

Resources for Alzheimer's Disease Prevention and Reversal

- HealthyLivingforBusyPeople.com – click on “Alzheimer’s Prevention and Reversal” tab for Alzheimer’s Disease Resources, podcasts, interviews, books, websites, etc.
- **“The 30-Day Alzheimer’s Solution: The Definitive Food and Lifestyle Guide to Preventing Cognitive Decline”** (2021) & **“The Alzheimer’s Solution: A Breakthrough Program to Prevent and Reverse the Symptoms of Cognitive Decline at Every Age”** (2017) – Books from the creators of the “NEURO Plan” for the prevention and reversal of cognitive decline – Neurologists Dean and Ayesha Sherzai, MD. Teamsherzai.com ; [Facebook.com/TeamSherzai/](https://www.facebook.com/TeamSherzai/) (Prevention of Alzheimer’s and mild – moderate cognitive issues)
- **“The End of Alzheimer’s Program: The First Protocol to Enhance Cognition and Reverse Decline at Any Age”** (2020) & **“The End of Alzheimer’s: The First Program to Prevent and Reverse Cognitive Decline”** (2017) – Books from the creator of the Bredesen Protocol™ and ReCODE. Drbredesen.com - authentic Bredesen Protocol™ for the public and physician education and practitioner referral – get on mailing list, doctor referrals, ReCode Report, videos, town hall meetings with Dr. Bredesen. <https://www.apollohealthco.com/> (Prevention of mild to moderate cognitive decline and early Alzheimer’s treatment).
- **“Diet for the Mind: The Latest Science on What to Eat to Prevent Alzheimer’s and Cognitive Decline”** (2017) – Book from the creator of the “MIND Diet,” Martha Clare Morris PhD. “10 Foods” That Decrease Alzheimer’s Risk and “5 Foods” That Increase Alzheimer’s Risk. (Prevention: No cognitive or memory symptoms yet)
- ApoE4.info a forum on practical application of the Bredesen Protocol™, especially application of a tailored, whole food, nutrient dense, more plant-based ketogenic diet to enhance cognitive function.
- FunctionalMedicine.org is the Institute for Functional Medicine’s website where you can find a practitioner trained in the Bredesen Protocol™
- The MIND Diet – Slide Presentation. The diet pattern proven to help prevent Alzheimer’s disease. <http://bit.ly/2ovCegH>
- Sign-Up for “Kirk’s Healthy Living Tips” at: StayingHealthyToday.com or HealthyLivingforBusyPeople.com

[Alzheimer’s disease as a systems network disorder: chronic stress/dyshomeostasis, innate immunity, and genetics.](#)

Bredesen DE and Kurakin A, Aging (Albany NY). 2020 Sep 21;12(18):17815-17844. ([full article](#))

[Preventing Alzheimer's: Our Most Urgent Health Care Priority.](#) Sherzai D, Sherzai A., Am J Lifestyle Med. 2019 May 9;13(5):451-461. ([full article](#))

[Reversal of Cognitive Decline: 100 Patients.](#) Bredesen DE. et al., The Journal of Alzheimer’s Disease and Parkinsonism, 2018, 8:5 ([full article](#))

[Reversal of cognitive decline: a novel therapeutic program.](#) Bredesen DE. Aging (Albany NY). 2014 Sep;6(9):707-17. ([full article](#))

[Metabolic profiling distinguishes three subtypes of Alzheimer’s disease.](#) Bredesen DE. Aging (Albany NY). 2015 Aug;7(8):595-600. ([full article](#))

[Inhalational Alzheimer’s disease: an unrecognized – and treatable – epidemic.](#) Bredesen DE. Aging (Albany NY). 2016 Feb;8(2):304-13. ([full article](#))

[Reversal of cognitive decline in Alzheimer’s disease.](#) Bredesen DE, Amos EC, Canick J, Ackerley M, Raji C, Fiala M, Ahdidan J. Aging (Albany NY). 2016 Jun;8(6):1250-8. ([full article](#))

[MIND diet slows cognitive decline with aging.](#) Morris MC, Tangney CC, Wang Y, Sacks FM, Barnes LL, Bennett DA, Aggarwal NT. Alzheimers Dement. 2015 Sep;11(9):1015-22. ([full article](#))

[MIND diet associated with reduced incidence of Alzheimer’s disease.](#) Morris MC, Tangney CC, Wang Y, Sacks FM, Bennett DA, Aggarwal NT. Alzheimers Dement. 2015 Sep;11(9):1007-14. ([full article](#))

[Diet May Help Prevent Alzheimer’s MIND diet rich in vegetables, berries, whole grains, nuts The MIND diet: 10 foods that fight Alzheimer’s \(and 5 to avoid\)](#)

*****Talk to Kirk Hamilton PA-C Mon-Friday 8-9 pm PST 916 489-4400 about preventing and/or reversing early cognitive decline, dementia and early Alzheimer’s disease as well as sensitive cognitive screening with the [MoCA Test](#).

