poor concentration, slow information processing**, and poor effort on testing (“I just can’t do this.”)
- Depression and dementia may occur at the same time.
- It is important to reevaluate someone after depression is treated.
- Studies suggest that Depression is a major risk factor for Dementia.

Delirium

- An acute/temporary state of confusion involving a fluctuation in consciousness, poor comprehension, and difficulty maintaining attention
- Delirium does not always mean that patient has a Dementia
- Patients with Dementia have a higher risk of developing Delirium
- Possible causes: Older age with multiple health problems, certain medications, excessive alcohol, acute illness, and hospitalization
- Delirium is reversible. However, it can severely disrupt medical and overall recovery, which may lead to functional and cognitive decline

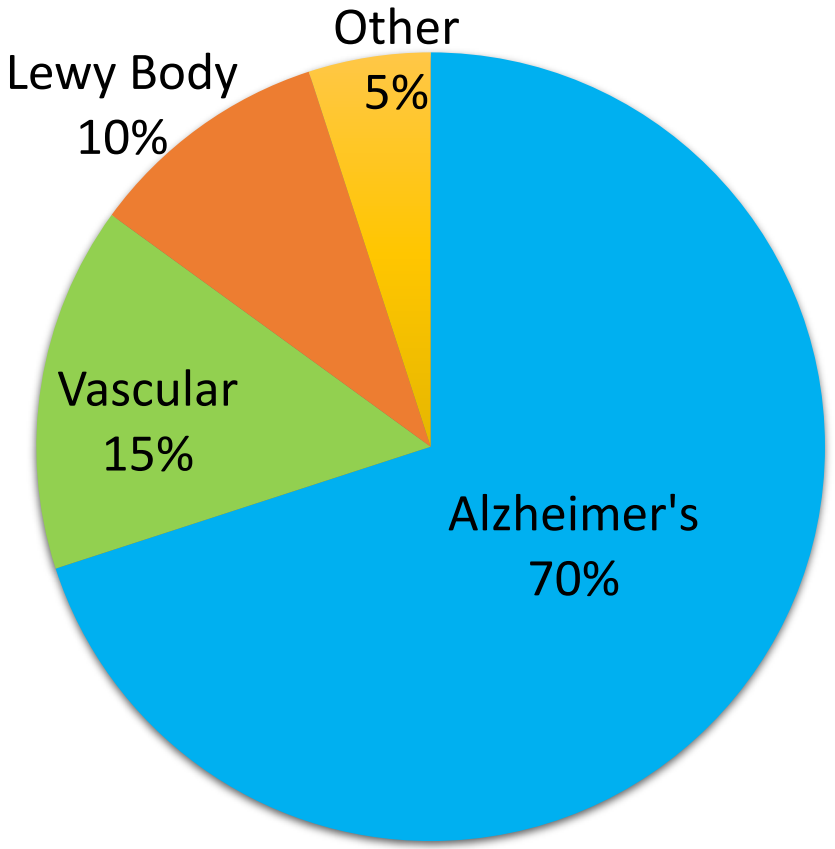
What is Dementia?

- It is a general term for a decline in memory and other thinking skills.
- Has a gradual onset and worsens over time.
- Must be significant enough to interfere with daily function.
- Must be global, affecting more than one function:
  1. Memory
  2. Speech and Language
  3. Orientation
  4. Calculation
  5. Judgment
  6. Planning and Problem solving



