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Nutrition and Complementary Medicine

Dacy C Reimer, APNP, MSN, CCRC



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- In the last decade researchers have made great advances in linking nutrition with disease, suggesting that a full lifestyle “makeover” can improve the way your brain works.
- A study performed by AARP found that while over 90 percent of American believe brain health to be important, however, few know how to maintain or improve it.
- The Journal of the American Medical Association reports it takes seventeen years on average for scientific discoveries to be put into day-to-day clinical practice.
- Many of our current nutritional and practice guidelines are extremely outdated or conflicting with current information.



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The Brain Gut Connection

2009 NIH Human Biome Project

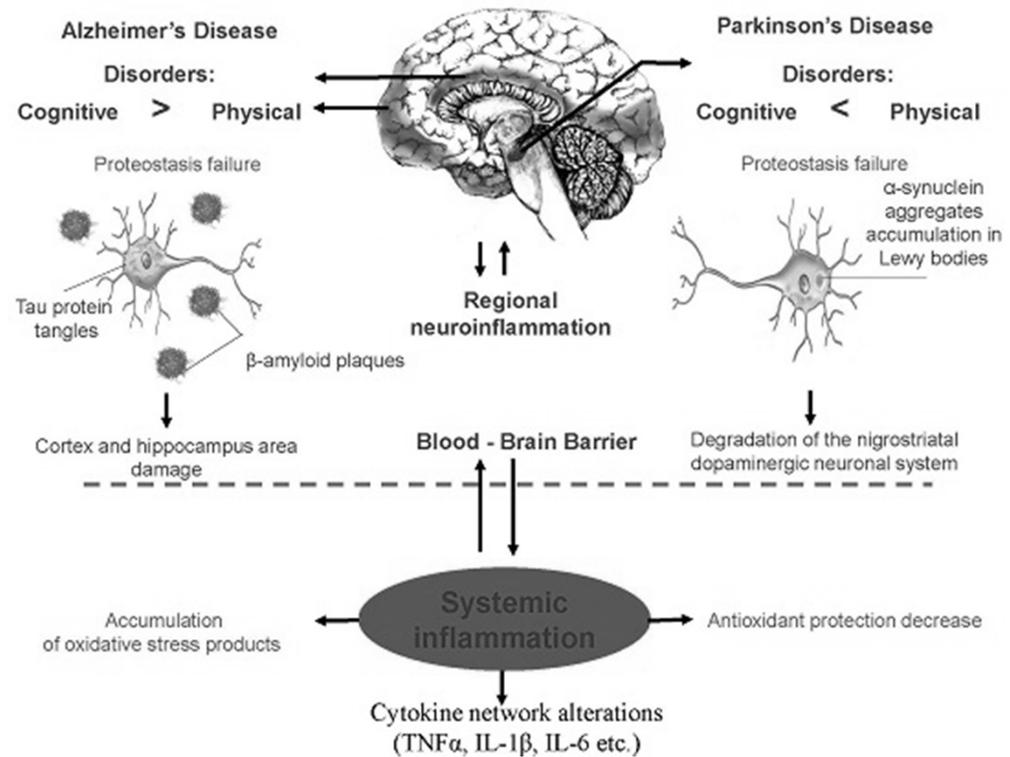
1. There are 100 trillion microbes in the gut
2. Now deemed the 2nd Brain
 - 80-90% of Serotonin (the happy neurotransmitter) is found in the gut.
 - Healthy = Happy
1. 70-80% of your immune system is in your gut
2. Diet optimizes the microbiome
 1. Prebiotics
 2. Probiotics
 3. Healthy fats
 4. Gluten free
 5. Antioxidants





Effects of Inflammation on the body

1. Dementia
2. Autoimmune Disorders
3. Cancer
4. Depression
5. ADHD
6. Respiratory Disorders



Boyko, A.A.; Troyanova, N.I.; Kovalenko, E.I.; Sapozhnikov, A.M. Similarity and Differences in Inflammation-Related Characteristics of the Peripheral Immune System of Patients with Parkinson's and Alzheimer's Diseases. *Int. J. Mol. Sci.* 2017, 18, 2633.



