

Choosing *smarter*: Building your Cognitive 401K

Dementia Prevention Strategies

Gina Serraiocco MD

Board-certified in Internal Medicine & Integrative Medicine



Questions

Questions will be answered at the end of the presentation.

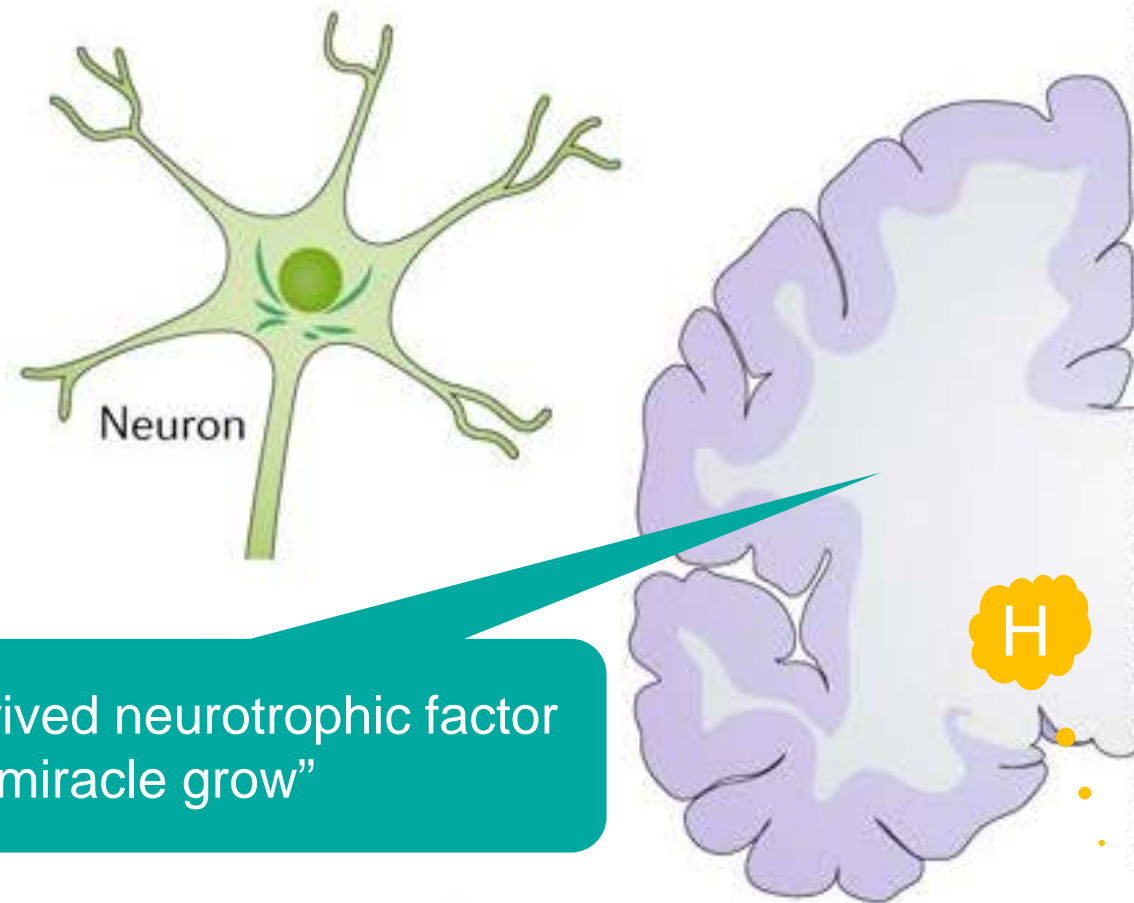
Text your questions to **916-573-0447**.