Types of Dementia

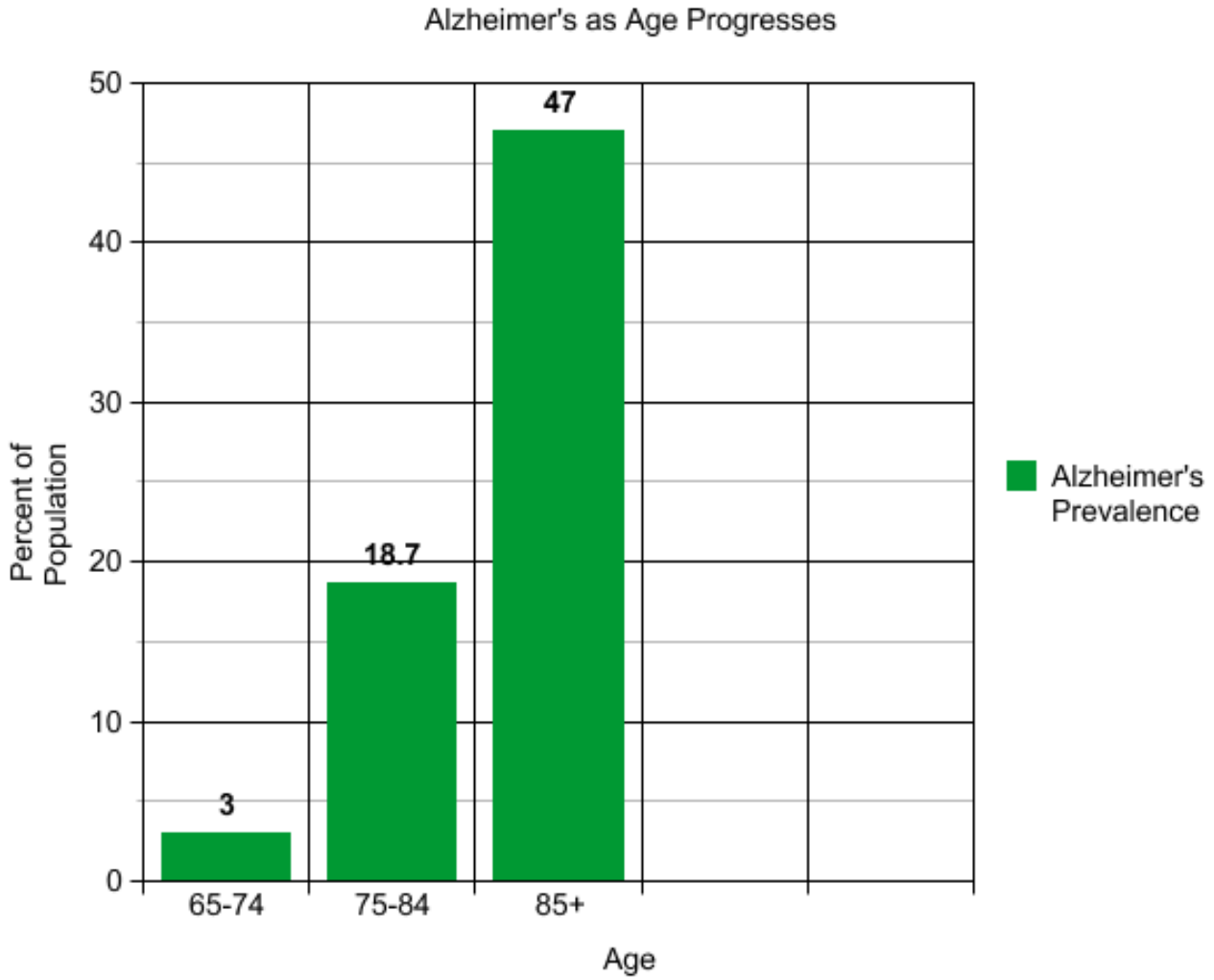
- Alzheimer’s disease
- Vascular (multi-infarct) dementia
- Lewy body dementia
- Other types
  - Frontotemporal dementia
  - Parkinson disease with dementia (PDD)
  - Huntington’s disease (HD)
  - Creutzfeldt-Jacob disease
  - Alcoholism
  - HIV related encephalopathy
  - Traumatic Brain Injury



Alzheimer's Disease: A Disease of Aging

- ✓ Caused by plaques and tangles in the brain.
- ✓ Age (greatest risk factor)
  Alzheimer's prevalence will double
  in the next 30 years.
- ✓ Genetics <5%
- ✓ High blood pressure, blood glucose, cholesterol
- ✓ Depression/stress
- ✓ Physical and mental inactivity
- ✓ DIET!!!!!

Medications are available to slow the progression; speak to your PCP.



A Brain-Healthy Lifestyle

- Daily physical exercise
- Mediterranean Diet
- Reduce risk factors (blood pressure, diabetes, cholesterol, smoking)

- Regular mental and social stimulation
- Get a good nights SLEEP
- Limit alcohol intake

Plaques and Tangles

Plaques and tangles in the brain are the pathological hallmark of Alzheimer's disease and cognitive impairment with aging.*

A healthy BMI and healthy lifestyle habits were linked to lower levels of plaques and tangles.

*American Journal of Geriatric Psychiatry; January 2019, Diet and Exercise Can Reduce Alzheimer's Plaque: Study Physical Activity May Preserve Memory in Seniors – Medscape- Jan 23, 2019

