

# Eating for a Clear Mind

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CDCES



# What is Dementia?

Most People Think of it as Just Forgetfulness.. But it's So Much More

- Trouble thinking of the words that you want to say
- Difficulty processing images
- Trouble with thinking through a problem carefully
- Physical inability to control the body

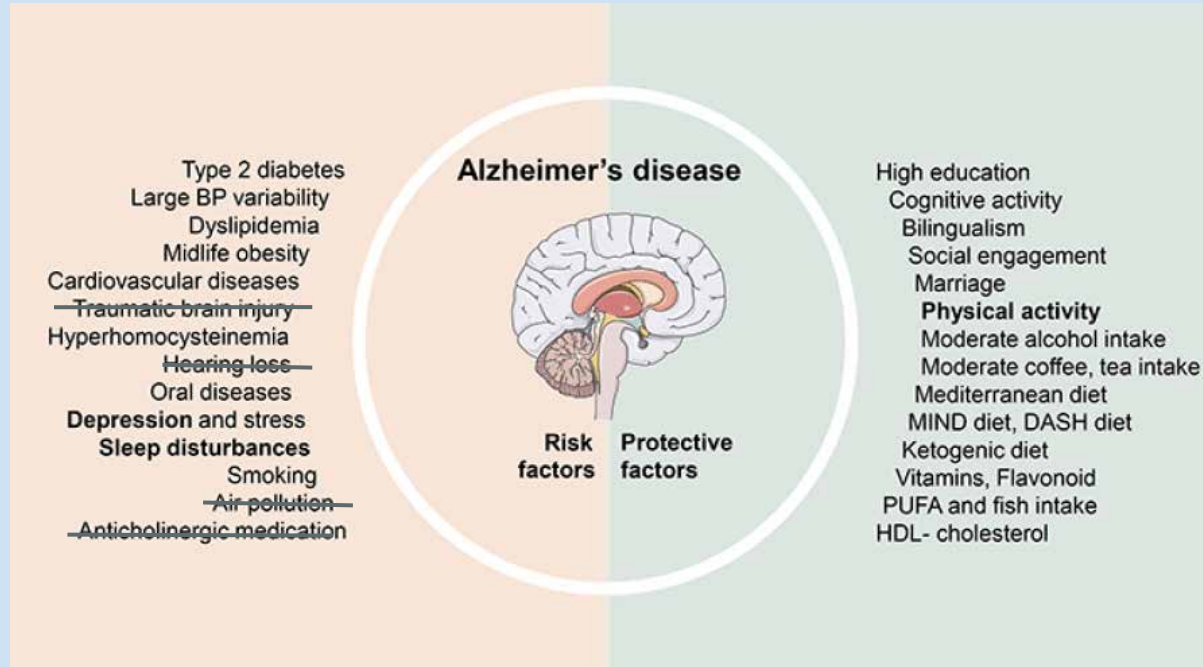


*Combined, the effects of dementia greatly affect the quality of life a person has, and can significantly change their personality.*