DIET FOR THE MIND



The Latest Science on
What to Eat to
Prevent Alzheimer's and
Cognitive Decline

From the Creator of the MIND Diet

Dr. Martha Clare Morris
WITH 80 RECIPES BY LAURA MORRIS

PREVENTING ALZHEIMER'S DISEASE (Prevention: No Symptoms) THE MIND DIET: 10 "BRAIN HEALTHY" FOODS GROUPS

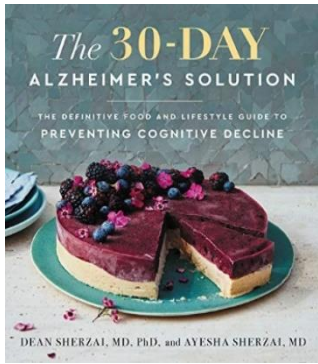
- Green leafy vegetables (serving 1 cup raw, 1/2 cup cooked)
- 2 servings/wk benefited
- 6 ≥ servings/wk optimal
- A salad and at least one other vegetable every day (serving 1 cup raw, 1/2 cup cooked)
- Nuts 5 servings (1/4 cup/sv) per week
- Berries two servings (1/2 cup/sv) per week
- Beans 3 servings per week (1/2 cup/sv cooked)
- Whole grains 3 servings per day (1 slice bread, 1/2 cup cooked grain, 1 cup cereal)
- Fish once per week (3 oz/sv, not daily)
- Poultry ≥ 2 servings per week (3 oz/sv)
- Olive oil as primary cooking oil
- 1 glass of wine daily

PREVENTING ALZHEIMER'S DISEASE THE MIND DIET: 5 "UNHEALTHY" BRAIN FOOD GROUPS

- Red meats ≤ 3 servings per week
- Butter and stick margarine < a tablespoon/day
- Cheese ≤ once per week
- Pastries and sweets ≤ 5 "treats" per week
- Fried or fast food ≤ once per week

PREVENTING ALZHEIMER'S DISEASE THE MIND DIET: MORE BENEFIT WITH TIME

- Even "modest adherence" to the MIND Diet measurably reduced a person's chances of developing Alzheimer's Disease, and the longer its use, the greater the benefits.
- "People who eat this diet consistently over the years get the best protection," said lead author Martha Clare Morris. "You'll be healthier if you've been doing the right thing for a long time."
- Alzheimer's Disease Prevention and Treatment with the MIND Diet – An Interview with Martha Clare Morris, PhD
 - [StayingHealthyToday.com \(http://bit.ly/1OXHFzN\)](http://bit.ly/1OXHFzN)
- The MIND Diet
 - [Slide Presentation ://bit.ly/2ovCegH \(http\)](http://bit.ly/2ovCegH)



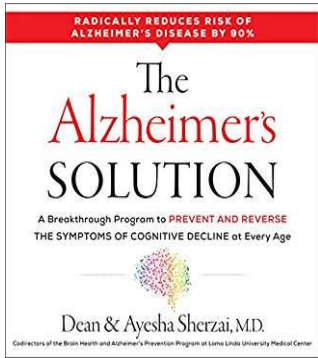
The 30-Day Alzheimer's Solution: The Definitive Food and Lifestyle Guide to Preventing Cognitive Decline by Dean Sherzai MD, PhD and Ayesha Sherzai, MD, MAS (2021).

Part 1) **A Proven Plan for Alzheimer's Prevention**

and Part 2) **What To Eat, What Not To Eat, and Why**

Part 3) **The Neuro Plan: 30 Days of Brain-Boosting**

Part 4) **Recipes** – Brain Boosting Breakfast; Smart Smoothie Bowls; Dazzling Dendritic Dishes; Rejuvenating Wraps; Brilliant Bowls; Brain-Loving Burgers; Vitalizing Veggies; Brain-Gain Grains; Synaptic Soups and Salads; Dreamy Dips Dressings; Neuroprotective Nut Cheeses; Mindful Muffins; Stimulating Scones; Dopamine-Boosting Desserts



RISK FACTORS TO COGNITIVE DECLINE AND ALZHEIMER'S

(The Alzheimer's Solution, 2017;18) Teamsherzai.com ; Facebook.com/TeamSherzai/
(Prevention & reversal of mild cognitive decline)

- Alcohol abuse
- Blood pressure - high
- Cholesterol - high
- Head trauma
- Obesity
- Sedentary Behavior
- Sleep problems, poor sleep
- Diabetes (or prediabetes)
- Diet – highly processed, high sugar, high saturated fat
- Smoking
- Stress
- Vascular disease – small vessel

THE NEURO 9 (The 30 Day Alzheimer's Solution, 2021;9)

- | | |
|---------------------------|---|
| 1. Green Leafy Vegetables | 3 cups raw or 1.5 cups cooked |
| 2. Whole Grains | 3 servings ½ cup cooked = 1 serving |
| 3. Seeds (flax, chia) | 2 tablespoons (2 servings) |
| 4. Beans & Legumes | 3 servings of ½ cup cooked beans or tofu/tempeh, ¼ cup hummus, 1/2 cup peas |
| 5. Berries | ½ cup serving (1 serving) |
| 6. Nuts | ¼ cup (1 serving) |
| 7. Crucifers | 1 cup (2 servings) |
| 8. Tea | At least 1 cup daily |
| 9. Hers and Spices | At least ¼ teaspoon daily |

7 Rules for Eating to Superior Brain Health (The 30 Day Alzheimer's Solution, 2021;11)

- | | |
|---|--|
| 1. Eat a plant-based diet (and the NEURO 9 foods every day) | 4. Reduce salt and season your foods with herbs and spices |
| 2. Avoid all foods that are high in saturated fats | 5. Avoid processed foods |
| 3. Avoid refined carbohydrates and sugar | 6. Drink water |
| | 7. Eat homemade meals |