The Blue Zones

1. Okinawa, Japan
2. Sardinia, Italy
3. Nicoya, Costa Rica
4. Ikaria, Greece
5. Loma Linda, California



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Research Article

Fish Consumption Moderates Depressive Symptomatology in Elderly Men and Women from the IKARIA Study

Christina Chrysohoou,¹ George Tzitsinakis,¹ Gerassimos Sianos,¹ Theodora Psaltopoulou,² Nikos Gallatasos,¹ Vasiliki Metaxa,¹ George Lazaros,¹ Antigoni Miliou,¹ Evaggelia Giakoumi,¹ Charalambos Mylonakis,¹ Marina Zaromytidou,¹ Evaggelos Economou,¹ Georgina Triantafyllou,¹ Christos Pitsavos,¹ and Christodoulos Stefanadis¹

¹First Cardiology Clinic, Medical School, University of Athens, 11527 Athens, Greece
²Department of Hygiene, Epidemiology and Medical Statistics, Medical School of Athens, University of Athens, 11527 Athens, Greece
³Health Center of Ithaca, Ithaca Island, Greece

Correspondence should be addressed to Christina Chrysohoou, chrysohoou@ua.net

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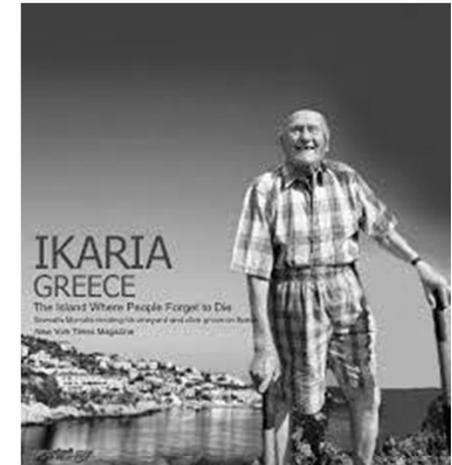
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Background: The aim was to examine the association of depressive symptoms with fish eating habits, in elderly individuals. **Methods:** From June to October of 2009, we studied 330 men and 343 women, aged 65 to 100 years, permanent inhabitants of Ikaria Island. Among several characteristics, depression was assessed with the Geriatric Depression scale (GDS range 0–15), while dietary habits through a valid semi-quantitative food frequency questionnaire. **Results:** Women had significantly higher values of the GDS compared to men (4.8 ± 3.3 versus 3.3 ± 3.1, $P = .001$). Participants in the upper tertile of depression scale ate less frequent fish and consumed higher quantities of alcohol, compared to those in the lowest tertile (all $P < .05$). Regarding fish consumption, 50% of the individuals reported consuming 1–2 times weekly, 27% 3 to 5 times weekly, 13% 2–3 times monthly, while the rest reported less (4.5%) and everyday (1.2%) consumption. Logistic regression showed that increased fish consumption (>3 times/week versus never/rare) was inversely associated with the odds of having GDS greater the median value (i.e., 4) (odds ratio = 0.34, 95% CI: 0.19, 0.61), after controlling for several confounders. **Conclusion:** Frequent fish consumption in elderly seems to moderate depression mood.

1. Introduction

Depression is a frequent mental disorder that in our age is characterized by a high level of morbidity which is expected to increase over the next 20 years. The World Health Organization has appreciated that major depression disorder will follow ischemic cardiomyopathy as the second more frequent reason of disability worldwide and will become the first cause in the developing countries up to 2020 [1]. Especially elderly individuals show increased vulnerability for expressing depressive symptomatology, which is often related with other pathological conditions [2]. As the social and economic cost of depression continues to increase, it is

essential to find alternative therapeutic solutions [3]. Among other therapeutic modalities, lifestyle habits have been related to a significant reduction of cardiovascular morbidity and mortality, especially among elderly individuals [4, 5]. Especially n-3 polyunsaturated fatty acids (PUFAs) provide a promising approach in the treatment of depression [5, 6]. Furthermore, it has been observed that populations with high consumption of fish appear to have a lower frequency of major depressive disorders [7, 8]. Clinical studies have found that people with depression n-3 PUFA administration had additive therapeutic effects [9, 10]. Moreover several randomized clinical studies have reported that treatment with n-3 PUFAs improves depression [11].