Build Brain Reserves for Cognitive Resilience

Lifelong Learning

Reading the newspaper, learning languages, playing musical instrument

Mentally Stimulating Leisure Activities

Playing games, crossword puzzles, computer use, listening to music

Social Engagement

Active in community, church, book clubs, discussion groups

Optimism and Mindfulness

Practicing meditation and volunteerism can improve psychological well-being

Physical Fitness as You Age

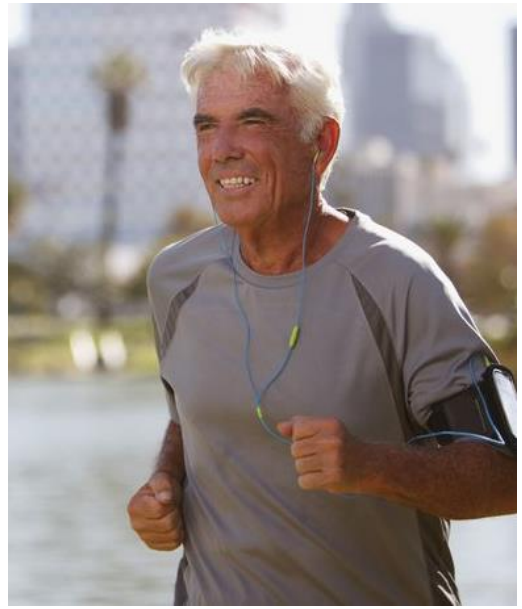
- Reduces Risk of Dementia and Alzheimer’s
- Improves Metabolic Changes and Weight Management
- Supports Bone Health
- Improves Balance and Strength for Independent Living

Cardiovascular Fitness for Brain Health

- Moderate to vigorous exercise
- 4-5 days per week
- 20-30 minutes
  (or 10 minutes at a time)

Cardiovascular Fitness and Brain Health

- ✓ Increases heart rate and oxygen to the brain, releasing hormones that nourish the growth of brain cells.
- ✓ Boosts the size of the hippocampus, the brain area involved in verbal memory and learning.
- ✓ Reduces insulin resistance, reduces inflammation, and stimulates the release of growth factors—chemicals in the brain responsible for the growth of new blood vessels in the brain, and the abundance and survival of new brain cells.
- ✓ Studies suggest that the parts of the brain that control thinking and memory (the prefrontal cortex and medial temporal cortex) have greater volume in people who exercise versus people who don't.
- ✓ Engaging in a program of regular exercise of moderate intensity over six months is associated with an increase in the volume of selected brain regions.
- ✓ Regulates stress hormones and aids sleep patterns



https://www.health.harvard.edu/blog/regular-exercise-changes-brain-improve-memory-thinking-skills-201404097110; Brigham and Women's Hospital Department Neurology at Harvard Medical School.

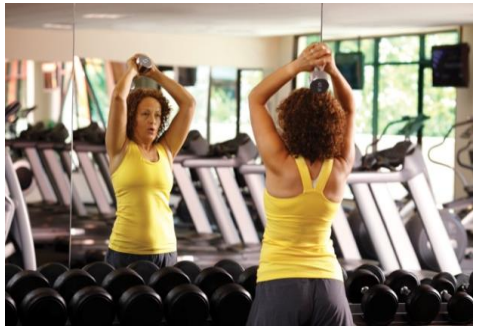
Strength Training and Brain Health

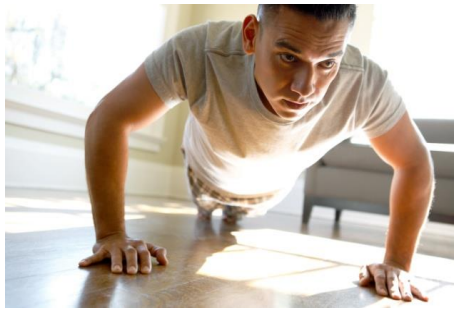
- Builds muscle mass and reduces loss (sarcopenia) as you age
- Maintains bone density
- Better balance and stability
- Improves activities of daily living (stairs, lifting, etc.)
- Strength training heavy or light, two to five days per week, helps stave off depression and decreases symptoms*
- Improves memory and cognitive function*

* J Strength Cond Res. 2013 Dec;27(12):3300-9. doi: 10.1519/JSC.0b013e31828ddf06. **The influence of agility training on physiological and cognitive performance.** Lennemann LM[1], Sidrow KM, Johnson EM, Harrison CR, Vojta CN, Walker TB.