TOP TWENTY "BRAIN NOURISHING" FOODS

(The Alzheimer's Solution, 2017:95-98)

- | | |
|--|--|
| <ul style="list-style-type: none"> • Avocados • Beans • Blueberries • Broccoli • Coffee • Dark Chocolate • Extra-Virgin Olive Oil • Flax Seed • Herbal Tea – Mint, lemon balm, hibiscus • Herbs – cilantro, dill, rosemary, thyme, oregano, basil, mint, parsley • Leafy Greens | <ul style="list-style-type: none"> • Mushrooms • Nuts • Omega-3 Fatty Acid (algae) • Quinoa • Seeds (Chia, sunflower) • Spices – Cinnamon, cloves, marjoram, allspice, saffron, nutmeg, tarragon • Sweet potatoes • Tea – green • Turmeric – curcumin • Whole grains |
|--|--|

TOP TEN FOODS TO AVOID FOR OPTIMAL “BRAIN HEALTH”

(The Alzheimer’s Solution, 2017:98-99)

- Processed foods – high in sugar, salt, saturated fats - clogs blood vessels to the brain and damages brain tissue
- Processed meats – preservative, salts and saturated fats that cause inflammation and damage blood vessels to the brain
- Red meat – contains inflammatory saturated fatty acids
- Chicken – main source of cholesterol in American diet. 3 x fat as protein and major contributor to obesity
- Butter and margarine – saturated and trans fats cause clogged arteries and brain shrinkage
- Fried food and fast food - trans fats reduce brain volume and increase cognitive decline
- Cheese – high saturated fat damages brain blood vessels
- Pastries and Sweets – inflammation and brain burnout
- Sugary Drinks – inflammation, damages neurons
- Excessive alcohol – neurotoxic to brain cells

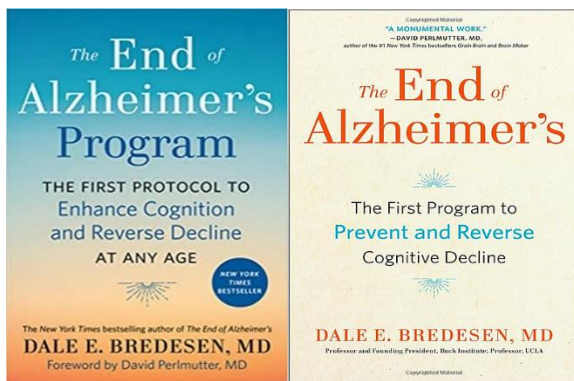
• **THE NEURO PLAN - LIFESTYLE MEDICINE FOR PREVENTION AND HEALING**

(Alzheimer’s Solution, 2017:79-270)

- **Nutrition** – mostly plant-based, whole grains, whole starchy and non-starchy vegetables, legumes, fruit, nuts, seeds, olive oil, EPA-DHA from algae. (81)
- **Exercise** – Exercise is ESSENTIAL to cognitive health. Prevents dementia and Alzheimer’s, repairs memory centers, and grows new brain cells. Build your life around movement. (141)
- **Unwind** – Reduce uncontrolled stress which can reduce neurotransmitter production, impair synaptic connections, shrink the brain, increase beta-amyloid, oxidation, inflammation, alter gene function, etc. by meditation, walking, yoga, listen to music, simplifying your physical environment, have healthy relationship, have a sense of life purpose and exercise. (179)
- **Restore** – Restorative sleep, a minimum of 6 hours, with 7-8 being optimal, can increase BDNF (brain-derived neurotrophic factor) which repairs the brain at night; neurons and glia regenerate at night; the brain clears out toxins at night reducing amyloid build-up; helps maintain hippocampal and brain volume size. Deep sleep is where the brain organizes and cleanses. (201)
- **Optimize** – “**Build Cognitive Reserve** - “Chunking”, association, method of loci, music, navigation (cab drivers), second language, music, dance, formal education, complexed professions, uncomfortable challenges, social interaction.(231)

METBOLIC CAUSES OF ALZHEIMER’S DISEASE

- **Inflammation** – Natural protective function of the immune system that fights harmful bacteria and viruses. Acute inflammation helps us recover from injury, chronic inflammation increases risk to diabetes, heart disease, cognitive decline and other diseases.
- **Oxidation** – Chemical process involving the transfer of electrons creating free radicals that can damage tissue and cellular structures.
- **Glucose Dysregulation** – Caused by high amounts of sugar, refined carbohydrates and bad fats. Insulin resistance blocks sugar uptake into cell and ↑ inflammation, oxidation, lipid dysregulation, tau phosphorylation. Diabetes can cause brain shrinkage (hippocampus – memory center).
- **Lipid Dysregulation** – Occurs from excess lipids, inflammation, lipid oxidation. Cholesterol damage leads to micro- and macrovascular disease. Improper clearance and processing of cholesterol and lipids can lead to amyloid plaque formation.