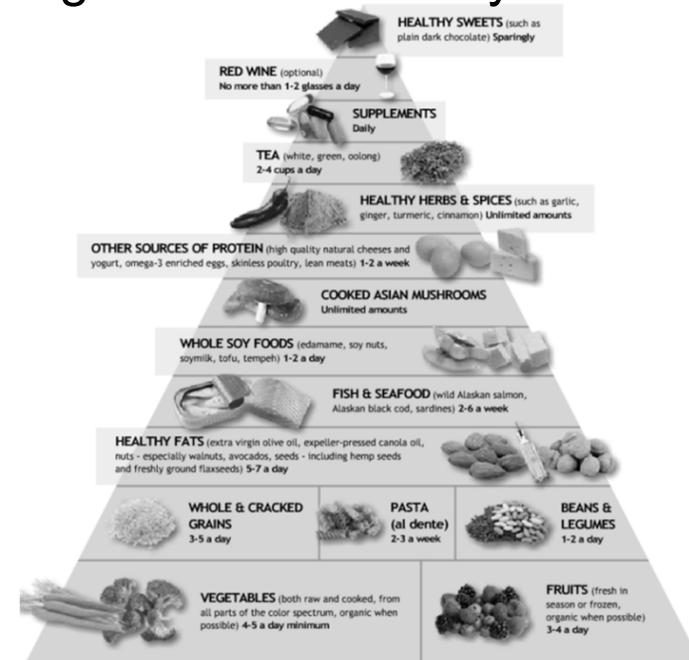


You Are What You Eat

What we eat is one of the most important decisions we make in a day. It regulates our health and disease states; a factor which we can control.

The state of your microbiome determines if you are fanning the flame of inflammation or squelching it.

Best Foods: Mediterranean Lifestyle and eating Anti Inflammatory





The Mediterranean Diet

The FINGER trial : The worlds first ongoing, large scale, long-term randomized control trial to measure the impact that our dietary and lifestyle choices have on our cognitive health

Goal: Reduce psychosocial risk factors for cognitive decline such as depression, loneliness, and stress using nutritional counseling and exercise.

After two years: Overall cognitive function of those in the intervention group increased by 25% compared to the controls, executive function increased by 83%, and a 150% improvement in brain processing speed.

Recommendation: The Mediterranean diet. A diet rich in vegetables, extra virgin olive oil, nuts, and legumes, low intake of red meat, low intake of dairy, and mild to moderate alcohol consumption.

Brainiac Foods

Dark Leafy Greens: Vegetables are your brains best friend! A recent study has shown that people who ate just two servings of dark leafy greens per day had brains that looked eleven years younger on scans!

Wild Alaskan Salmon: King Salmon is highest in long-chain omega-3 fatty acids, which have been shown to reduce inflammation, lower blood pressure and decrease risk factors for disease.

Avocados: They have more potassium than bananas and are high in fiber. Avocados contain healthy monounsaturated fat that when eaten with other vegetables, increases the absorption of their nutrients.

Blueberries: Have the highest antioxidant capacity and help with brain memory.

Extra-Virgin Olive Oil: Contains oleocanthal that stimulates our body to repair itself. It has the same anti-inflammatory effect as taking a small dose of Ibuprofen, without the potential side-effects.

Brainiac Foods Continued

Eggs: Packed with vitamins and nutrients, eggs, especially the yolks, are complex and assist in the flexibility of our cell membranes, increase acetylcholine (a learning and memory neurotransmitter), and contain lutein and zeaxanthin (two carotenoids shown to protect the brain and increase neural processing speed)

Grass Fed Beef: When it comes to animal proteins, keep in mind, we eat what they ate. Grains increase inflammation, so if the animal ate it, so are you. Grass fed beef is higher in Omega 3 fatty acids (good fatty acids) and has less Omega 6 (you want this to be low). Beef from grass-fed cows contains a certain beneficial fatty acid called CLA (conjugated linoleic acid). CLA can help prevent several diseases and conditions like obesity and diabetes).