# What If Dementia Could Be Prevented?

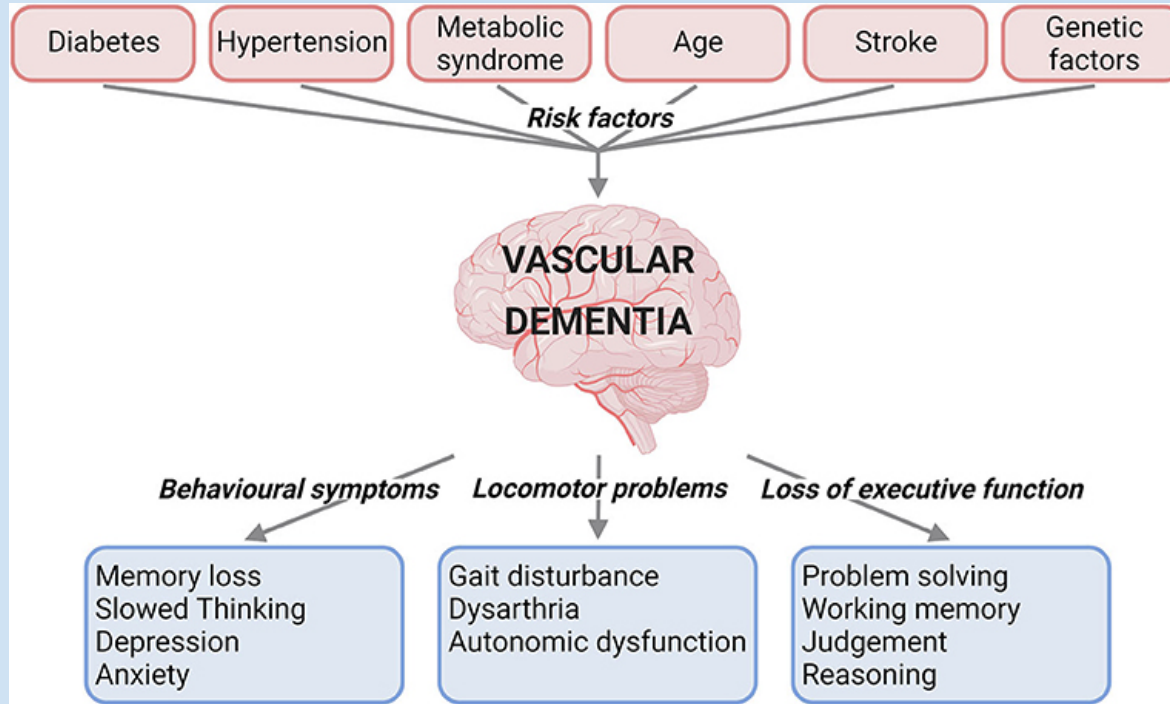


# Risk Factors for Alzheimer's:



Source: Zhang, X., Tian, Y., Wang, Z., Ma, Y., Tan, L., & Yu, J. (2021). The Epidemiology of Alzheimer's Disease Modifiable Risk factors and Prevention. *JPAD*, 1–9.  
<https://doi.org/10.14283/jpad.2021.15>

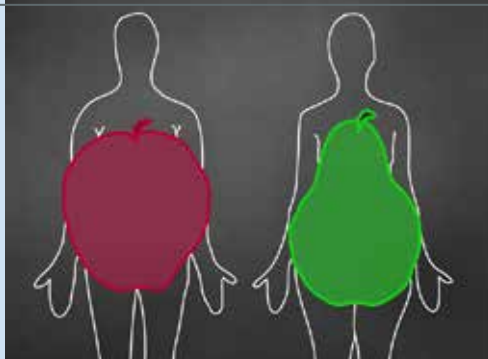
# Risk Factors of Vascular Dementia:



Source: Parsi, M. M., Duval, C., & Ariëns, R. a. S. (2021). Vascular dementia and crosstalk between the complement and coagulation systems. *Frontiers in Cardiovascular Medicine*, 8. <https://doi.org/10.3389/fcvm.2021.803169>

# What is Metabolic Syndrome?

BLOOD PRESSURE CATEGORY	SYSTOLIC mm Hg (upper number)		DIASTOLIC mm Hg (lower number)
NORMAL	LESS THAN 120	and	LESS THAN 80
ELEVATED	120 – 129	and	LESS THAN 80
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1	130 – 139	or	80 – 89
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2	140 OR HIGHER	or	90 OR HIGHER
HYPERTENSIVE CRISIS (consult your doctor immediately)	HIGHER THAN 180	and/or	HIGHER THAN 120



