




BRAIN HEALTH THROUGH NUTRITION

Patricia Faust, MGS, LNHA
Gerontologist/Brain Aging/ Brain Health Specialist

<https://myboomerbrain.com>

513-460-6171



BRAIN HEALTH THROUGH NUTRITION

The brain is an elite organ! For all miraculous things our brain does, it is not sustainable without proper nutrition. Our brain is dependent on the nutrients we consume to function on a high level. Here is the inside scoop on the what and why of the critical nutrients for our brain.

Little But Mighty

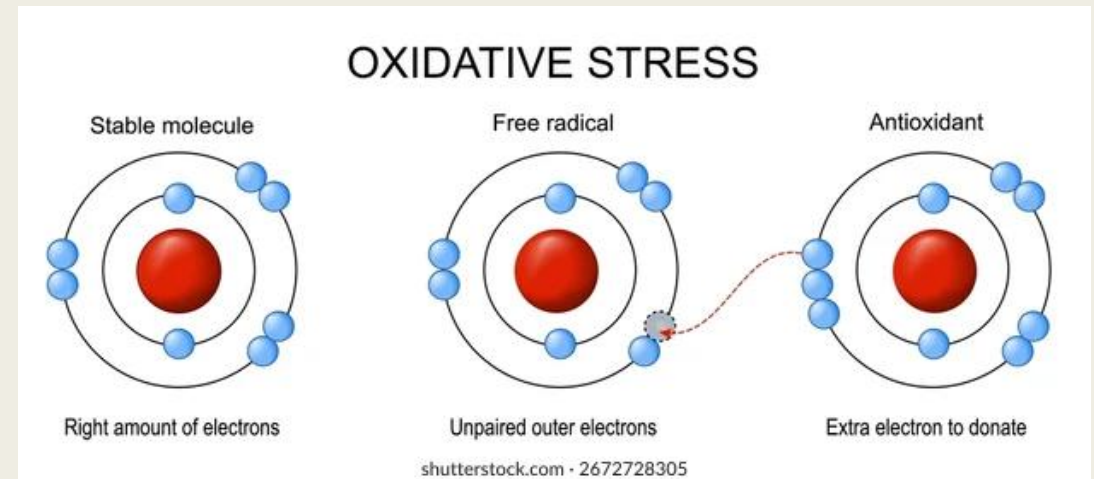
- Our brain makes up only 2% of body weight
 - *But consumes 20% of daily calories and oxygen*
- Preferred Energy Source: Glucose
 - Food broken down → glucose transported in blood → across blood/brain barrier → into brain cells*

It has high metabolism and uses up nutrients quickly



Hunger Needs

- The Brain is hungry for energy (calories)
- The Brain also hungry for Antioxidants
- The Brain is a metabolically active organ
- It creates an abundance of oxidative molecules called **Free Radicals**
 - *(unstable molecules that damage cells)*
- Makes the brain susceptible to oxidative stress → a result of having more **free radicals** than antioxidants to neutralize them
- Oxidative stress can damage brain tissue.



The Antioxidant Story

- There are two kinds of antioxidants:
 - *Enzymes made by the body (endogenous antioxidants): can prevent toxic substances from being created*
 - *Nutrients from food (dietary oxidants): can neutralize damaging consequences of oxidation – like free radicals*
- Dietary antioxidants have a big role to play





The FAT BRAIN

- 75% of the brain is water
- Then remaining brain is Brain Matter – 60% of this is FAT (lipids)
- Fats are an essential structural component of neurons
- The brain needs healthy fats to function properly
 - *From facilitating better blood flow*
 - *To improving memory and mood*