The FIRST Principle for Strength Training

Strength or resistance training can benefit the body in many ways, including increasing metabolic rate, building lean body tissue, enhancing calorie burn and improving bone density

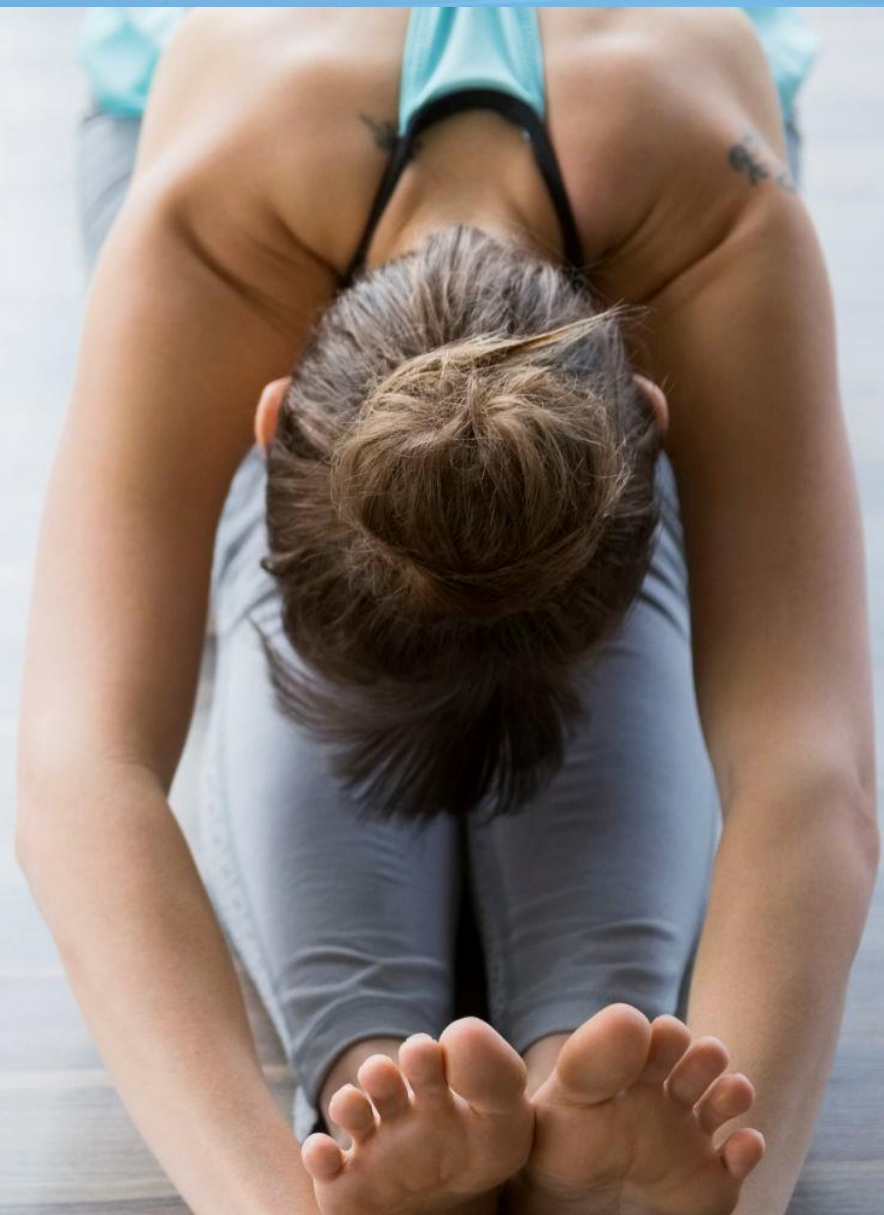




Frequency	Intensity	Repetitions	Sets	Type
2 – 3 times per week	Moderate to hard with progressive increase in resistance	8 – 15 per exercise	1 – 3 for each muscle group	Body weight, free weights, bands, machines

Benefits of Flexibility Training

- Increases range of motion in the joints
- Improves elasticity of tendons, ligaments, and muscles
- Reduces risk of activity-based injury
- Improves blood flow to muscles
- Can improve athletic performance