But first, an invitation

...to ***be present***



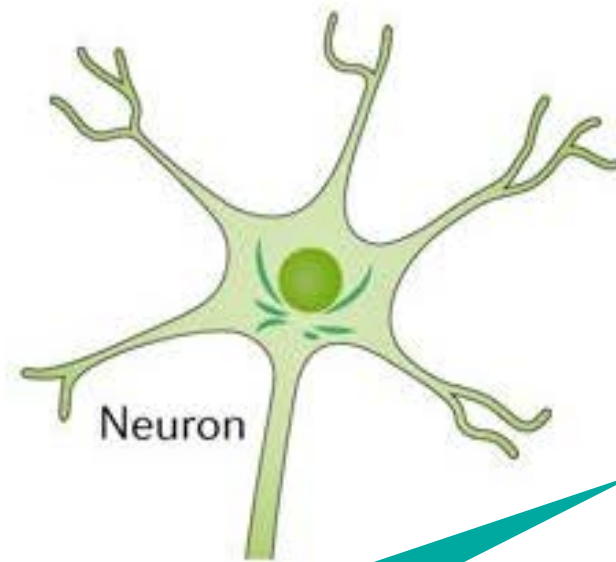
Healthy Brain



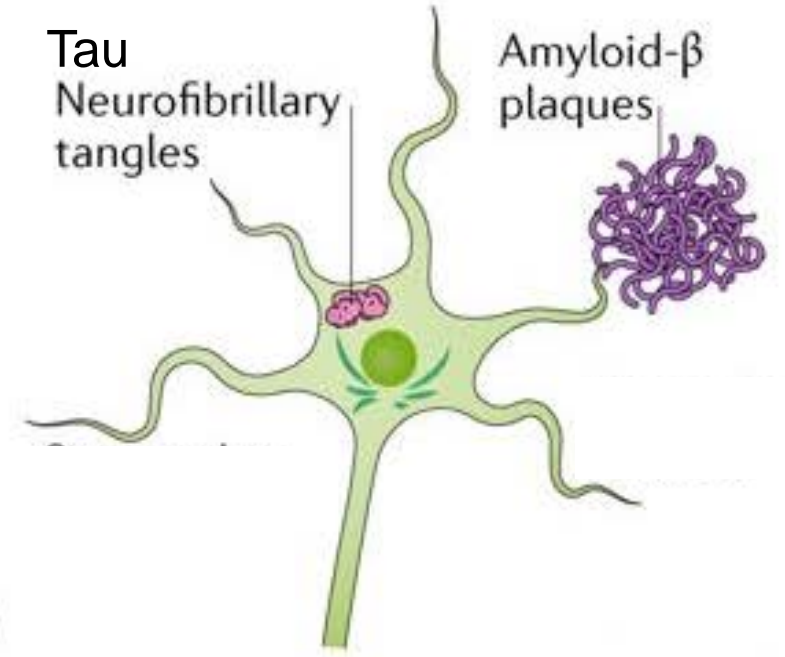
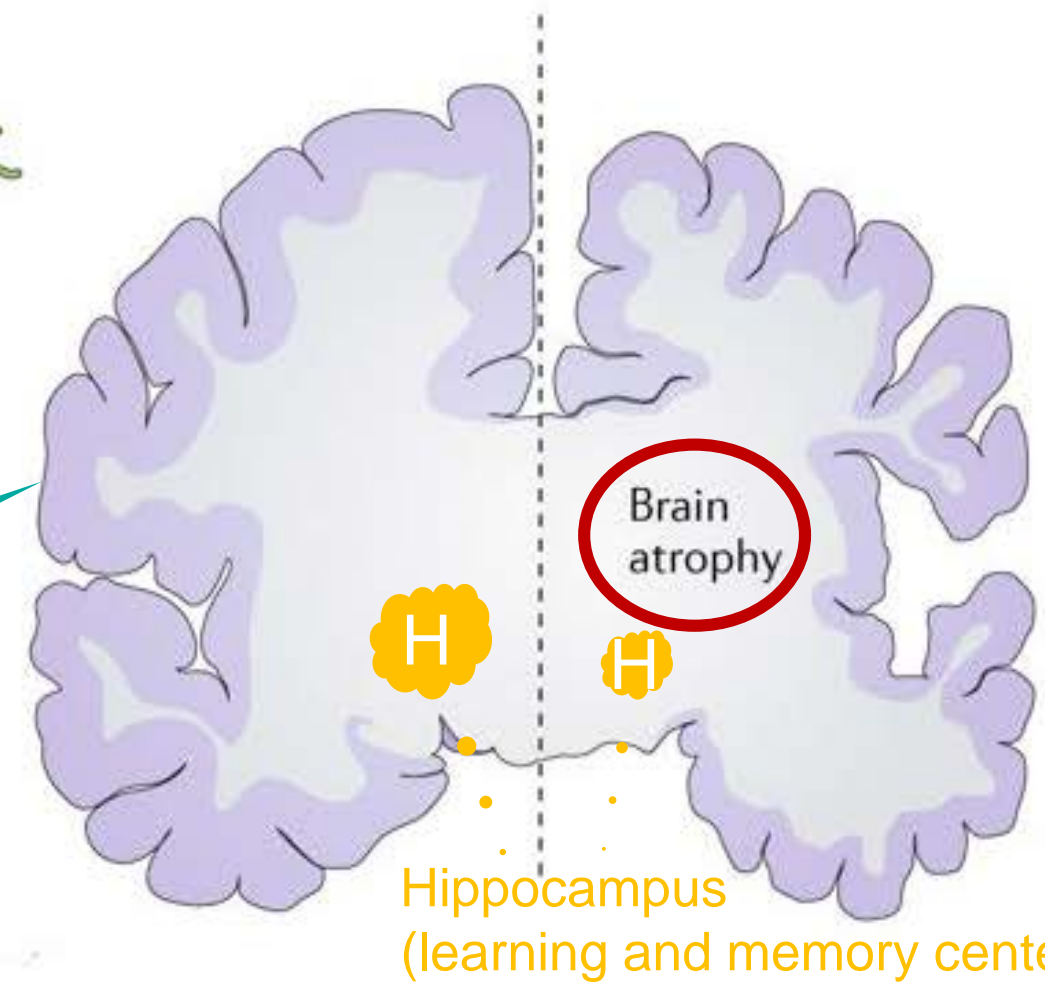
Brain-derived neurotrophic factor (BDNF) “miracle grow”

Hippocampus
(learning and memory center)

Healthy Brain vs Alzheimer's Brain



Brain-derived neurotrophic factor (BDNF)



ApoE4 gene?

Prevention: **choose** *smarter, not harder*

nourish *smarter*

slumber *smarter*

breathe *smarter*

move *smarter*

detox *smarter*

cultivate your thoughts *smarter*

...