The End of Alzheimer's Program (2020) & The End of Alzheimer's and by Dale Bredesen, (2017)

WHAT IS ALZHEIMER'S DISEASE
SIX (3) TYPES OF ALZHEIMER'S DISEASE (Bredesen)
 (Prevention, mild to moderate cognitive decline, Alzheimer's diagnosis)

- Type 3 – Toxic
- Type 4 (1a) - Vascular
- Type 5 (1b) – Traumatic

- Type 1 - Inflammatory
- Type 2 – Atrophic/Anti-inflammatory
- Type 1.5 - Glycotoxic (combines 1 & 2)

RISK FACTORS WE CAN CONTROL FOR ALZHEIMER'S DISEASE

- Alcohol use more than 1.5 drinks per day
- Anesthesia after 40 years old (general) more than 2 x
- Carbohydrates (too much simple and processed) in diet
- Chronic Inflammatory Response Syndrome (mold, toxin exposure)
- Dental amalgams more than 3
- Diabetes
- Drug use – addiction, illicit
- Food sensitivities
- Gluten sensitivity
- Hypertension
- Medications – polypharmacy
- Menopause – especially surgical menopause
- Metabolic syndrome
- Mitochondrial damaging agents – medications
- Mold exposure
- Nasopharyngeal infection (MARCoNs, fungus, biofilm)
- Neuroactive medications
- Nighttime eating
- Oral Hygiene – Poor, lack of flossing or dental care
- Peripheral vascular disease
- Pre-diabetes – FBS > 100
- Proton pump inhibitor (PPIs) use
- Root canal untreated
- Sinusitis – chronic
- Sleep < 7 hr/night
- Sleep apnea
- Statin use
- Stress
- Testosterone “suppression” therapy (i.e. for prostate cancer)
- Vascular disease (coronary, cerebral, peripheral, etc.)

REVERSING ALZHEIMER'S DISEASE - CHARACTERISTICS OF SUCCESS

- Supportive spouse, family or caretaker
- Success depends on the caretaking team's continued education
- Helpful and knowledgeable physician
- Diligence with program
- Attention to detail
- Improvement in lab values

- Consistent follow-up
- Repeated optimization of patient's metabolism

TESTS FOR ALZHEIMER'S DISEASE – “COGNOSCOPY”

- A/G ratio (albumin:globulin) ≥ 1.8
- Albumin > 4.5 g/dL (3.6-5.1)
- AST 10-35 U/L
- ALT 9-46 U/L
- Creatinine < 1 (.7-1.25 mg/dL)
- Glucose (fasting) 70 - 90 mg/dl
- Hemoglobin A1c < 5.6 (%)
- Homocysteine < 7 uM (umol/L)
- Insulin (fasting) ≤ 4.5 uIU/ml

INFLAMMATION

- hs-CRP < 0.9 mg/l
- IL-6 < 3 pg/ml
- TNF- $\alpha < 6$ pg/ml
- Glutathione – 5.0-5.5 micromolar

LIPIDS

- Cholesterol Total 125-200 mg/dL (< 150 mg/dl with diet reverses CAD generally)
- Increase AD risk < 150 than over 150???
- Triglycerides < 100 mg/dL (< 150)
- HDL > 50 mg/dL
- LDL < 100 mg/dL (< 70 reverses CAD), LDL particle # < 1000
- LDL p 700-1000, sd LDL $< 20\%$ of LDL; < 60 oxLDL
- Chol/HDL $< 3:1$
- Omega-6:3 =.5-3.0 (rare?)

METALS

Urine – Post Chelation Challenge with 1000 mg DMSA and CaEDTA 1500 mg

- Aluminum
- Arsenic
- Cadmium
- Lead
- Mercury
- Nickel

Quick Silver – Mercury Tri-Test (quicksilverscientific.com)

TESTS FOR ALZHEIMER'S DISEASE - MINERALS

- Ceruloplasmin 18-36 (m) ; 18-53 (f) mg/dL
- Copper – 70-175 mcg/dl
- Copper (Cu) serum minus 3 x ceruloplasmin ≤ 30
- Ferritin 20-380 ng/mL
- Iron 50-180 mcg/dL
- Iron binding capacity 250-425 mcg/dL
- % Saturation 15-60%
- Magnesium – RBC > 5.2 , 4-6.5 mg/dl
- Potassium > 4.5 (3.5-5.3 mmol/L)

- Selenium = 110 – 150 ng/ml
- Zinc > 90-110 mcg/dL, RBC zinc 12-14 mg/L
- Zinc: copper < .8-1.2 (ideal 1:1)

TESTS FOR ALZHEIMER'S DISEASE - VITAMINS

- Folate RBC > 280 ng/mL (serum 10-25 ng/ml)
- Vitamin A 38-98 mcg/dl (frequently low)
- Vitamin B1 >20 (20-30 nmol/L) or RBC thiamine pyrophosphate (TPP) = 100-150 ng/ml (critical in carbohydrate/energy metabolism)
- Vitamin B6 60-100 (2.1-21.7 ng/mL)
- Vitamin B12 500-1500 pg/ml)
- Vitamin C 1.3-2.5 mg/dL)
- Vitamin D > 50 (50-80 ng/mL)
- Vitamin E > 12-20 mcg/mL

GASTROINTESTINAL TESTING AND TREATMENT

- GI Effects Stool Exam
- Comprehensive Digestive Stool Analysis
- SIBO – small intestinal bacterial overgrowth – breath hydrogen and methane test
- Treat bacterial overgrowth, parasites or yeast found or by history