Cruciferous vegetables: such as broccoli, Brussel sprouts, cabbage, kale, bok choy, arugula, radishes. Broccoli contains a compound called sulforaphane, which is a powerful activator of antioxidants to help detoxify by mopping up harmful free radicals in our body.

Brainiac Foods Continued

Dark Chocolate: Yes, I said chocolate!! Cocoa flavanols have been shown to reverse signs of cognitive aging and improve insulin sensitivity, vascular function and blood flow to the brain. Make sure its not processed with alkali, known as Dutch processing. Also, the cacao content should be above 80%. Consume one bar per week. Opt for organic or fair-trade source, which is usually ethically sourced.

Nuts: All nuts are healthy. They are rich in antioxidants, are a powerful source of Vitamin E (which protects synaptic membranes from oxidation, supporting neuroplasticity), and contain polyunsaturated fat. Pistachios contain more lutein and zeaxanthin (boost brain speed) than any other nut. They also contain resveratrol; an antioxidant shown to protect and enhance memory function. Fresh or dry roasted only. “Roasted” means deep fried in oil and lost nutrients.

Shoppers Tip: Shop the perimeter of the supermarket for fresh vegetables, fruits, and meats. The inner isles are full of processed, sugar filled products with un-natural additives to increase shelf life that are harmful to your body.

Brainiac Foods Continued

Prebiotics: are a special form of dietary fiber that acts as a fertilizer for the good bacteria in your gut such as:

- Apple cider vinegar
- Chicory
- Jerusalem artichokes
- Garlic
- Onions, shallots, and spring onions
- Leeks
- Savoy cabbage
- Cruciferous vegetables like broccoli, Brussel sprouts and cauliflower

Probiotics: are live bacteria and yeasts that are good for you by improving or restoring the gut flora. They can be found in authentic Greek yogurt and other fermented foods such as:

- Pickles or pickled vegetables
- Sauerkraut
- Traditional Buttermilk
- Kimchi

Feeble Foods

These are known to “gum” up the brain

Grains: Are a hidden sugar source. Gluten is a sticky protein found in wheat, barley and rye. Its present in breads, pizza and beer.

Goal: Minimize frequent and extended insulin spikes throughout the day. Spike cause a protein build up of Beta Amyloid known to cause Alzheimers disease (plaques).

40% of Alzheimers cases may be owed to chronically elevated insulin which may begin **decades** prior to diagnosis.

Hint: Stop eating 2-3 hours before bedtime to optimize this process by reducing circulating insulin.

Feeble Foods Continued

Refined Sugar: Our most concentrated source of carbohydrates and largest cause of insulin spikes.

Increased sugar = increased glycation = increased risk of dementia

Clear your pantry and read labels

Hidden offenders include: cane juice, fructose, malt dextrose, honey, maple syrup, molasses, sucrose, coconut sugar, brown rice syrup, fruit juice, lactose, date sugar, glucose solids, agave syrup, barley malt, maltodextrin, and corn syrup

Fructose makes you hungrier rather than full and causes you to over eat. It also goes right to your liver and induces fat creation called lipogenesis.

Feeble Foods Continued

Cheap Oils/Bad Fat: Are processed and modified into formulations that cause oxidation.

Oxidation = Free Radicals

Free radicals are 10,000x stronger and damage your bodies good lipids, proteins, DNA, hormones and enzymes.

Excessive oxidation is a primary mechanism for aging and inflammation, leading to Alzheimers, Parkinsons, Multiple Sclerosis, Lewy Body Dementia and Autism.

Avoid: Canola oil, corn oil, peanut oil, soybean oil, vegetable oil, safflower oil, sunflower oil, rapeseed oil, grapeseed oil and rice bran oil.

Use: Extra virgin olive oil, grass fed tallow, organic grass-fed butter/ghee, avocado oil or coconut oil.