Q&A



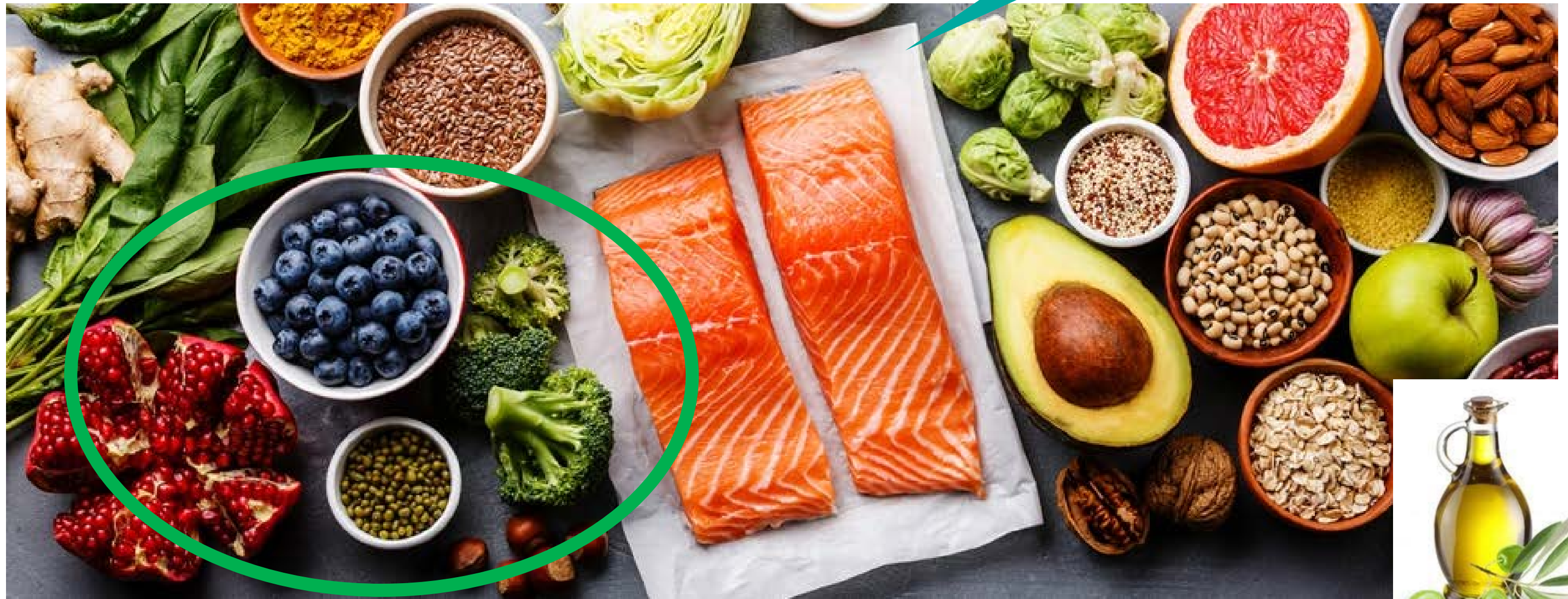
Nourish *smarter*

eat food. not too much. mostly plants.

- michael pollan

Nourish *smarter...* MIND diet

40% ↓ risk
Independent of ApoE4!



Nourish *smarter*...8 hour time-restricted eating (16 hour overnight fasting)



Photo: ID 116806775 © Rudiestrummer | Dreamstime.com

Slumber *smarter*... multiple choice:

Pertaining to sleep, which of the following are true:

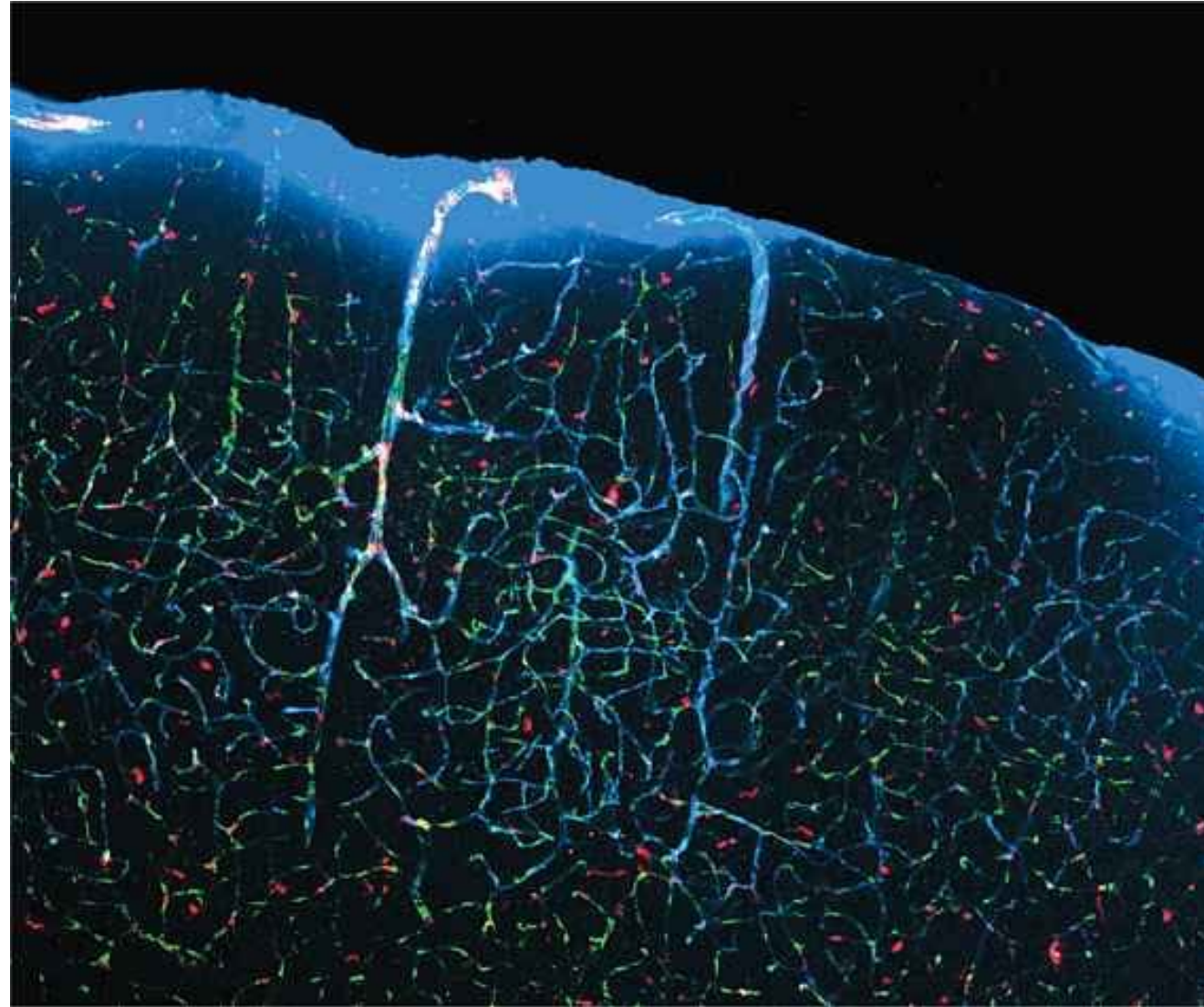
- A. Blue light (bulbs and electronics) adversely affects **melatonin** production, and therefore sleep
- B. Ambien (zolpidem), a prescription sleeping pill, has been shown to increase the risk of dementia by **3-fold** with chronic daily use
- C. Sleeping is like the **rinse cycle** of the dishwasher
- D. **All** of the above