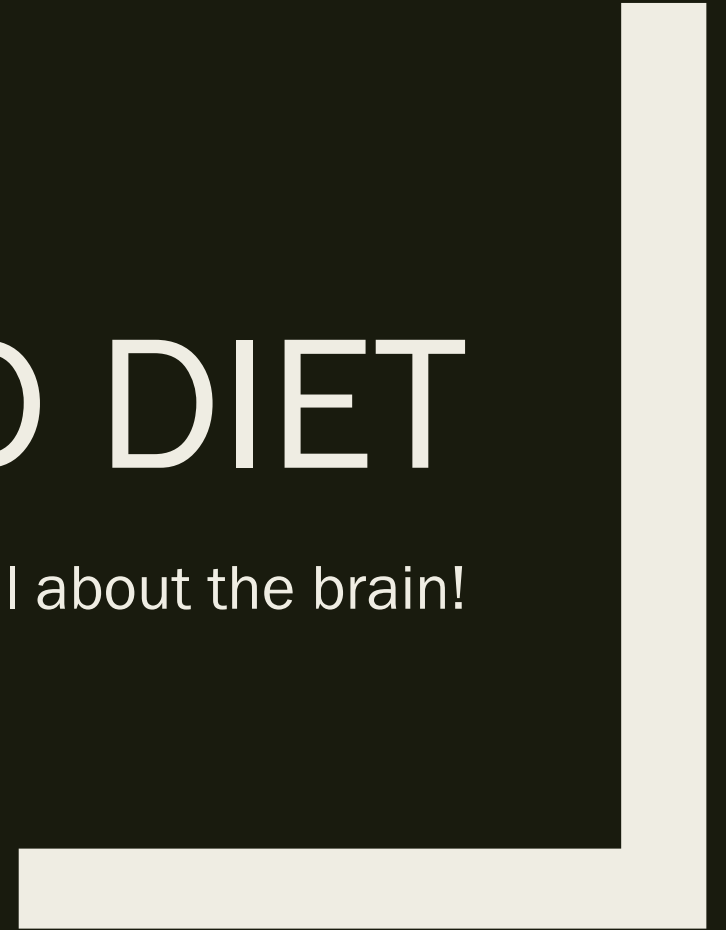
Where Does the Brain Get the Fats It Needs?



- The body produces all the saturated fat it needs
- Some fats need to come from the diet
- Essential polyunsaturated omega-3 and omega-6 fats
- The American diet supplies enough omega-6 fats , but not enough omega-3s – which come from fish, nuts, and seeds

THE MIND DIET

It's all about the brain!



What Is the MIND DIET?



- A healthy, evidence-based way to eat
- Designed to help prevent Alzheimer's disease and delay cognitive decline
 - *Made up of 15 components*
 - *Including 10 brain-healthy food types to consume*
 - *5 brain-harming ones to limit*
- Healthy Brain Foods:
 - *Leafy greens, more vegetables, berries, seafood, nuts, beans, whole grains, olive oil, lean poultry, moderate intakes of wine*
- Brain-harming Foods:
 - *Butter and stick margarine, whole-fat cheese, fried fast foods, red meat, and pastries and sweets.*



Earning Top MIND DIET Score

- Three servings of whole grains, one serving of vegetables,, one glass of wine each day.
- Eating leafy greens nearly every day (at least six times/week)
- Nuts most days of the week (at least five times/week)
- Beans about every other day (four times/week)
- Berries twice a week, lean poultry twice a week, fish once a week, use olive oil as main oil

What Foods to Limit

- Limiting as much as possible the foods that aren't great for brain health.
- Consuming less than one tablespoon of butter or margarine /day
- Pastries and sweets no more than four times/week
- Red meat – no more than twice/month
- Fried fast foods no more than twice/month





Nutrients Your Brain Needs to Function

- Omega-3 Fatty Acids:
 - A type of fat your body cannot make on its own; we can only get it through our diet
 - Benefits of Omega-3s:
 - *They strengthen the structure of brain cells*
 - *Improve blood flow in the brain and reduce overall inflammation*
 - Good Sources of Omega-3s:
 - *oily fish, salmon, tuna, mackerel, sardines, walnuts, flaxseed, chia seeds*

Nutrients Your Brain Needs to Function

- Choline:
 - An essential nutrient required to produce a chemical called acetylcholine → plays major role in regulating memory, mood, and cognitive performance
 - Also needed to synthesize DNA which is needed for brain growth and functioning
 - Good Sources of Choline:
 - *Eggs, chicken, shiitake mushrooms, and seafood like cod, salmon, shrimp, and scallops*



Nutrients Your Brain Needs to Function



- Flavonoids:
- A large family of plant compounds that help protect brain cells against inflammation and oxidative stress.
- Improve blood flow and encourage cell and blood vessel growth in parts of the brain that are involved in memory and learning.
- Good Sources of Flavonoids:
 - *Brightly colored fruits and vegetables, such as berries, grapefruit, and bell peppers.*
- Other Sources:
 - *Tea, red wine, and dark chocolate.*

Nutrients Your Brain Needs to Function



- Vitamin E:
- This vitamin acts as an antioxidant/protects brain cells against oxidative stress and inflammation
- Observational studies: association between inadequate vitamin E and reduced cognitive performance, especially in older adults.
- Studies found link between high vitamin E levels and a reduced risk of developing Alzheimer's
- Good Sources:
 - *Nuts, seeds, natural peanut butter, leafy green vegetables, avocados, and trout.*



Nutrients Your Brain Needs to Function

- B Vitamins
- B12, B6 and Folate are important for brain health because they help produce the energy needed to develop new brain cells.
- These vitamins breakdown an amino acid – homocysteine.
- Important because high levels of homocysteine associated with an increased risk for dementia and Alzheimer's
- Good Sources:
 - *Eggs, leafy green vegetables, whole grains, legumes, chicken, turkey, and low-fat yogurt*

THE BRAIN-GUT CONNECTION

The gut-brain connection is complex and bidirectional. Signals pass both ways between your digestive system and central nervous system, and health or disease can affect the other. Key players in this connection include your enteric nervous system, your vagus nerve, and your gut microbiome

What Is the Brain-Gut Connection?