Mediterranean Diet

Carbohydrate

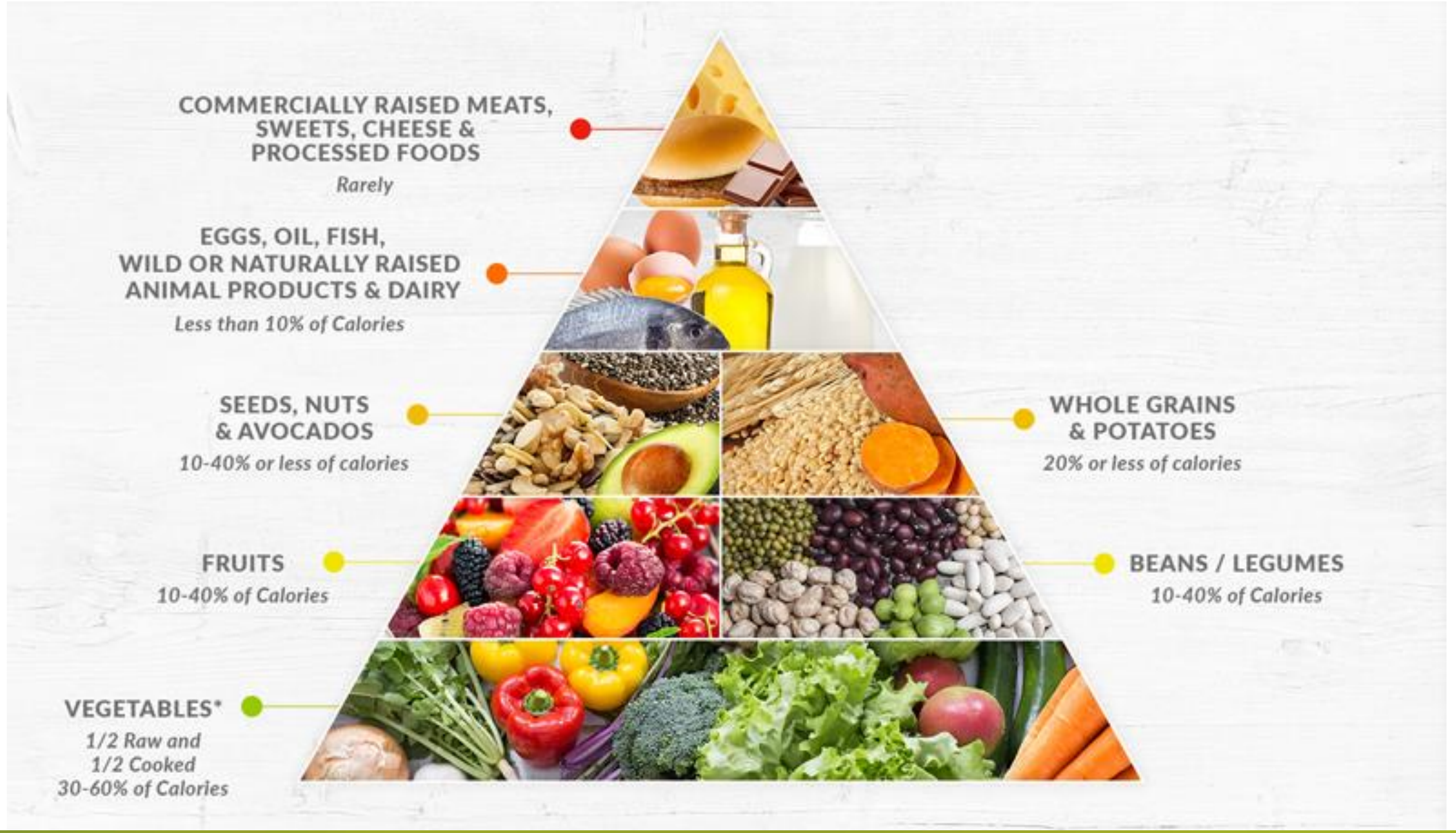
Carbohydrates are the body's main source of immediate energy use or stored for later.
Sources include grains, starches, vegetables and fruits.