Slumber *smarter*... it's the rinse cycle



<https://www.sciencenews.org/article/sleep-brain-alzheimers-plaques-protein>

Slumber *smarter*... glymphatic drainage



Xie L, Kang H, Xu Q, et al. Sleep drives metabolite clearance from the adult brain. *Science*. 2013;342(6156):373-7.

Slumber smarter... multiple choice:

Pertaining to sleep, which of the following are true:

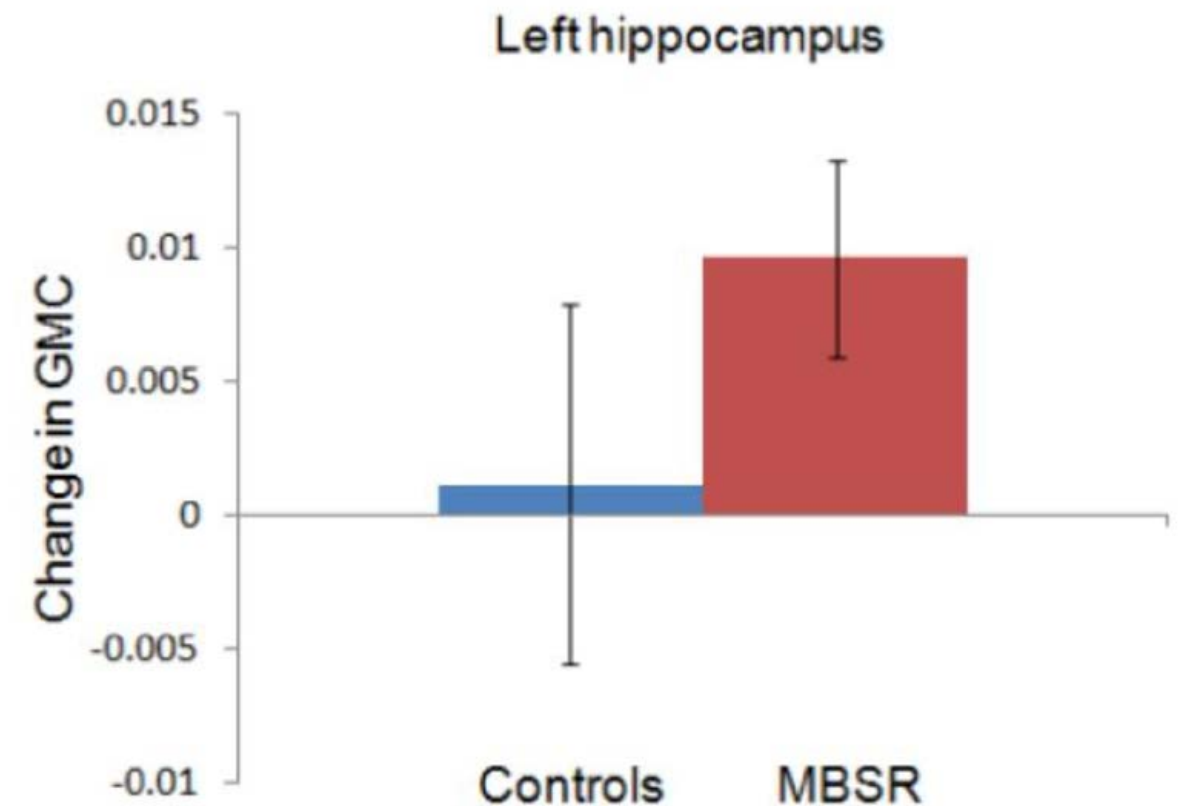
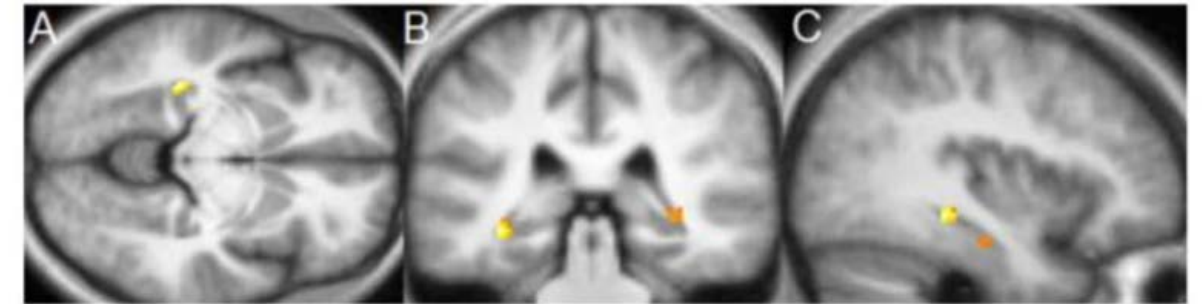
- A. One night of missed sleep can result in increased **A β deposition** in the hippocampus
- B. Untreated **sleep apnea** increases dementia risk by 26%
- C. Optimal sleep for brain health seems to be **7-9 hours** per night
- D. All of the above

Breathe *smarter*

Decrease stress; increase resilience
Increase BDNF
Protect against atrophy
Increase hippocampal growth

Mindfulness-based Stress Reduction (MBSR) class

Apps: 10% happier (for skeptics)
Headspace, Calm, Insight timer



Breathe smarter... 4-7-8 breathing

Tips:

Sit up straight

Place tip of tongue just behind upper teeth, and exhale around your tongue

Steps:

- Exhale completely through mouth, whoosh
- Inhale deeply and fully through nose, count of **4**
- Hold breath, count of **7**
- Exhale completely through mouth, whoosh, *slow* count of **8**
- Repeat three times

Move smarter... “sitting is the new smoking”

Multiple choice: Based on clinical research, a **35% reduction** in dementia risk is seen in patients who:

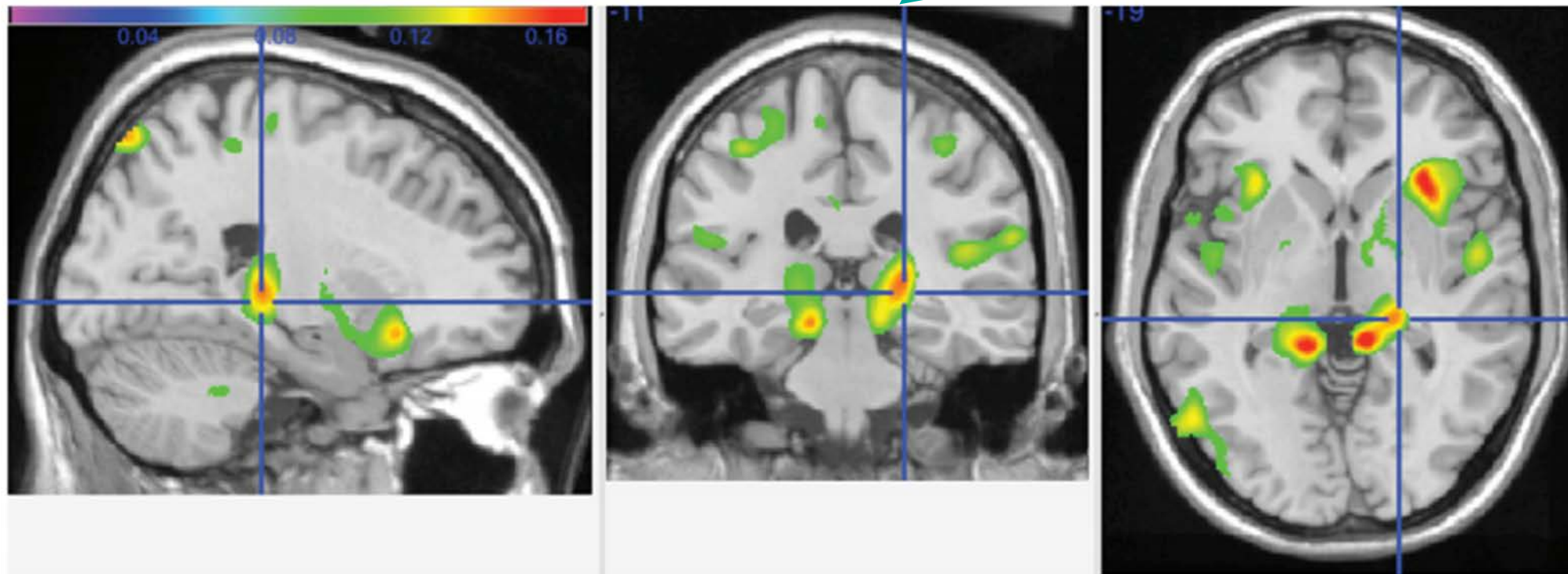
- A. Work 10 hours a day at a desk job
- B. Commute by car 1.5 hours a day
- C. Play computerized brain games (like BrainHQ) for 1 hour a day
- D. Walk an average of 6 miles *per week*

6 miles @ 2000 steps per mile = 12,000 steps ***per week***
... easy!



Move smarter

- Increase BDNF
- Decrease brain atrophy
- Increase in hippocampal volume



Detox smarter... first, avoidance!

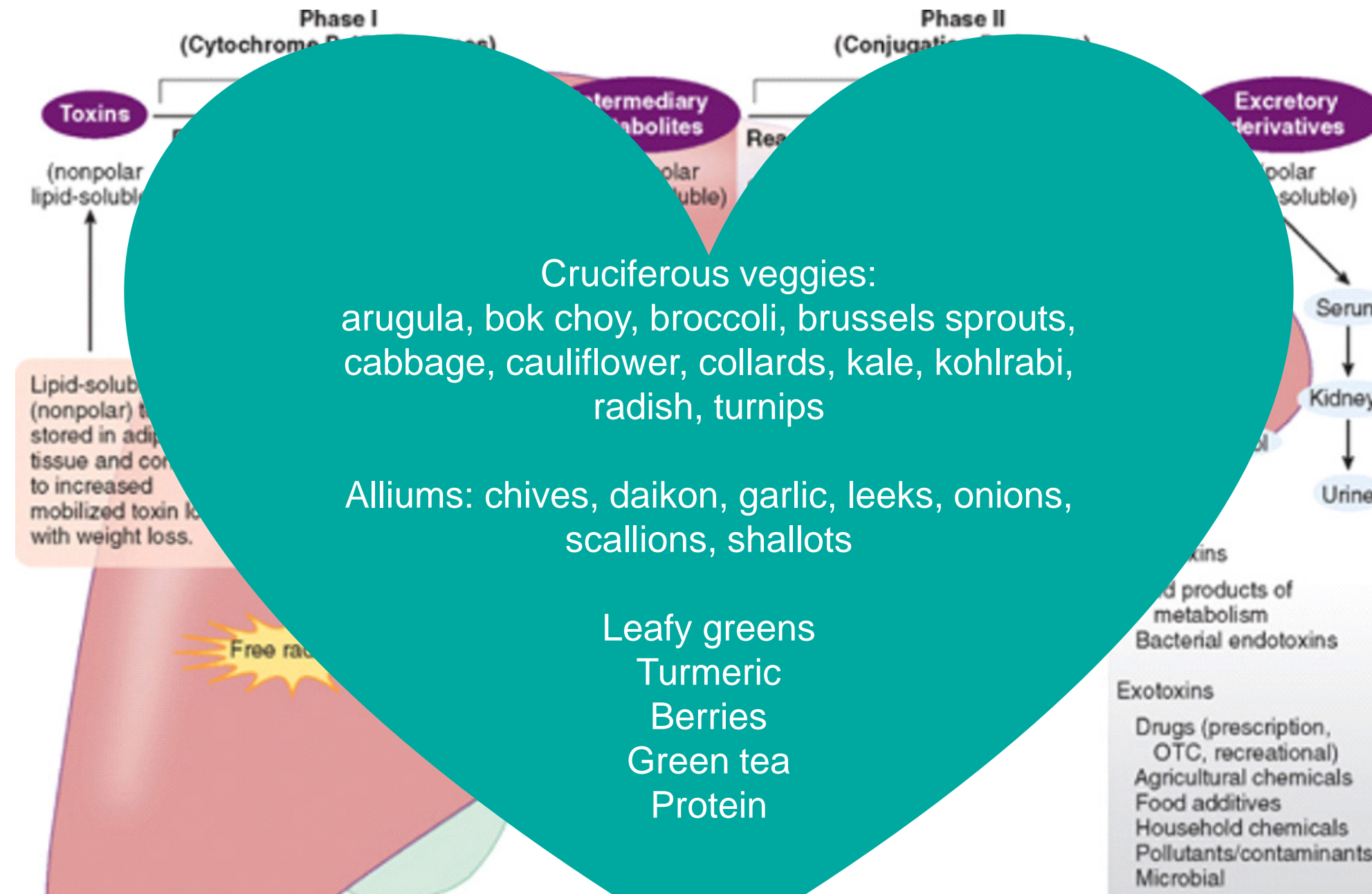
Detox smarter... first, avoidance!