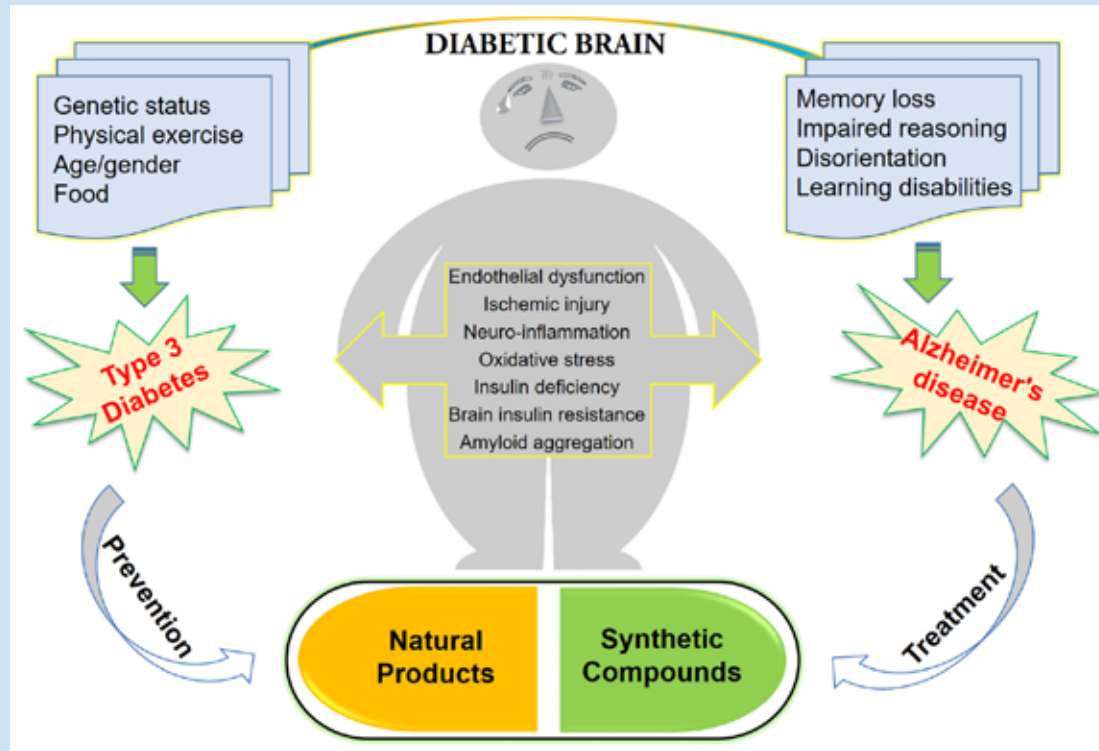
# What is the Major Commonality?

....Blood Sugar Control!

There's Even a New Name for Alzheimer's.....



# Type 3 Diabetes:



Source: Nguyen, T. T., Ta, Q. T. H., Nguyen, T. K. O., Nguyen, T. T. D., & Van Giau, V. (2020). Type 3 diabetes and its role implications in Alzheimer's disease. *International Journal of Molecular Sciences*, 21(9), 3165. <https://doi.org/10.3390/ijms21093165>



# The Guru of Alzheimer's Prevention, and His Recommended Labs:



- ❖ APOE4
- ❖ Homocysteine
- ❖ A1c
- ❖ Fasting Insulin
- ❖ Advanced Lipid Panel
- ❖ Vit. D
- ❖ Full Thyroid Panel (including antibodies)
- ❖ Ferritin
- ❖ TIBC
- ❖ RBC Magnesium
- ❖ Zinc
- ❖ Copper
- ❖ Vit. A
- ❖ Vit. E
- ❖ C-reactive Protein
- ❖ Cortisol
- ❖ B-12
- ❖ Folate

# What Are We Really Looking For In Terms Of a Target A1c?

**American Diabetes Association** | **DiabetesPro**

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## eAG/A1C Conversion Calculator

ADA is recommending the use of a new term in diabetes management, estimated average glucose, or eAG. Health care providers can now report A1C results to patients using the same units (mg/dl or mmol/l) that patients see routinely in blood glucose measurements. The calculator and information below describe the ADAG Study that defined the relationship between A1C and eAG and how eAG can be used to help improve the discussion of glucose control with patients.

**Choose source:**  
 A1C to eAG  
 eAG to A1C  
(unit to calculate from)

**To:**  
 mg/dl  
 mmol/l  
(unit to calculate to)

**Source value \***

**Calculate**

**Results**

An A1c of 5.2% or less means that your blood sugar is spending most of its time in the normal range.

# The One Major Change You Can Make...



Decrease your intake of added sugars to < 25 grams daily.

## Nutrition Facts

Serving size: 1 cup (37g)

Amount per serving  
**Calories** **140**  
As Packaged

Food component / Nutrient	Amount As Packaged	% DV* As Packaged
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<b>Total Fat</b>	2g	2%
Saturated Fat	0g	0%
Trans Fat	0g	—
Polyunsaturated Fat	0.5g	—
Monounsaturated Fat	0.5g	—
<b>Cholesterol</b>	0mg	0%
<b>Sodium</b>	210mg	9%
<b>Total Carbohydrate</b>	30g	11%
Dietary Fiber	3g	10%
Soluble Fiber	1g	—
<b>Total Sugars</b>	12g	—
<b>Incl. Added Sugars</b>	12g	24%
<b>Protein</b>	3g	—

<b>Vitamin D</b>	4mcg	20%
<b>Calcium</b>	130mg	10%
<b>Iron</b>	3.6mg	20%

# Another Example...

## Nutrition Facts

4.0 servings per container

**Serving size** 1 container (150g)

**Amount per serving**

**Calories** 120

	% Daily value*
<b>Total Fat</b> 3g	4%
Saturated Fat 1.5g	8%
Trans Fat 0g	0%
<b>Cholesterol</b> 15mg	5%
<b>Sodium</b> 55mg	2%
<b>Total Carbohydrate</b> 10g	4%
Dietary Fiber 1g	2%
Sugar 9g	0%
Added Sugar 5g	10%
<b>Protein</b> 12g	24%
Calcium	10%
Potassium	4%

\*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.



