

Healthy Brain



Exercise with U of Minnesota

Nutrition with Lyngblomsten

Sensitivities with Dr. William Walsh, M.D., Allergist



Healthy Brain

Four Things You Can Do Now to Promote and Maintain Mental Fitness

Carolyn Klaver, RN
Community Dementia Care Specialist
2nd Half with Lyngblomsten
A Center for Enriching Lives after 50:
Engage—Discover—Thrive
1415 Almond Avenue | St. Paul, MN 55108
952|261-5235 www.lyngblomsten.org/2ndHalf



What is GOOD for the Heart

IS GOOD for the BRAIN!

#1 -- Diet



- Calorie-controlled
- Abundant, intensecolored fruits & vegetables
- Whole-grain
- Appropriate levels & types of fats
- Reduced animal protein
- Increased plant-based proteins
 Image: Ima



Protein



- Maintains & develops nerve cells and their branches
- Choline necessary to form acetylcholine
- Nerve cells without enough choline will cannibalize their own membrane to make acetylcholine
- Choline: soybeans, egg yolks, peanuts & liver



Omega-3 fatty acids



- Nerve cell communication
- Nerve cell membranes
- Works against the process of inflammation
- Brain NEEDS fat
- Sources: lean meat, skinless poultry, nuts, olive oil, canola oil, salmon, mackerel, tuna, sardines, flax



Vitamin B6



- VITAL for synthesis of neurotransmitters such as serotonin and dopamine (which are required for normal nerve cell communication)
- Deficiency results in memory impairment
- Sources: potatoes, bananas, rainbow trout, poultry, carrot juice, beef top round steak, beans, whole grains, dairy



Antioxidants



The brain's unique characteristics, its high

rate of metabolism and its long-lived neurons, make it particularly vulnerable to oxidative damage ("rust").



Studies: Fruits & vegetables high in antioxidants might protect the brain against this kind of damage.

Sources of Antioxidants



- Darker and richer the colors, the better
 - spinach, romaine lettuce, broccoli, strawberries, raspberries, oranges, grapes, kiwi, pinto beans, red cabbage, brussels sprouts, garlic, dried apricots, blueberries, prunes
 - Turmeric (contains curcumin) -- significantly lowers oxidized proteins & inflammatory cytokines associated with Alzheimer's Disease)





Calcium



- Parathyroid gland regulates amount of calcium in bloodstream
- Low calcium in the blood?
- Nerve impulse conduction
- Sources: dairy, sardines, tofu, pink salmon



Vitamin D



- As you age (in people over 50), less vitamin D is produced in the skin through sunshine
- Sources: eel, sardines, fortified juice or milk, tablespoon of cod liver oil
- Low levels linked to depression & schizophrenia



Magnesium

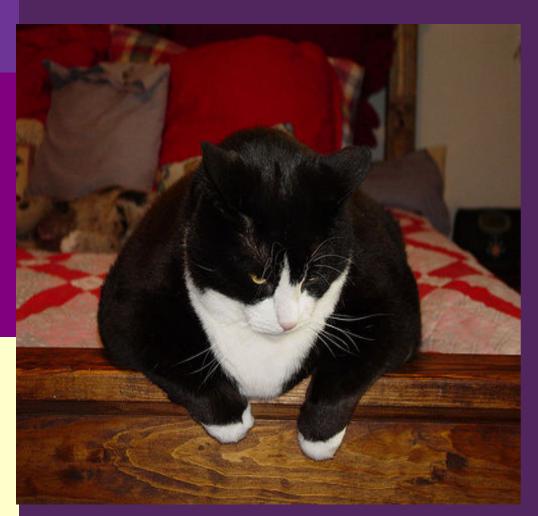




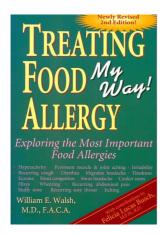
- Helps widen blood vessels
- Sources: whole grains, leafy greens, beans, avocados, nuts