Regarding toxin exposure, which of the following are true:

- A. 2019 Dirty Dozen List includes: Strawberries Spinach Kale Nectarines Apples Grapes Peaches Cherries Pears Tomatoes Celery Potatoes
www.EWG.org; organic; choose personal/home care products wisely, avoid plastic
- B. Compared to the countryside, there is 40% increased risk of dementia in urban dwellings within 50 meters of a major highway
HEPA filter. Recirculation button during heavy commute.
- C. Smoking is associated with a 70% greater risk of Alzheimer's dementia
No smoking
- D. Oral care may decrease oral bacterial toxins found in 90% of Alzheimer's brains
Floss daily!
- E. **All of the above**



Detox smarter... food as medicine



Detox smarter... sauna

True or False?

Research suggests that a daily 20-minute **sauna** can decrease dementia risk by **65%**

Detox smarter... sauna

A lesson from the Finns...

40-60 yo

20 minute dry sauna, 170+°F(!)

4+ days/week vs. 1 day/week

Followed for 20 years



65% decreased risk of dementia!
40% decreased all-cause mortality!

Laukkanen T, Kunutsor S, Kauhanen J, Laukkanen JA. Sauna bathing is inversely associated with dementia and Alzheimer's disease in middle-aged Finnish men. *Age Ageing*. 2017 Mar 1;46(2):245-249.

Laukkanen, T., Kunutsor, S. K., Khan, H., Willeit, P., Zaccardi, F., & Laukkanen, J. A. (2018). Sauna bathing is associated with reduced cardiovascular mortality and improves risk prediction in men and women: a prospective cohort study. *BMC medicine*, 16(1), 219. 2018 Nov 11. doi:10.1186/s12916-018-1198-0

Cultivate your thoughts *smarter*




50%↓ risk!

Independent of ApoE4!

OPEN ACCESS PEER-REVIEWED

RESEARCH ARTICLE

Positive age beliefs protect against dementia even among elders with high-risk gene

Becca R. Levy , Martin D. Slade, Robert H. Pietrzak, Luigi Ferrucci

Published: February 7, 2018 • <https://doi.org/10.1371/journal.pone.0191004>

Purpose
Community
Social
Love
Hobbies
Volunteering
Spirituality
Gratitude
Joy

Prevention: **choose** *smarter, not harder*

nourish *smarter*

slumber *smarter*

breathe *smarter*

move *smarter*

detox *smarter*

cultivate your thoughts *smarter*

...