Gluten Free



KOSHER



Low Fat



Non GMO

## Ingredients

Cultured Lowfat Milk, Cane Sugar, Water, Strawberry Puree, Fruit Pectin, Natural Flavors, Locust Bean Gum, Fruit and Vegetable Juice Concentrate (for Color), Guar Gum, Lemon Juice Concentrate, 6 Live and Active Cultures: S. Thermophilus, L. Bulgaricus, L. Acidophilus, Bifidus, L. Casei, and L. Rhamnosus.

## Allergen Info

Contains Milk and its Derivatives. Free from Cereals and Their Derivatives.

## Disclaimer

Actual product packaging and materials may contain additional and/or different ingredient, nutritional, or proper usage information than the information displayed on our website. ... [Read More](#)



# What About Artificial Sweeteners?



# Artificial Sweeteners and Stroke:

## Sugar- and Artificially Sweetened Beverages and the Risks of Incident Stroke and Dementia A Prospective Cohort Study

Matthew P. Pase, PhD; Jayandra J. Himali, PhD; Alexa S. Beiser, PhD; Hugo J. Aparicio, MD;  
Claudia L. Satizabal, PhD; Ramachandran S. Vasani, MD; Sudha Seshadri, MD\*; Paul F. Jacques, DSc\*

**Background and Purpose**—Sugar- and artificially-sweetened beverage intake have been linked to cardiometabolic risk factors, which increase the risk of cerebrovascular disease and dementia. We examined whether sugar- or artificially sweetened beverage consumption was associated with the prospective risks of incident stroke or dementia in the community-based Framingham Heart Study Offspring cohort.

**Methods**—We studied 2888 participants aged >45 years for incident stroke (mean age 62 [SD, 9] years; 45% men) and 1484 participants aged >60 years for incident dementia (mean age 69 [SD, 6] years; 46% men). Beverage intake was quantified using a food-frequency questionnaire at cohort examinations 5 (1991–1995), 6 (1995–1998), and 7 (1998–2001). We quantified recent consumption at examination 7 and cumulative consumption by averaging across examinations. Surveillance for incident events commenced at examination 7 and continued for 10 years. We observed 97 cases of incident stroke (82 ischemic) and 81 cases of incident dementia (63 consistent with Alzheimer's disease).

**Results**—After adjustments for age, sex, education (for analysis of dementia), caloric intake, diet quality, physical activity, and smoking, higher recent and higher cumulative intake of artificially sweetened soft drinks were associated with an increased risk of ischemic stroke, all-cause dementia, and Alzheimer's disease dementia. When comparing daily cumulative intake to 0 per week (reference), the hazard ratios were 2.96 (95% confidence interval, 1.26–6.97) for ischemic stroke and 2.89 (95% confidence interval, 1.18–7.07) for Alzheimer's disease. Sugar-sweetened beverages were not associated with stroke or dementia.

**Conclusions**—Artificially sweetened soft drink consumption was associated with a higher risk of stroke and dementia. (*Stroke*. 2017;48:00-00. DOI: 10.1161/STROKEAHA.116.016027.)

Artificial Sweeteners Are NOT a Healthy Shortcut!

In the first 3-6 months after a stroke, ~25% of people develop dementia.



# But Wait, I Don't Use Splenda...or Do I?



Cultured Non Fat Milk, Water, Strawberries, Less Than 1%: Natural & Artificial Flavors, Black Carrot Juice & Carmine (For Color), Modified Food Starch, Acesulfame Potassium, Sucralose, Fructose, Malic Acid, Potassium Sorbate (to maintain freshness), Active yogurt Cultures *L. Bulgaricus* & *S. Thermophilus*.

At least 50% less fat than average flavored Greek yogurt

Light & Fit: 80 calories, 0g fat

Average flavored Greek yogurt: 110 calories, 1g fat per 5.3 oz serving

Most people are consuming them, they just don't know...

Always look for the words sucralose, acesulfame potassium, and aspartame in the ingredients.