TESTS FOR ALZHEIMER'S DISEASE - HORMONE TESTING

- Cortisol (ug/dl) - a.m. 10-18 mcg/dl or 4 point saliva test
- DHEA – w 350-430 ug/dl m 400-500 mcg/dl
- Estradiol m < 50 pg/ml; f 50-250 pg/ml
- Pregnenelone > 100 ng/dl (50-100)
- Progesterone 1-20 ng/ml or Salivary Hormone Testing (must use for topical creams – upper ½ of normal range)
- P/E ratio 300-600 (f); males ratio 100-300 (m)***
[in saliva testing]/ serum P/E 100:10
- Sex hormones – by cream, patches, oral, pellets, sublinguals (test, prog, estrogen varying doses and routes).
- Testosterone (bio) – m-15-150 pg/ml
- Testosterone (free) – m – 6.5-15 ng/dl
- Testosterone (total) –m- 500-1000 ng/dl
- Testosterone (free) –f - 0.1-6.4 pg/ml

THYROID

- Morning basal body temperature > 97.7
- TSH < 2 microU/ml (maybe <1)
- T3 free = 2.3-4.2 pg/ml
- T4 free = 1.3 -1.8 ng/dl
- T3 reverse < 20

TESTS FOR ALZHEIMER'S DISEASE - MISCELLANEOUS FUNCTIONAL TESTING

- Coenzyme Q10 > 3 heart > 4 neuro (.44-1.64 mg/L)
- GGT (gamma-glutamyl transpeptidase) < 30 IU/L
- Lyme Testing (Igenix)
- Methylmalonic Acid (MMA) 87-318 nmol/L
- Mycotoxins – urinary mycotoxins for aflatoxins, trichothecene, ochratoxin, gliotoxin
- NutrEval (amino acid, antioxidants, fatty acids, RBC minerals, whole blood metals, organic acids)

TESTS FOR ALZHEIMER'S DISEASE - NEUROLOGIC/PSYCHOLOGICAL ASSESSMENT

- Neurologic Structure Assessment
 - Amyloid PET scan positive?
 - Hippocampal volume percentile
 - FDG PET performed?
 - FDG PET compatible with AD?
 - NeuroQuant/NeuroReader
- Neuropsychological Assessment
 - MoCA score > 26-30 - normal
 - Neuropsych or BrainHQ memory percentile
 - Neuropsych or BrainHQ executive percentile

TESTS FOR ALZHEIMER'S DISEASE - VASCULAR INFLAMMATION MARKERS

- Fatty Acids
 - OmegaCheck™ > 5.5% % by weight CHL (measures Total Omega 3s, EPA, DPA, DHA, AA, LA and ratios)
 - Omega 3:6 Index > 3.2%
- Inflammation Panel Cleveland Heart Lab
 - ADMA/SDMA (endothelial damage/dysfunction) – IPCHL
 - APOE4
 - F2-Isoprostanes (F2-IsoPs/oxidative stress in the body)
 - hs-CRP (mg/l) < 0.9 mg/L
 - Lp-PLA2 Activity (base of the plaque; rupture risk) < 75 nmol/min/mL - IPCHL
 - Microalbumin (kidney endothelial damage) women < 7.5; men < 3.6 mg/g creatinine - IPCHL
 - MPO (myeloperoxidase) (cap of plaque rupture risk) < 470 pmol/L - IPCHL
 - Oxidized LDL (OxLDL) < 60 U/L– IPCHL
 - TMAO (trimethylamineoxide) < 6.2 u/M– IPCHL

TESTS FOR ALZHEIMER'S DISEASE - CHRONIC INFLAMMATORY RESPONSE SYNDROME (CIRS)

- C4a 0-2830 > abnormal (toxin exposure)
- ERMI Test mycometrics.com 36 mold species (mold index)
- HERTSMI- 2 - 5 molds – recheck house to see if fixed (mycometrix.com)
- HLA-DR/DQ Haplotypes Lab Corp #167120 (mold susceptibility)
- MSH (Melanocyte Stimulating Hormone) abnormal < 35 pg/ml
- Mycotoxins – urine post glutathione challenge
- Nasal culture – MARCoNS (multiple-antibiotic resistant coagulase-negative Staphylococcus), biofilm, fungus
- TGF Beta-1 - Transforming Growth Factor Beta-1, abnormal > 2380
- Vasoactive Intestinal Peptide (VIP) – < 23 abnormal
- Visual Contrast Testing (visual contrast sensitivity testing) – do online (<http://www.survivingmold.com/store1/online-screening-test>)

TREATING ALZHEIMER'S DISEASE – LOW GLYCEMIC, WHOLE FOOD, MOSTLY PLANT-BASED DIET AND MILD KETOSIS

- **DIET** – Mild ketosis for cognitive function enhancement (combination of fasting, diet and exercise) Ketoflex 12/3
- Get glucose-ketone meter (ex. **Precision Xtra meter** ~\$25).