Water Your Brain

- **Your brain is 80% water!**
- Dehydration is the most treated emergency symptom in the aging population: most treatments start with IV fluids
- Dehydration causes cognitive slowing, fogginess, lack of concentration and in some cases confusion and hallucinations.
- Signs you need to drink more water:
 - Dry mouth
 - Dry skin
 - Constipation
 - Mental fog
 - Fatigue
 - Headaches
 - Dark urine
 - Dizziness
 - Muscle Cramps

Water Your Brain

- Make water more flavorful by adding fruit, a sprig of mint or lime. Infused water is natural and contains more nutritious vitamins and antioxidants.
- Switch your soda to sparkling water or mineral water
- Avoid electrolyte or flavored drinks with added sugars or artificial colors
- Drink green or black tea for healthy polyphenols
- Sip! Don't chug!
- Your body only absorbs about a Dixie cup of water every 30 minutes...the rest you will urinate out.
- Cant remember to drink water?
 - Get a BPA free cup that has time and measures printed on it such as the Cactaki Water Bottle with time marker (Amazon.com)
 - Purchase a light up cup-to remind you to drink every 30-60 min (see my example cup)
 - Purchase an Ulla Smart Hydration Reminder for any cup you own (Amazon.com)

Summary: Make it nutritious! Choose real food over supplements

High Fiber

High Antioxidants (repair free radicals)

Brightly colored fruits and vegetables

Green and Black tea

Beans & legumes

Fish- 5 servings per week

Moderate protein consumption

Mostly from beans/plants

Minimal from animal: increase poultry, reduce red meats; make it grass-fed

Increase Herbs & Spices: tumeric, cinnamon, cloves

Eliminate fried food

Go nuts!

Enjoy a glass of red wine

Eliminate pesticides; Go organic

Drink more water- Sip! Don't chug!



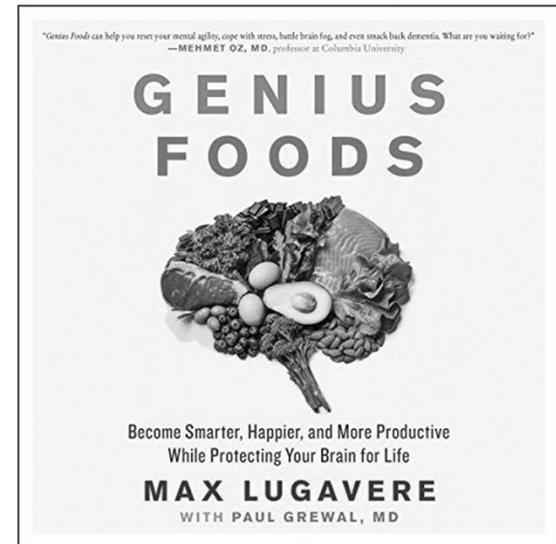
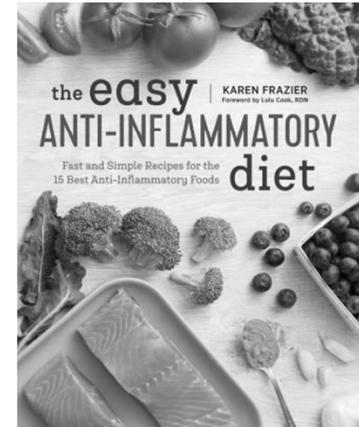
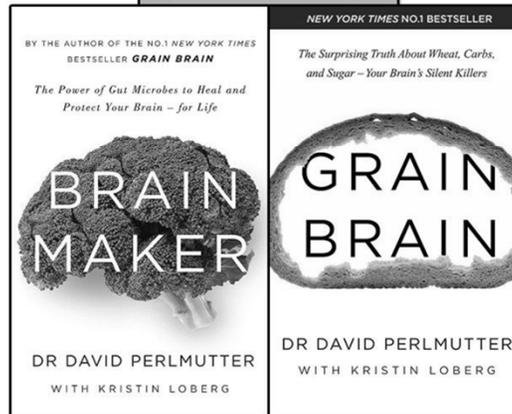
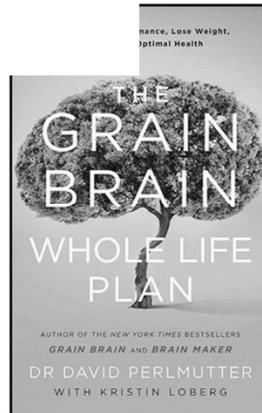
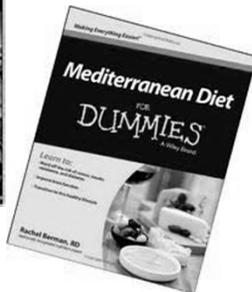
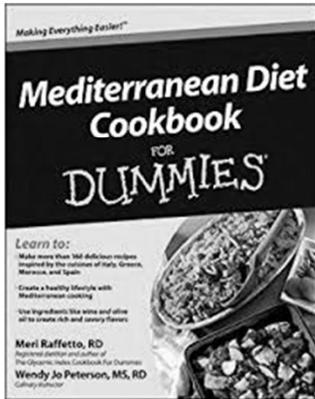
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COFFEETOWN & PRESS