# The MIND Diet vs DASH Diet vs Mediterranean:



## WHAT'S ON THE MIND DIET?

AT LEAST **THREE SERVINGS** OF WHOLE GRAINS EACH DAY

AT LEAST ONE DARK GREEN SALAD AND ONE OTHER VEGETABLE EACH DAY



**BERRIES AT LEAST TWICE A WEEK**

AT LEAST A ONE-OUNCE SERVING OF NUTS EACH DAY

**BEANS OR LEGUMES AT LEAST EVERY OTHER DAY**

**POULTRY AT LEAST TWICE A WEEK**



**FISH AT LEAST ONCE A WEEK**

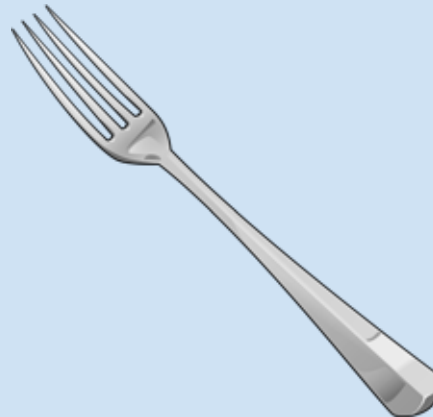


NO MORE THAN ONE TABLESPOON A DAY OF BUTTER OR MARGARINE; CHOOSE OLIVE OIL INSTEAD



CHEESE, FRIED FOOD AND FAST FOOD NO MORE THAN ONCE A WEEK

**PASTRIES AND SWEETS LESS THAN FIVE TIMES A WEEK**



## MEDITERRANEAN DIET PYRAMID

Red meats & sweets  
**ENJOY SPARINGLY**



Poultry, eggs & dairy  
**ENJOY 1-2x PER WEEK**



Fish, seafood & omega-3 rich foods  
**ENJOY >3x PER WEEK**



Whole grains, legumes, fruit, vegetables, healthy fats, herbs & spices  
**ENJOY DAILY**



Physical activity, meal & family time  
**PRACTICE DAILY**





# Supplements for Healthy People to Preserve Cognitive Function

- Lutein and Zeaxanthin
- Magnesium (400 mg as opposed to high-dose)
- Multivitamin



- Source
- Mixed-carotenoids: (flakes) tripartite
  - Lycopene: natural tomato concentrate
  - Lutein: marigold flower extract
  - Zeaxanthin: synthetic
  - Vitamin C: corn dextrose fermentation
  - Vitamin D<sub>3</sub>: cholesterol from wool fat (lanolin)
  - Vitamin E: soybean oil
  - Vitamin K<sub>1</sub>: synthetic
  - Vitamin B<sub>1</sub>: thiamine HCl: synthetic
  - Vitamin B<sub>2</sub>: riboflavin: corn dextrose fermentation
  - Niacinamide and Niacin: synthetic
  - Vitamin B<sub>6</sub>: (calcium pantothenate): synthetic
  - Vitamin B<sub>12</sub>: (methylcobalamin): synthetic
  - Vitamin B<sub>12</sub>: (methylcobalamin): corn dextrose fermentation
  - Folic acid (Metafolin®): L-5-MTHF: synthetic
  - Biotin: synthetic
  - Alpha lipoic acid: synthetic
  - Minerals: naturally derived from limestone. Sources of the mineral chelates include:
    - Citrate: corn dextrose fermentation
    - Glycinate: synthetic
  - Mixed carotenoid profile typically contains 4,500 mcg beta carotene, 125 mcg lycopene, 250 mcg lutein and 50 mcg zeaxanthin
  - Turmeric extract is derived from *Curcuma longa* root and standardized to contain 95% curcuminoids
  - Grape seed extract is derived from *Vitis vinifera* seed and standardized to contain 92% polyphenols
  - Pomegranate extract is derived from *Punica granatum* L. whole fruit and standardized to contain 40% polyphenols

# So Does Prevagen Really Work?



Supplement Facts		
Serving Size: 1 capsule		
Amount per capsule	% Daily Value	
Vitamin D (as D3 cholecalciferol)	50 mcg	250%
Apoaequorin	10 mg	†

† Daily Value not established.

**Other ingredients:** microcrystalline cellulose, vegetable capsule (cellulose, water), sugar, contains 2% or less of: acacia (gum arabic), casein peptones, corn starch, lactose, magnesium stearate (vegetable source), medium chain triglycerides (vegetable oil), salt, soy peptones, DL- $\alpha$ -tocopherol, tricalcium phosphate, water.