Protein

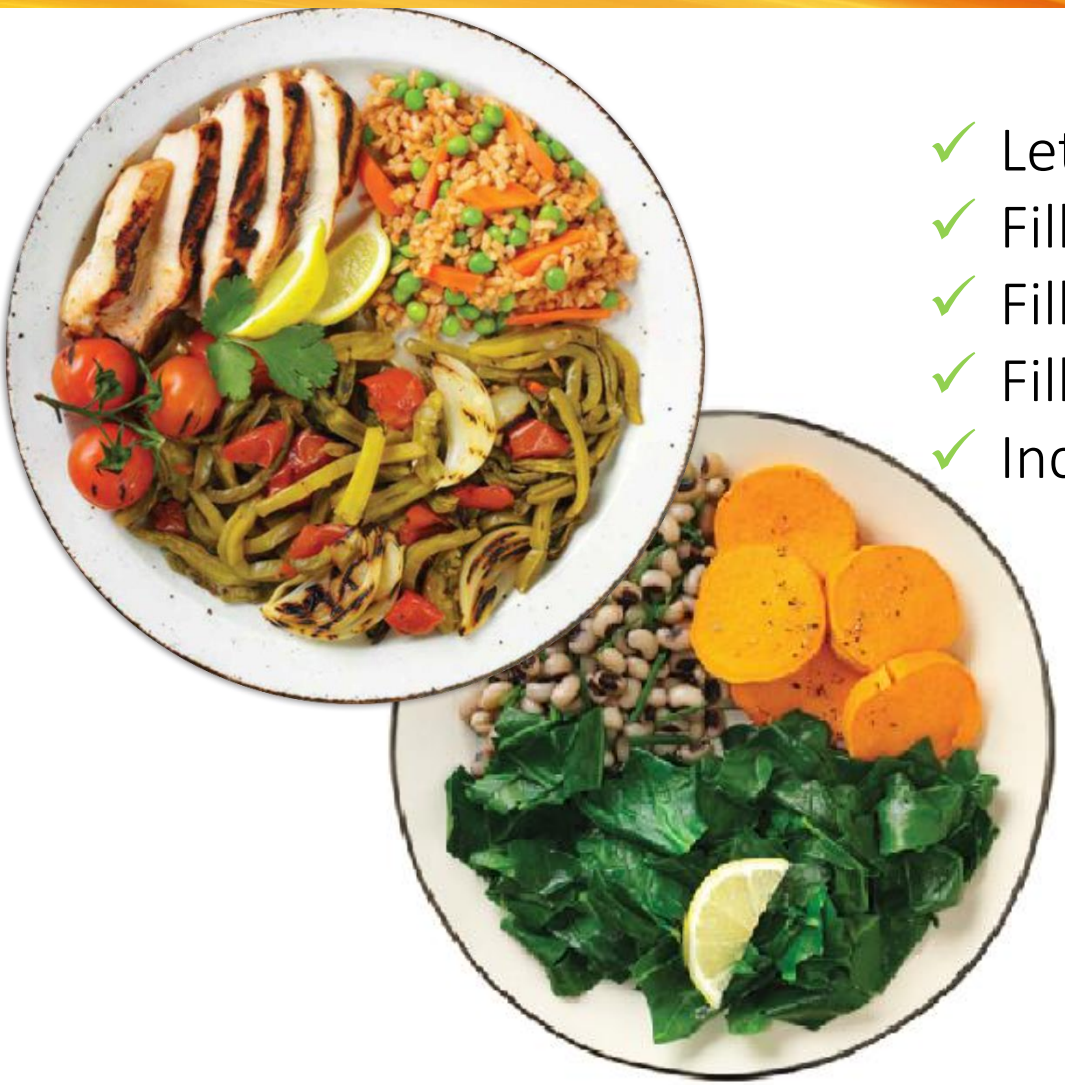
- Major building blocks of all body cells.
- Vital for building muscle.
- Sources include lean meats, fish, lean dairy, wheat gluten, soy, beans and legumes.

Fat

- Critical for long term energy storage, cell membranes, hormones and satiety.
- Limit saturated fats found in animal products. Include more plant-based fats like nuts, seeds and oils.


COMMERCIALLY RAISED MEATS, SWEETS, CHEESE & PROCESSED FOODS
Rarely
EGGS, OIL, FISH, WILD OR NATURALLY RAISED ANIMAL PRODUCTS & DAIRY
Less than 10% of Calories
SEEDS, NUTS & AVOCADOS
10-40% or less of calories
WHOLE GRAINS & POTATOES
20% or less of calories
FRUITS
10-40% of Calories
BEANS / LEGUMES
10-40% of Calories
VEGETABLES*
1/2 Raw and
1/2 Cooked
30-60% of Calories