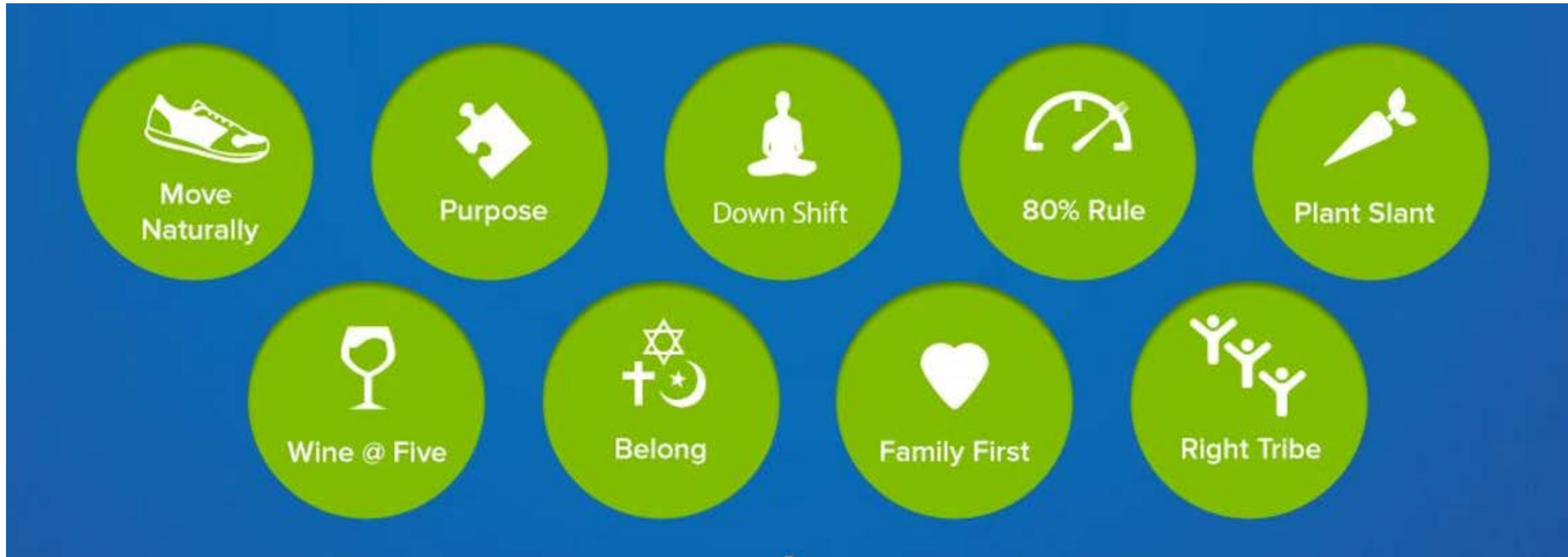
Q&A



Live smarter... Blue Zones



Live smarter... Blue Zones



Choose *smarter*... checklist

- MIND diet = Mediterranean diet + extra berries and greens
- 8-10 hour time-restricted eating window
- Prioritize medication-free sleep, 8 hours
- 4-7-8 breath & meditation
- Minimum* walk 6 miles per week (!)
- EWG.org Dirty Dozen & personal/home products & water filters
- Sauna culture
- Cultivate a positive attitude

Choose *smarter*... checklist

- MIND diet = Mediterranean diet + extra berries and greens
- 8-10 hour time-restricted eating
- Prioritize medication-free sleep, 8 hours
- 4-7-8 breath & meditation
- Minimum* walk 6 miles per week (!)
- EWG.org Dirty Dozen & personal/home products & water filters
- Sauna culture
- Cultivate a positive attitude

Questions



Text Your Questions
916-573-0447

By 2050... 1 in 33 Americans
will have Alzheimer's Dementia

...what is your *motivation to change*?

Early Symptoms of Alzheimer's Disease

- Memory loss
- Difficulty planning and solving problems
- Difficulty completing familiar tasks
- Difficulty determining time or place
- Vision/perception/depth loss
- Difficulty finding the right words
- Misplacing items often
- Difficulty making decisions
- Withdrawing from work and social events
- Experiencing personality and mood changes

Supplement *smarter...* & remember *FOOD first*

Magnesium

Turmeric

Omega-3 Fish Oil

Vitamin D (with K2)



Supplement *smarter**

- Magnesium Glycinate (or Citrate) 200-600mg nightly
- Vitamin D3 (*with* Vitamin K2) 2000IU daily with a fat-containing meal
- Turmeric 500mg (*with* piperine) daily with a fat-containing meal
- Omega-3 fish oil (Carlson or Nordic Naturals)

www.consumerlab.com

Quality Purity Cost Research

- ***Disclaimer:** Supplements *must* be tailored to individual health and lifestyle; please discuss with a trained practitioner. Extra caution if liver/kidney issues or if on prescription medications or blood thinners.

Medicate *smarter* (if needed at all)

	Common drugs that might increase dementia risk with CHRONIC use		Possible alternatives	
Allergies, colds	Anticholinergics brompheniramine (Dimetapp) carbinoxamine (Palgic) chlorpheniramine (Chlor-Trimeton)	diphenhydramine (Benadryl) hydroxyzine (Atarax, Vistaril)	cetirizine (Zyrtec) desloratadine (Clarinex)	fexofenadine (Allegra) loratadine (Claritin)
Anxiety	Benzodiazepines alprazolam (Xanax) chlordiazepoxide (Librium) clonazepam (Klonopin) clorazepate (Tranxene)	diazepam (Valium) flurazepam (Dalmane) lorazepam (Ativan) oxazepam (Serax) paroxetine (Paxil)	bupropion (Wellbutrin) buspirone (BuSpar) citalopram (Celexa) fluoxetine (Prozac)	sertraline (Zoloft) venlafaxine (Effexor)
Depression	Anticholinergics amitriptyline (Elavil) clomipramine (Anafranil) doxepin (Sinequan)	imipramine (Tofranil) paroxetine (Paxil) trimipramine (Surmontil)	bupropion (Wellbutrin) buspirone (Buspar) citalopram (Celexa) fluoxetine (Prozac)	sertraline (Zoloft) venlafaxine (Effexor)
Insomnia	Anticholinergics mirtazapine (Remeron) nefazodone (Serzone) trazodone (Desyrel) zolpidem (Ambien)	Benzodiazepines estazolam (ProSom) quazepam (Doral) temazepam (Restoril) triazolam (Halcion)	Melatonin Nondrug approaches practicing relaxation techniques avoiding alcohol and heavy meals before bedtime exercising vigorously early in the day	
Urge incontinence	Anticholinergics darifenacin (Enablex) fesoterodine (Toviaz) flavoxate (Urispas) oxybutynin (Ditropan)	solifenacin (Vesicare) tolterodine (Detrol) trimipramine (Surmontil) trospium (Sanctura)	Nondrug approaches bladder training physical exercise weight loss for overweight or obese women	Minimally invasive procedures Botox injections implantable bladder stimulators

Sources: DeGage SB, et al. "Benzodiazepine use and risk of Alzheimer's disease: Case-control study," BMJ (Sept. 9, 2014), Vol. 351, published online; Salahudeen MS et al. "Anticholinergic burden quantified by anticholinergic risk scales and adverse outcomes in older people: A systematic review," BMC Geriatrics (March 15, 2015), Vol.15, No.31, published online.