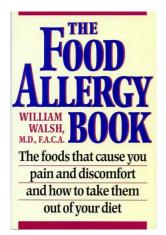
Obesity

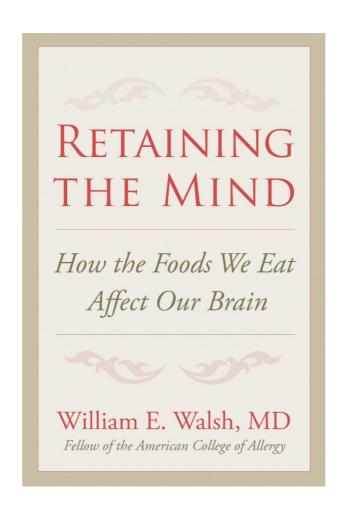


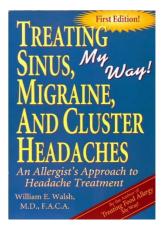


- Inflammation comes from fat cells which affects memory & promotes aging.
- Alzheimer's/ dementia risk up
- Avoid large belly
- Brain tissue: needs oxygen for survival











The Complete Guide to Understanding and Relieving Your Food Allergies

William E. Walsh, M.D. Fellow of the American College of Allergy

My Qualifications To Discuss Diet

Professional qualifications:

- Medical doctor: Creighton University, Omaha, Nebraska.
- General medical officer: USAF, started allergy clinic.
- Allergy fellowship: Mayo Clinic.
- Certified: American Board of Allergy and Immunology.
- Fellow: The American College of Allergy, Asthma and Immunology.
- Practice: Consultant allergist specializing in food sensitivity.
- HealthEast Care Allergy Clinic: started clinic, still operating.
- I have Alzheimer's disease.



Diets Delay Dementia

Mediterranean diet: resists onset of Alzheimer's.

Dash diet: resists onset of Alzheimer's

Mind diet: "Early studies show it lowers the risk of Alzheimer's by 53% in those who follow it closely and by 35% in those who follow it more loosely."**

- These diets encourage fruit, vegetables, fish, chicken, legumes, olive oil, nuts and whole grains.
- They avoid sugar and MSG.

What Makes A diet Unhealthy

- Sugar, MSG and citric acid powerfully irritate nerves.
- Years of this irritation injures nerves.
- Nerves die. Brain shrinks. Dementia results.
- Aging genes & poor body/mind exercise promote dementia.
- Hope: The brain can heal itself. Stop poisoning it!

How Food Chemicals Cause Disease

- Sugar (fructose): (includes alcoholic beverages).
 - disrupts blood sugar levels and insulin (diabetes).
 - induces body to convert sugar to fat (obesity).
 - deposits fat in heart and brain arteries (stroke, heart attacks).
- MSG: (includes LC sweeteners, gluten, maybe spices).
 - damages and kills nerves by chronic over-stimulation (migraines).
- Citric and malic acid: (includes tartaric acid of grapes and wine).
 - irritates virus-infected nerves (cold sores, eczema).
 - may promote synthesis of MSG through citric acid cycle.

The three chemicals act together to cause disease.

Diseases responding to the Mediterranean diet

- Diseases associated with injury to nerves.
 - Alzheimer's, Parkinson's, vascular, Lewy body, other dementias.
 - Migraine headaches, balance disorders, AMD.
- Diseases associated with fat formation and storage.
 - Obesity, strokes, heart attacks.
- Diseases associated with endocrine disorders.
 - Diabetes.
- Disorders associated with mental health.
 - Depression, autism, ADHD.

Summary of Mediterranean diet benefits

RANDOMIZED CONTROLLED TRIALS

- Improved cognitive function
- Less depression
- Lower death rates
- Less heart disease, strokes
- Less atria fibrillation
- Improvement heart disease risk
- Less type 2 diabetes
- Better blood sugar control
- Sustained weight loss
- Less cancer
- Less breast cancer
- Fewer fractures
- Less inflammation
- Less GI reflux disease
- Less diabetic eye disease

Miles Hassell. MD

Brain Health and Lifestyle: Which Choices

Matter.

goodfoodgreatmedicine

.com

PROSPECTIVE OBSERVATIONAL STUDIES

- Less dementia, Parkinson's disease
- Less mild cognitive impairment and progression to dementia
- Less depression
- Lower death rates
- Less heart disease, stroke, and peripheral artery disease
- Less type 2 diabetes
- Less cancer
- Better cancer survival
- Less menopausal symptoms, hot flushes and night sweats
- Less inflammation
- Less age related macular degeneration
- Less childhood obesity and ADHD
- Less non-alcoholic fatty liver disease

Also: less autism, better grades on tests, fewer migraine headaches

When Should You Start The Diet

- Consider at any age.
- When you notice symptoms of 'aging'.
- At any age, before an important test.
- You can't remember yesterday's activities or today's breakfast.
- Your thinking becomes fuzzy, you can't remember common words.
- When you tire of making excuses.
- You can't remember how you started a long sentence.
- Before they take away your keys, place you in a memory unit.