**Contains:** Milk, Soy, Tree nuts (Coconut) derived ingredients

**Distributed by**   
Quincy Bioscience Holding Company, Inc.,  
Madison, WI 53717

**Suggested use:** Take one capsule daily in the morning, with or without food.

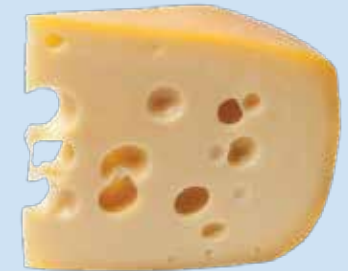
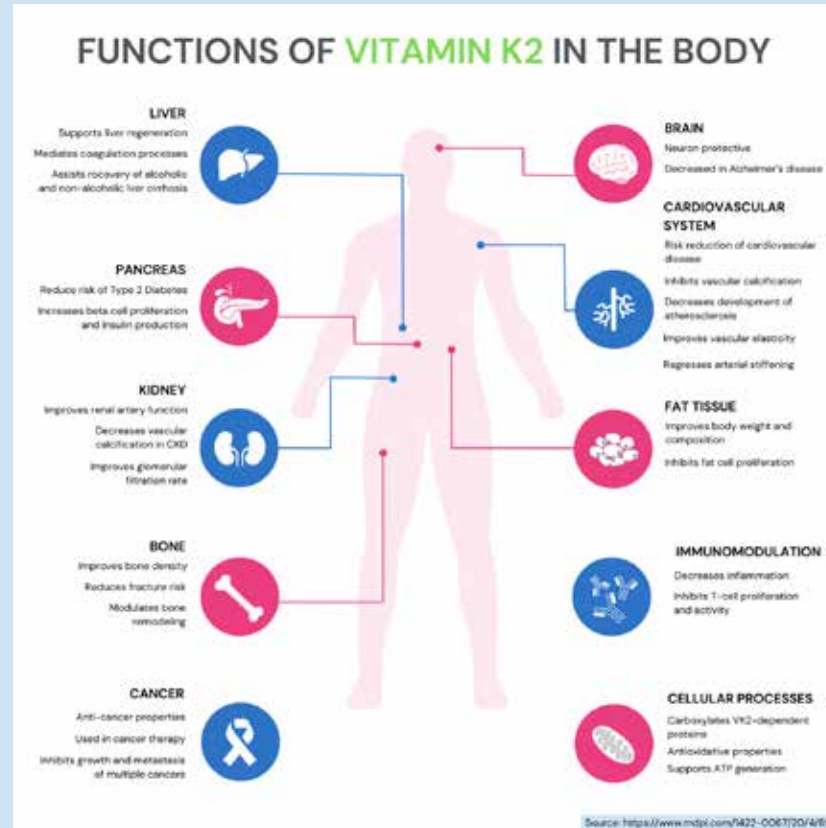
That's kind of up in the air; there's no studies in humans that shows that it does.

More important, is the effect it's supposed to have on the body...the mechanism of action is purported to be the binding of excess calcium in the brain.

There's another nutrition though that's super important to making sure calcium goes where it needs to...

# Vitamin K2

Vitamin K2 helps tell the body to deposit the calcium you take in, into the bones, instead of in other tissues of the body. It also has many other uses...



# Supplements That May Help Decrease Age-Related Cognitive Decline

- ❖ Fish Oil
- ❖ Animal-Based Phosphatidylserine

Food-based options that contain high levels of spermidine can also help!



# Supplements Potentially Beneficial in Mild Cognitive Impairment

- ❖ Acetyl-L-Carnitine
- ❖ Ashwagandha
- ❖ B-vitamins (specifically, vitamins B-1, B-12, B-6 and Folate)
- ❖ Fish Oil (may only help though if B-vitamins levels are adequate + has greatest benefit in those who don't regularly consume fish)
- ❖ L-arginine
- ❖ MCT
- ❖ Probiotics (specifically L. Rhamanosus GG)
- ❖ Vitamin D (intake sufficient to maintain a moderate vit. D level)

# Supplements Potentially Beneficial in Alzheimer's

- ❖ Acetyl-L-Carnitine
- ❖ Choline (specifically CDP choline)
- ❖ Fish Oil
- ❖ Huperzine A\*
- ❖ High-Dose Vitamin E (~2000 IU daily)\*
- ❖ Magnolia Bark



# One Last Note..Dental Care is Super Important!



Chronic gum disease is associated with a higher risk of vascular dementia.



# Questions?