- Your brain talks to your gut and your gut talks back.
- Your brain communicates with all your body through your nervous system
- Your brain and your gut are ‘besties’!
- They talk about all kinds of things – practical, physical matters and emotional ones
- More information passes between your brain and your gut than any other body system
- There are more nerve cells in your gut than anywhere else in your body, outside of your brain.

What Body Systems Are Involved in the Gut-Brain Connection?

- Enteric Nervous System:
 - The neural network operates within your GI tract and controls digestive functions
 - With more than 500 million neurons, it is the most complex neural network outside your brain.
 - Your enteric nervous system is a special division of your autonomic nervous system
 - *It governs the autonomic functions of your internal organs*
 - *It operates as part of the overall autonomic nervous system, but also on its own.*
 - *It can gather information in your GI tract, process that information locally and generate a response without sending it back to your brain*



Vagus Nerve

- The Vagus Nerve is the main link between your enteric nervous system and your brain
- It is one of the cranial nerves – which begins at your cranium and travels down your body, branching out along the way.
- It conveys sensory information about the conditions inside your gut from your enteric nervous system to your brain; it conveys motor signals from your brain to your gut
- It mediates various reflexes that operate within your gut in response to changing conditions, like chemical changes or the presence of food. These are Vagal Reflexes
- Intrinsic vagal reflexes operate your enteric nervous system without involving your brain
- Extrinsic reflexes operate through communication between your enteric nervous system and central nervous system.



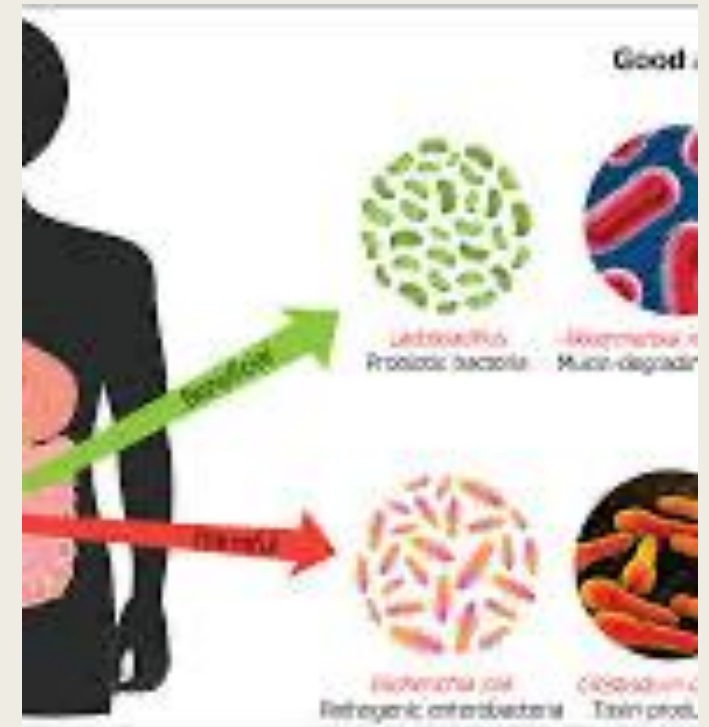
Gut Microbiome



- The bacteria that live in your gut are also involved in your gut-brain connection
- Gut microbes produce or help produce many of the chemical neurotransmitters that convey messages between your gut and brain
- They also produce other chemicals that can affect your brain through your bloodstream
- Your brain and gut can affect your gut microbiome by altering the environment
- Studies have shown that gut microbiome may be involved in various neurological, mental health and functional gastrointestinal disorders.

The Gut Microbiome Influences Brain Function

- A healthy gut microbiome helps regulate inflammation, produces neurotransmitters such as Serotonin and Dopamine, and supports the integrity of the brain-blood barrier.
- When the gut is balanced, these systems promote clearer thinking, and emotional regulation, and resilience against stress.





Inflammation Is a Critical Link

- When the gut is disrupted — through poor diet, chronic stress, illness, or aging — systemic inflammation and altered neurotransmitter signaling can negatively alter cognition, mood, and memory.