- **Mild ketosis** – Keep beta-hydroxybutyrate (BHB) 0.5-2.0mM provides cognitive benefit; (Glucose strips are inexpensive (less than \$1) and widely available. Ketone strips are more expensive (around \$4). Some found deals on Amazon, eBay or even through Canadian Pharmacies.)
- **Fasting Blood Sugar (FBS)** - 70-90 mg/dl
- **Post-Prandial Blood Sugars** (after meals) - 1) One hour after a typical meal: 90–125 mg/dl (200 mg/dl – diabetes) 2) Two hours after a typical meal: 90–110 mg/dl (140 mg/dl – diabetes) non-diabetics < 120 mg/dl 2 hours post meal
- **CRON-O-meter** www.cronometer.com - track macronutrient ratios (ex. 13%-P, 68%-F, 19%-C)
- **FAST – Starting 3 hours** before bed until morning (↓insulin→↑melatonin & HGH →↑sleep & immune function) i.e. go to be 3 hours or more after your evening meal.
- **FAST - 12 hours each night** from the end of your dinner to breakfast the next day (↑autophagy, ↑breakdown aggregated proteins & molecules) – Skipping breakfast is an option. May take a 1000 mg MTC capsule to aid in ketosis. Water with lemon or ginger to break the fast. (ApoE4s 14-16 hrs fasting)
- Consider having biggest meal at noon.
- Consider skipping breakfast
- **Glycemic Index** – consume foods with a glycemic index < 35 (<http://www.glycemicindex.com/>)

TREATING ALZHEIMER’S DISEASE - THE CRITICAL IMPORTANCE OF EXERCISE

- Every hour get up and walk 5-10 minutes
- 50-60 minutes DAILY of aerobic exercise (at least 5-6 days per week↑ brain derived neurotrophic factor protects/enhances brain “...EXERCISE IS ONE OF THE BEST WAYS TO PREVENT COGNITIVE DECLINE...A VERY, VERY IMPORTANT PART OF THE PROTOCOL! - ↑sleep, ↑insulin sensitivity, ↑oxygenation, ↑brain physiology, ↓stress, ↓fat, ↓adipokines)
- Strength training, yoga 2-4/week each
- Stretching, yoga, tai chi

TREATING ALZHEIMER’S DISEASE - HORMONE OPTIMIZATION

- Supports brain structure and function; enhance new memories and storage; inhibits neurodegeneration
- For initial assessment in non-hormone using adults serum, saliva, urine or blood spot may be used
- Topical cream monitoring should use saliva testing (serum values do not rise consistently with topical creams though tissue concentrations have been documented)
- Pellets, pills, injections, patches can use serum or saliva for monitoring

TREATING ALZHEIMER’S DISEASE - THE CRITICAL IMPORTANCE OF SLEEP

- 7-9 hours per night; get to bed before midnight; dark room; turn of EMFs; quiet
- ↑melatonin: ↓amyloid beta; ↑memory consolidation; ↑removal of abnormal and toxic protein species from brain
- Melatonin .5-10-20 mg at night; tryptophan 500 mg and/or 5HTP 100 mg if awoken at night
- Wind down before bed; avoid exercising before bed
- Miscellaneous ideas - blue blocker glasses (www.lowbluelights.com); cool bedroom; essential lavender or rosemary oil on bed sheets to aid in relaxation and to promote healthful sleep.
- Refrain from stimulating work or conversation.
- Sleep apnea assist – CPAP (sleep study)

TREATING ALZHEIMER’S DISEASE - STRESS REDUCTION

- ↑cortisol and corticotropin releasing factor receptor 1: ↑neural cell death and cognitive decline
- Stress reduction – meditation, music, walking, yoga, lovemaking, visiting areas of interest
- Meditation assistance - www.headspace.com
- Neural Agility (<http://www.activemindsglobal.com/products/revita-mind/>) 5 nights/wk for 30 minutes

TREATING ALZHEIMER'S DISEASE - MENTAL EXERCISE & AUDITORY PHYSIOLOGY

- Mental Exercise (Brain Training)
 - At least once daily 15-30 minutes
 - Brain HQ, Posit Science (<https://www.brainhq.com/>)
 - Dakim Brain Fitness (<https://www.dakim.com/>)
 - Luminosity (<https://www.luminosity.com/>)
 - Sudoku (<http://www.sudoku.com/>)
 - Crossword puzzles (<http://www3.crosswordpuzzels.com/>)
- Auditory Physiology
- Meditation on Steroids (<https://www.actualized.org/articles/>)

TREATING ALZHEIMER'S DISEASE - SUPPLEMENTS

- Alpha lipoic acid 100-300 mg/d (Mitochondria – ↑ cell energy)
- Bacopa monniera 250 mg (cognitive enhancement) 1-2/d
- Betaine 1-2 each meals (digest food, ↓ intestinal permeability and inflammation)
- Citicoline 500 mg BID (↑NGF)
- CoQ10 (ubiquinol) 400-900 mg (CVD >3; Neuro > 4.0)
- DHEA 25-100 mg/d
- DHA 400-1000 mg/d, EPA 120 mg/d
- Digestive enzymes (mixed) DigestZyme 1-2 each meal
- Flaxseed daily ¼-1/2 cup daily (Do Omega Check from CHL (> 5.5%))
- Glutathione (liposomal) 250 mg twice daily
- Magnesium taurate 200-400 mg/d (cognitive enhancement)
- Medium Chain Triglycerides (coconut oil) 1-2 tablespoons per day
- Melatonin .5 – 3 mg qhs (sleep)
- Methyl B12 (HOMO <7, B12 > 500)
- Methyl folate MTHF 1-10 mg daily (HOMO <7)
- N-Acetylcysteine 500-1500 mg/d (Mito – ↑cell energy)
- P5P – Pyridoxal 5 Phosphate 50-100 mg/d (HOMO <7)
- Pregnenelone 25-100 mg/d
- Probiotics/Prebiotics – Culturelle 2/d, VSL#3 2/d
- Resveratrol 100-400 mg/d (Mito – ↑cell energy; ↑SirT1 function)
- Turmeric (MERIVA) 500 – 2000 mg/d
- Vitamin B1 25-100 mg/g
- Vitamin D3 2000-10000 IU (25OH = 50-100 ng/ml)
- Vitamin K2 100-200 mcg/d
- Zinc (25-80 mg/d) / Cu (0-.5 mg/d if at all) (zinc:cu < 1.3 ideally 1:1)