Optimize your numbers *smarter*

- ❑ blood pressure: <120/80
- ❑ cholesterol: LDL <100, triglycerides <150
- ❑ fasting glucose 70-90
- ❑ fasting insulin <5
- ❑ hs-CRP <0.9
- ❑ Vitamin D >40
- ❑ waistline (*lose the belly roll*) BMI 19-24

Mind your hormones *smarter... in menopause*

Table 3 Risk of developing Alzheimer disease (AD) among women using postmenopausal hormone therapy (HT) (self-reported) in the whole cohort (n = 8,195)

Postmenopausal HT, y	Incidence of AD/1,000 person-years	Model 1		Model 2	
		HR (95% CI)	p Value	HR (95% CI)	p Value
None	1.6	1.00 (reference)		1.00 (reference)	
<1	1.8	1.10 (0.69-1.80)	0.607	1.10 (0.69-1.80)	0.644
1-3	1.7	1.10 (0.76-1.50)	0.670	1.00 (0.72-1.50)	0.881
3-5	1.8	1.20 (0.76-1.80)	0.467	1.10 (0.73-1.80)	0.558
5-10	1.3	0.89 (0.61-1.30)	0.571	0.82 (0.55-1.20)	0.323
>10	0.97	0.62 (0.38-1.00)	0.070	0.53 (0.31-0.91)	0.021

47% ↓ risk when HRT started *within 5 years* of menopause

Abbreviations: CI = confidence interval; HR = hazard ratio.

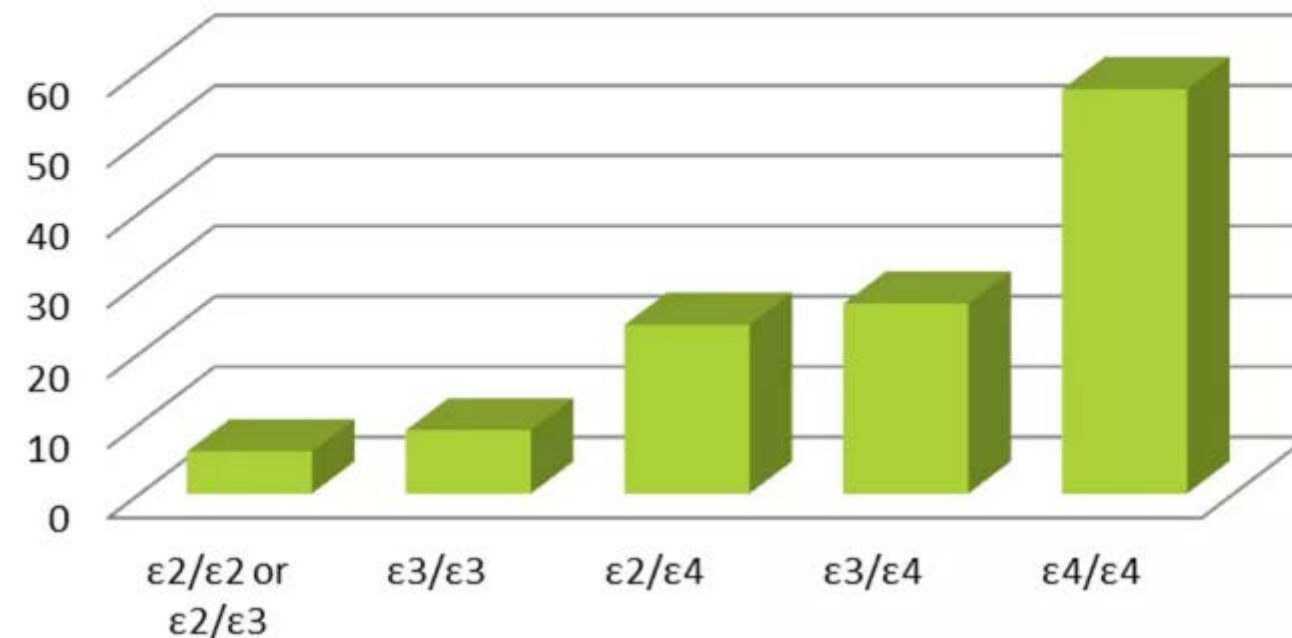
Model 1: adjusted for age. Model 2: adjusted for age, body mass index, alcohol, smoking, physical activity, occupation status, number of births, menopause status, any cancer, and surgery.

Imtiaz B, Tuppurainen M, Rikkinen T, et al. Postmenopausal hormone therapy and Alzheimer disease: A prospective cohort study. *Neurology*. 2017;88(11):1062-1068.

Shao H, Breitner JC, Whitmer RA, et al. Hormone therapy and Alzheimer disease dementia: new findings from the Cache County Study. *Neurology*. 2012;79(18):1846-52.

Hack your genes *smarter...* you are not your genes!

Approximate Lifetime Risk (%) of Alzheimer's Disease Based on ApoE Genotype*



*“genes may load the gun, but the environment pulls the trigger”
... choose smarter!*

Choose smarter... checklist

- MIND diet = Mediterranean diet + extra berries and greens
- 8-10 hour time-restricted eating
- Prioritize medication-free sleep, 8 hours
- 4-7-8 breath & meditation
- Minimum* walk 6 miles per week (!)
- Avoid toxins: EWG.org organic, water filter, clean products/air
- Sauna culture
- Cultivate a positive attitude
- Supplements (personalized) & mindful Medication use

Reversing early decline *smarter*

Book: The Alzheimer's Solution: A Breakthrough Program to Prevent and Reverse the Symptoms of Cognitive Decline at Every Age by Dean & Ayesha Sherzai MD

Book: The End of Alzheimer's: The First Program to Prevent and Reverse Cognitive Decline by Dale Bredeesen MD

<https://www.apoe4.info> support forum

<https://drhyman.com/broken-brain-podcasts/>