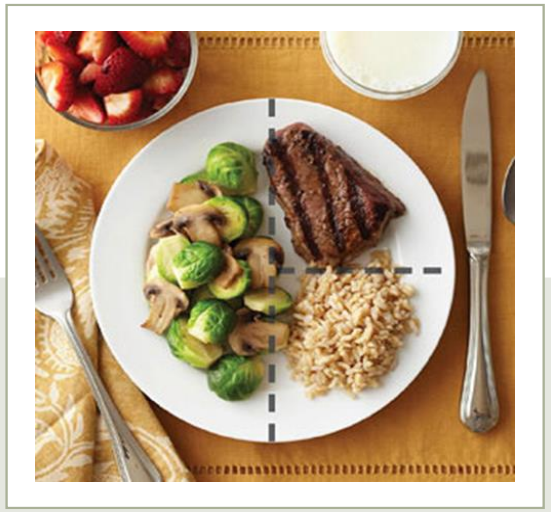
The Plate Method

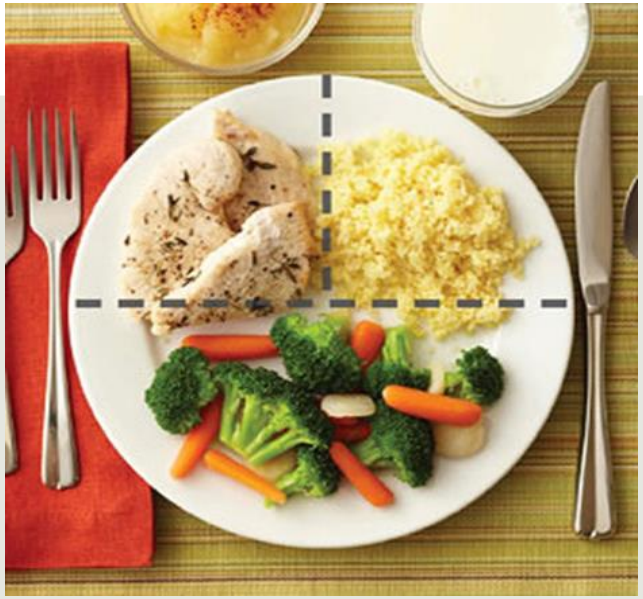


- ✓ Let a 9-inch plate be your guide
- ✓ Fill ½ plate with non-starchy vegetables
- ✓ Fill ¼ plate with beans or lean meat
- ✓ Fill ¼ plate with a whole grain, pasta or potato
- ✓ Include a serving of fruit

The Plate Method

Protein and the Plate Method





The Plate Method- Carbohydrates

Quickly Absorbed Carbohydrates	Moderately Absorbed Carbohydrates	Slowly Absorbed Carbohydrates
Bagels	Fruits	Legumes: Beans, Lentils, Soy beans
Crackers and Cookies	Winter squash	Quinoa
Juice and Sugary Drinks	Sweet potato	Whole Grains, Oatmeal, Millet, Spelt, Barley, Farro
White Bread, Rice, Pasta, and Potato	Carrots	Dairy Products
Candy, Sweets and Desserts	Beets	Most Vegetables

Healthy Fats

- ✓ Fish and plant sourced oils high in Omega-3 fats (salmon, olives, avocados, nuts, and seeds. (low intake of omega-3 fat foods linked with increased risk for dementia and Alzheimer's Disease)[1]
- ✓ Omega-6 and Omega 3 fats Increase brain health and function[1]
- ✓ Eat fats in moderation – better to eat as the whole food (avocado, olives, nuts, seeds)

Prostaglandins Leukot Essent Fatty Acids. 2009 Aug-Sep;81(2-3):213-21. doi: 10.1016/j.plefa.2009.05.015. Epub 2009 Jun 12.
Omega-3 fatty acids and dementia. Cole GM[1], Ma QL, Frautschy SA.

Saturated and Trans Fats

- ✓ Limit or avoid saturated fats (i.e. fatty meats, eggs, dairy, coconut, palm oil
- ✓ Avoid or limit oils
- ✓ Avoid all trans fats (hydrogenated vegetable oils)

* Neurobiol Aging. Author manuscript; available in PMC 2015 Sep 1. Neurobiol Aging. 2014 Sep; 35 Suppl 2: S59–S64. Published online 2014 May 15. doi: 10.1016/j.neurobiolaging.2014.03.038 **Dietary fat composition and dementia risk** Martha Clare Morris[a] and Christine C. Tangney[b]

Proper hydration underlies everything when it comes

- There is no single recommendation for fluid intake that works for everyone.
- Fluid needs vary depending on lean body mass, activity level, environmental conditions, certain nutritional factors, illness, etc.
- 8 X 8 oz. recommendation. No science, just easy to remember.
- Checking urine color more effective than thirst. Pale yellow to clear is best.
- Thirst is turned on at 3% dehydration, body function begins to decline at 2%.
- All fluids count!

Why Sleep is Important

- ✓ People who have restless, poor sleep have a higher risk of cognitive decline than those who sleep straight through the night*
- ✓ Sleep “locks in” memories and enhances the ability to memorize new skills.*
- ✓ The sleep you get now may have a long-term influence on your risk for cognitive decline as you age.*
- ✓ People who sleep for more than nine hours a night have an increased risk of both dementia and Alzheimer’s compared with those who log six to nine*