TREATING ALZHEIMER'S DISEASE - ADDITIONAL TREATMENTS

- Basic Vitamin Infusion 1-3 x weekly or MJBVI 1-3 x weekly (Myer's Cocktail Equivalent)
- B1 (66 mg – 2/3 cc), B12 (methyl 666 mcg – 2/3 cc) Folic Acid (666 mg – 2/3 cc) – 2 cc IM 1-3/wk
- Chelation Therapy (toxic metals, coronary and cerebrovascular disease) 1-3 x weekly
- Glutathione IV – 1500-3000 mg 1-3 x weekly x 10
- NAD IV 250 mg -1-2 weekly x 2-4 weeks to see if benefit
- Phosphatidyl choline 875-1750 mg 1-3 x weekly x 10
- Vitamin C infusion ____ 25 gm ____ 50 gm ____ 75 gm ____ 100 gm

REV 05/02/21

A Greek Island's Ancient Secret to Avoiding Alzheimer's

<https://www.bluezones.com/2018/11/a-greek-islands-ancient-secret-to-avoiding-alzheimers/>

By [Dan Buettner](#), *Founder of Blue Zones, National Geographic Fellow, and New York Times bestselling author*

Most cases of Alzheimer's and dementia cases are avoidable. On the Greek island of Ikaria, there is a population of 10,000 people living eight to ten years longer than Americans with half the rate of heart disease, much less cancer, and most extraordinarily, also no cases of dementia.

If you are living in America and you hit 85 years, there's a high chance you have Alzheimer's disease. On Ikaria, you have a less than 10 percent chance. People are staying sharp and healthy until the end.

How Are Ikarians Avoiding Alzheimer's Disease? Going Wild

Ikarians eat the strictest version of the [Mediterranean diet](#) in the world. Like other people that eat the Mediterranean diet, they eat a lot of fruits and vegetables, whole grains, red wine, and olive oil. But the [Ikarian diet](#) varies in that they eat a lot less fish and meat and a lot more greens. They regularly eat a hundred or so wild greens and garden greens like mustard, chicory, fennel, and greens that we weed-whack in the States. These wild greens have ten times the artery scrubbing antioxidants that red wine does.

Herbal Teas

Looking at dietary surveys over the last 80 years (and visiting locals there) shows us that Ikarians are drinking herbal teas every day. They make these teas with plants from around their houses, from their gardens, and from the wild. They are making them with herbs like oregano, dandelion, sage, and rosemary. We sent some samples to be tested at the University of Athens during one of our Blue Zones expeditions to the island.

Not only were they anti-inflammatories, they were also mostly mild diuretics. Diuretics are the first line of pharmaceuticals the doctor diagnoses you with if you have high blood pressure.

Diuretics and Dementia

So how does this all connect to dementia?

Diuretics keep your blood pressure low, help your kidneys get rid of sodium, and help keep your arteries clean and wide so it's easier for blood to flow through. John Hopkins research published in the journal *Neurology* confirmed that the [use of diuretics reduced the risk of Alzheimer's by nearly 75%](#). Other research confirms that diuretics have a [neuroprotective benefit](#).

At the Height of Health

Ikaria is a mountainous village. Just about every trip to the store or a friend's house to eat includes a trip uphill. So throughout the day, residents are getting regular, low-intensity physical activity. They're not doing

[what we are getting wrong in America](#), where we think that we can sit in the office and in front of the TV all day and then make up for it with 30 minutes in the gym.