Dr. Laurie K
Mischley

NATURAL THERAPIES FOR
**PARKINSON'S
DISEASE**



Neuroscience Group Memory Care Program

Who should schedule an appointment?

Medical evaluation is essential when memory loss interferes with the ability to carry out activities of daily living and seems progressive. Here are some of the warning signs:

- Challenges in planning or problem solving
- Difficulty completing familiar tasks
- Confusion with time or place
- Trouble with visual images and spatial relationships
- Change in ability to recall words or express self in conversation or writing
- Misplacing things and losing the ability to retrace steps
- Decreased or poor judgment
- Withdrawal from work or social activities
- Changes in mood or personality

What are some of the benefits of an appointment at the Memory Care Center?

- Identify treatable causes of memory changes
- Manage symptoms with medication and other interventions
- Open access to valuable support services and education
- Allow planning for the future



<https://neurosciencegroup.com/memory-care-center/>

The Science Behind Meditation: How It Changes Your Brain

Meditation helps participants feel calmer, lessening perceived stress and the risk of Alzheimer's.

Meditation reduces the stress hormone cortisol, which has been known to increase the risk of developing **dementia**.

Meditation increases cortical thickness and grey matter which slows the aging rate of the brain



A new study using functional resonance imaging shows differences in the emotion networks of the brain in people who don't meditate, people new to meditation, and people considered long-term meditators, who have thousands of lifetime experience with mindfulness meditation. Pictured is Matthieu Ricard, a buddhist monk, who has participated in similar studies at the UW–Madison Center for Healthy Minds. Among those helping him into the MRI is Professor Richard Davidson, with jacket. **PHOTO: JEFF MILLER**

Meditation: How long does it take?

In 2011, Sara Lazar and her team at Harvard found that mindfulness meditation can actually change the structure of the brain: Eight weeks of Mindfulness-Based Stress Reduction (MBSR) was found to increase cortical thickness in the hippocampus, which governs learning and memory.

Seek resources and keep practicing. It takes time to become skilled.

My suggestion for new meditation practitioners:

- Create a special peaceful environment, free of distractions
- Try it for just ten minutes a day for one month with the simple goal of developing more positive emotions, reduce stress, and strengthen focus in daily life.

If you have a few minutes in the morning or evening (or both), rather than watching TV, turning on your phone or going online, see what happens if you try quieting down your mind.



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Meditation/Mindfulness Resources

UW Health-Mindfulness Resources

<https://www.uwhealth.org/meditation-stress-reduction/mindfulness-based-stress-reduction-educational-resources/39766>

Wisconsin Hawthorn Project

<https://www.wihawthornproject.com/mindfulnessstrategies>

Rick Paddock- Mindfulness Trainer and Coach

<https://www.rickpaddock.com>

May 27, 2020 WPA "Ask The Expert"



It's never too late to make healthier choices
to improve your brain function!

Thank You!

Neuroscience Group
1305 W. American Drive
Neenah, WI 54956
(920) 725-9373