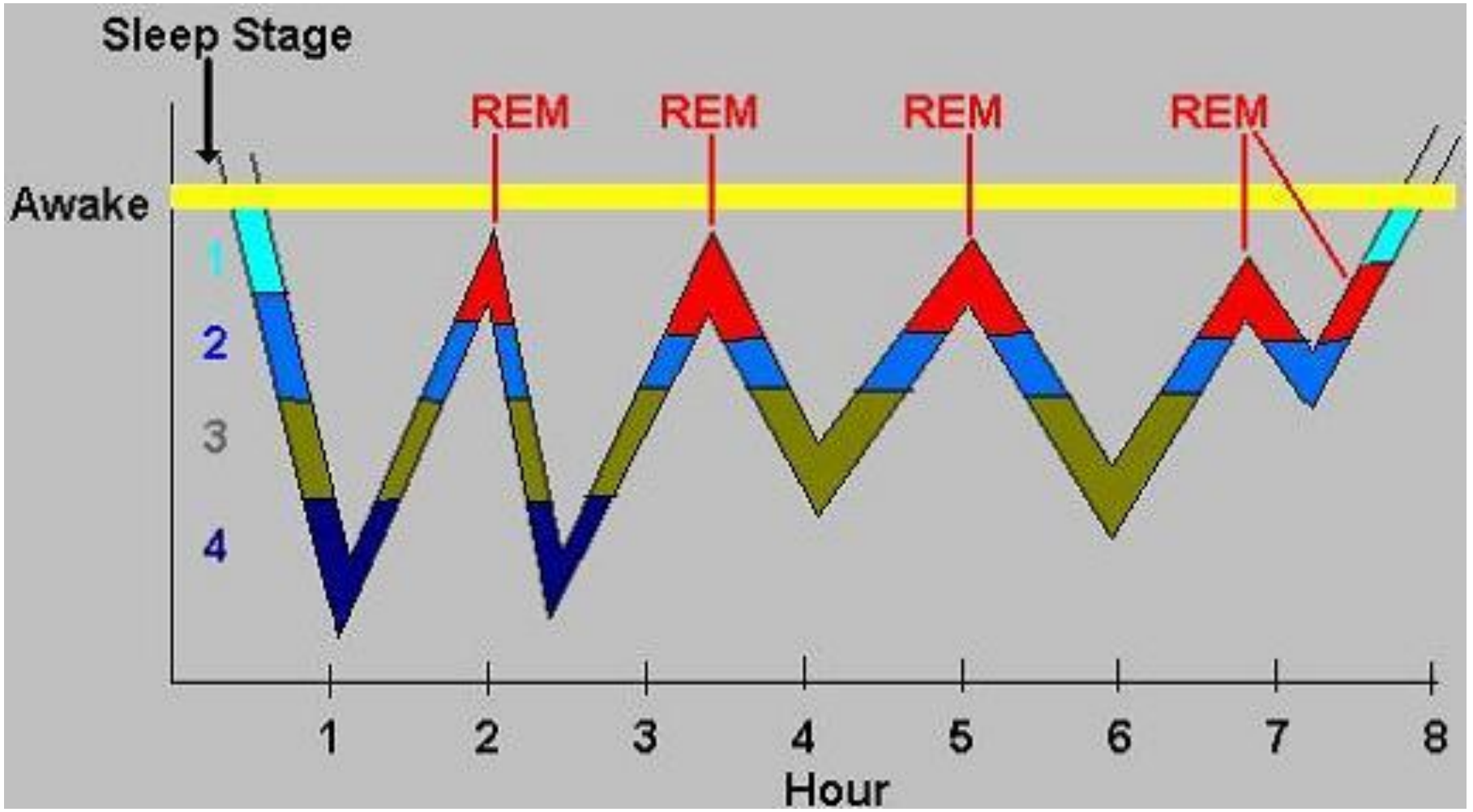
* https://www.sleepfoundation.org/articles/what-your-sleep-habits-reveal-about-your-dementia-risk

Sleep and Dementia

- ✓ Half of all dementia patients have sleep disturbances
- ✓ Compared to older adults with normal cognition, adults with dementia have:
  - Shorter Sleep cycles and greater sleep fragmentation
  - Less deep REM sleep with reduced sleep efficiency
  - More frequent nighttime awakening, wandering, and increased daytime napping
  - More difficulty getting to sleep and staying asleep
- ✓ Increased severity of dementia is associated with greater sleep fragmentation

Feinberg et al., 1967:Moe et al., 1995:Prints et al., 1982a, 1982b: Vitiello ert al., 1990: Mortimore et al., 1992

Sleep Cycles



Conclusion

- Not all memory problems equal Dementia
- A healthy lifestyle is key to delaying or preventing MCI and Alzheimer's disease.
- Be proactive
- Research of memory problems is at high speed right now

  clinicaltrials.gov

  nia.nih.gov/alzheimers

  Alzheimer's Association: alz.org/trialmatch

  UCSD: www.adrc.ucsd.edu)

Kaiser Permanente Resources

- Stress Management Class
- Sleep Apnea Class
- Life Care Planning
- Nutrition Options
- Follow up with Primary Care Doctor

Community Resources

- Early Stage Support with Alzheimer’s San Diego
- Continuing Care Website of Resources
  www.continuingcare-sandiego.kp.org

Start Your Life Care Planning Conversation Today!

- You can register for the Life Care Planning workshop by calling 619-641-4194
- You can also visit kp.org/lifecareplan to learn more about how to start the conversation and download and Advance Directive

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Creating Your Action Plan

What one thing can you work on today?