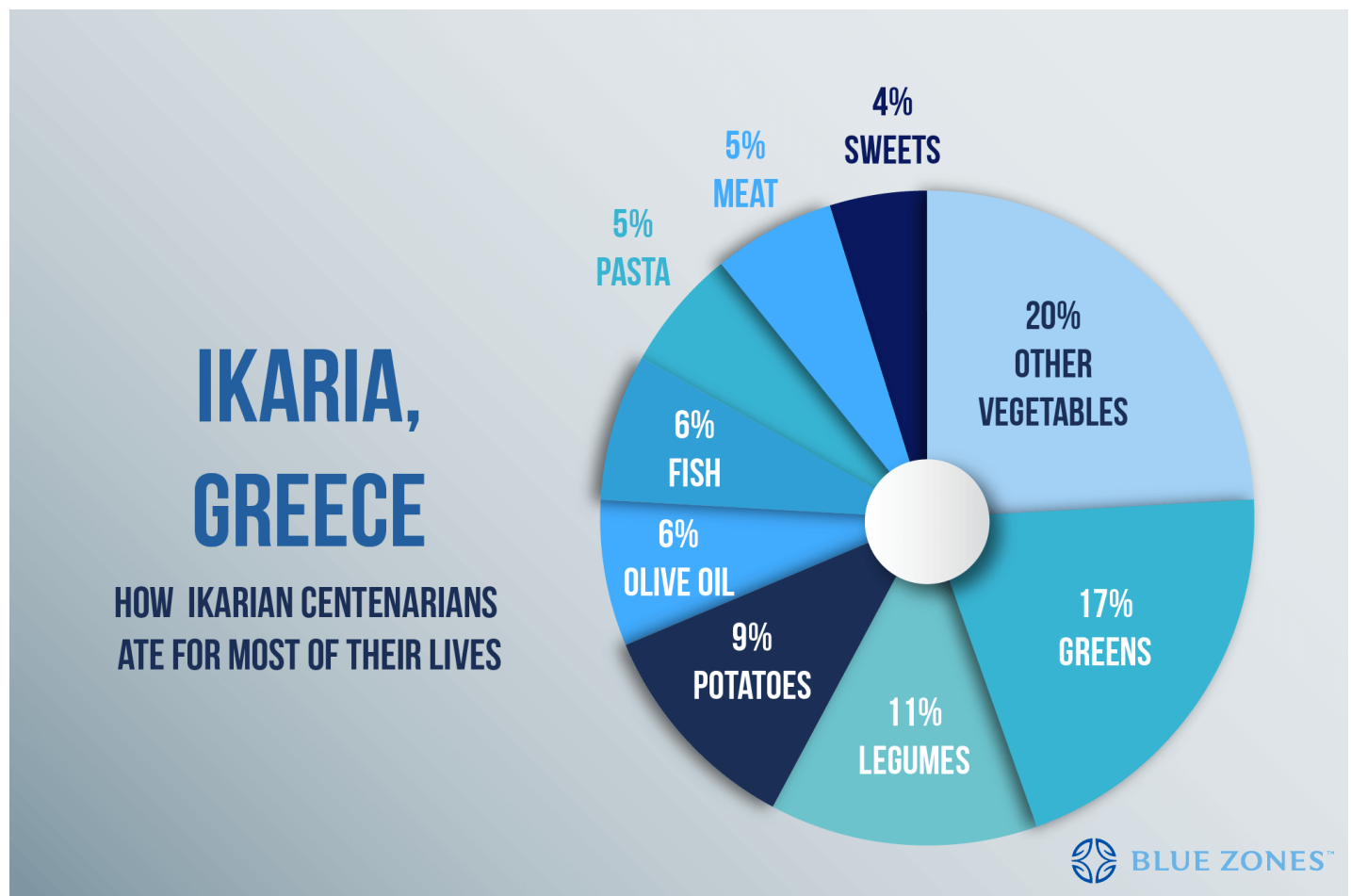
Village Living

Finally, in Ikaria, you can't avoid social contact. People expect you to show up at village festivals, at church, and at celebrations. If you don't, your neighbor will be pounding at your door wondering where you are. Ikarians are much less likely to suffer loneliness and depression than Americans. Depressed people are 50 percent more likely to suffer from dementia.

If you want to avoid Alzheimer's Disease and dementia, don't hope to rely on a silver bullet drug or wait until you're 80 to improve your lifestyle. Start now, with these simple lifestyle habits that will not only dramatically lower your risk of Alzheimer's, it will also lower your risk of almost every other chronic disease.

1. Eat a plant-based diet
2. Foster social connections
3. Set up your surroundings so you move every 20 minutes or so

Because at the end of the day, we don't just want to live a long time, we also want to stay sharp until the very end.





Diet and Dementia: What Foods Increase or Decrease Alzheimer's Risk?

<https://www.bluezones.com/2017/07/diet-dementia-foods-increase-decrease-alzheimers-risk/>

In the Blue Zones region of Ikaria, Greece, dementia among people over 85 is rare—over 75 percent less common than it is in the United States. (About half of Americans over 85 years show signs of Alzheimer's disease.)

Depression, cardiovascular disease, and type 2 diabetes are also rare. Ikarians eat a more austere form of what Americans call the Mediterranean diet, and what we call the plant-slant diet common to all Blue Zone areas: 95% of their calories come from plant foods and meat is eaten sparingly.

The [NutritionFacts](#) video below breaks down the science of why dementia is much lower among people that eat a Mediterranean-style diet. We also give a short summary of the video below.

Video Summary: There is considerable scientific evidence that healthy dietary patterns such as the Mediterranean diet are associated with lower Alzheimer's risk and slower cognitive decline.

The Mediterranean diet* is high in vegetables, beans, fruit, and nuts, and low in meat and dairy. But what are the protective components in the diet? Looking at the research, the important dietary differences seem to be the **high plant consumption** and the **lower fat consumption**.

China has the lowest fat intake and lowest Alzheimer's rates and the United States has the highest fat intake and highest Alzheimer's rates. Looking closer, the type of fat does matter. Harvard researchers found that higher saturated fat intake was associated with a poorer trajectory of cognition and memory. Women with the highest saturated fat intake had 60 to 70% greater odds of worst change on brain function.

Foods high in saturated fat: Beef, lamb, pork, butter, cheese, sausages. These are the foods to avoid.

*The [Mediterranean Diet](#) (MeDi) referenced in the studies is characterized by:

1. High intake of vegetables, legumes, fruits, and cereals
2. High intake of unsaturated fatty acids (mostly in the form of olive oil)
3. Low intake of saturated fatty acids
4. Moderately high intake of fish
5. Low-to-moderate intake of dairy products (mostly cheese or yogurt)
6. Low intake of meat and poultry
7. Regular but moderate amount of ethanol, primarily in the form of wine and generally during meals.

Dr. Greger's sources:

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