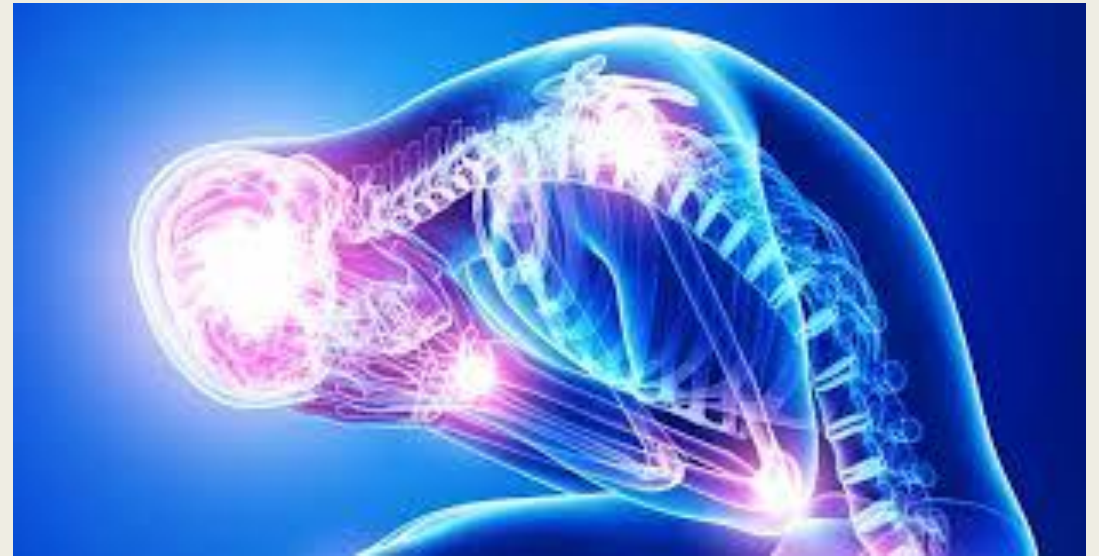
Aging Increases Vulnerability

- As we age, changes in digestion, medication use, and lifestyle can compromise gut health, increasing vulnerability to cognitive decline and neurodegenerative disease.



Stress Directly Impacts Gut and Brain Health

- Chronic stress alters gut mobility and microbiome balance
- This creates a feedback loop that worsens anxiety, sleep, and cognitive performance.





Nutrition Is a Brain Intervention

- Diets rich in fiber, polyphenols, healthy fats, and fermented food support gut bacteria.
- Ultra processed foods can disrupt gut health and increase inflammation.

Brain Health Is Not Just in the Head

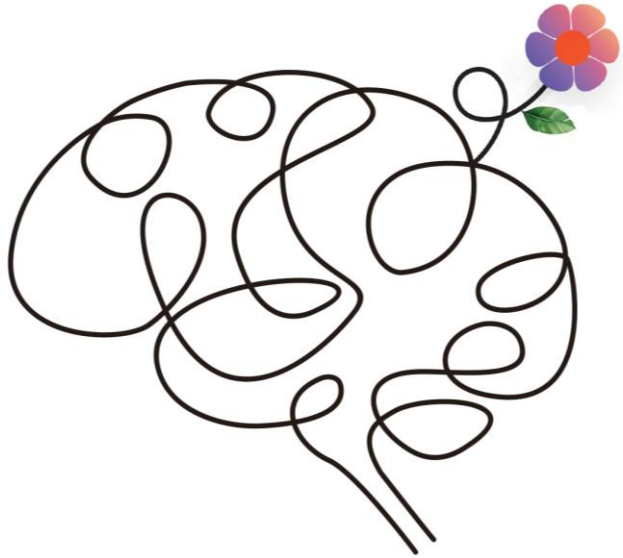
Supporting the brain-gut connection through nutrition, stress management, sleep and overall metabolic health is therefore not just about digestive wellness — it is a foundational strategy for protecting brain function, preserving cognitive capacity, and supporting long-term brain resilience.

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For Baby Boomers Concerned
About Dementia and Alzheimer's

THE BOOMER BRAIN



Your Brain is Ageless
A Longevity Guide

Patricia McCarthy Faust MGS

The Boomer Brain

Normal brain losses occur as you age. The Boomer Brain offers tools and strategies to change your brain.”

“The risk of getting Alzheimer’s is 70% lifestyle.”

“As an aging boomer, I worry when I can’t find a word or think fast. This book explains it all and gives you hope it won’t progress.”

Available on Amazon:

<https://Amazon.com/dp/1962133613>



THANK YOU

IT HAS BEEN A PLEASURE SPEAKING
WITH ALL OF YOU!

FEEL FREE TO CONTACT ME WITH ANY
QUESTIONS ABOUT YOUR AGING
BRAIN!

Patricia Faust, MGS, CAt, LNHA
513-460-6171

patricia@myboomerbrain.com

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