Degree Of Impairment Determines Diet.

• Mild:

 'Aging' symptoms: Decreased sight, hearing, strength, stamina, sensation in arms, legs, mild memory deficit.

Moderate:

• Symptoms worsen but still able to remember most things and able to care for self. Friends and relatives become concerned. More trouble with speech and self-care; home-care worsens. Sight, hearing, thinking, planning, conversation worse.

• Severe:

• Symptoms much worse. Mood unstable, speech halting, hearing deteriorating, AMD worse, numb feet, balance poor, stroke, MI, poor thinking, planning and self care, driving forbidden, memory care.

Following The Diet

Guidelines.

- Begin with carefully avoiding these 'aging chemicals' to ensure they cause your symptoms.
- Skilled staff can be extremely helpful.

Maxims in following the diet:

- 'Everything in moderation'. MSG, citric acids OK if consumed at tolerated levels. Sugar is addicting, try to totally avoid.
- 'God' perfect; we're not'. Strive not for perfect diet, only for symptom relief.

What You Can Eat And Drink

- Depends on the severity of your symptoms.
- Meat: all unprocessed pork, beef, fish, fowl and eggs. Avoid seasoning/spices.
- Fruits: contain sugar/citrus. Regard as candy.
- Vegetables: those without sweet/citrus taste (avocado, asparagus, beans, cabbage family, peas, spinach, squash, boiled potatoes, rutabaga, yams).
- Beverages: water, coffee, tea. Limit/avoid alcohol.
- (controversial). All fats acceptable. High fat diet.

Samantha Strubel

strub019@umn.edu

Office-612-625-3648

Cell-507-226-2953



University of Minnesota--Twin

Cities

ACT Study Coordinator

FIT-AD Study Coordinator

#3 -- Challenge the Brain





The Best: Challenge AND Sociability





Check out the Winter Catalog!

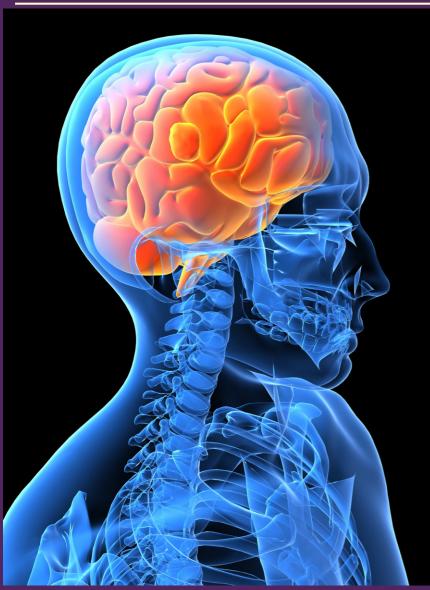
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Neuroplasticity





- Ability of brain to change its structure & functions in response to experience
- Before: immutable
- Now: brain can change/grow to reflect the lives we have led (in size of different regions, strength of connections between them, their functions)
- Brain can "rezone" itself when it suffers trauma
- lacksquare Samantha

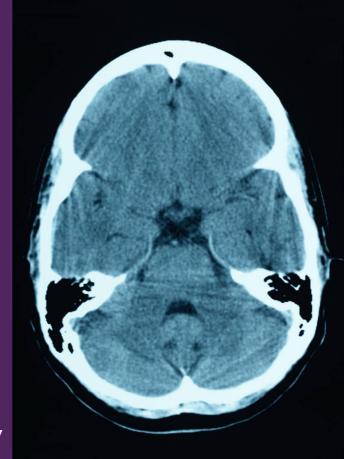
Cognitive Reserve



The ability to tolerate progressive brain pathology without demonstrating clinical

cognitive symptoms

- 1998 post-mortem
- The higher the brain weights and the greater number of neurons, the least likely to exhibit the clinical symptoms of Alzheimer's Disease despite their actual pathology



Challenge & Immune System



Immune system critical to successful

aging

What effect does challenge have on the brain?



#4 – Love & Nurturing/ Balance & Rest





"Normal" Stress



- Waking Up
 - Begins & ends in hypothalamus
- Fight or Flight
 - Response to threat



- Pituitary triggers adrenocorticotropic hormone
- Adrenal gland releases cortisol
- Body responds: blood pressure rises, blood shunted to major muscles, digestion slows, heart rate speeds up



When Stress Turns Bad



- Prolonged stress
 - Inflammation, lowered immunity, high blood pressure
 - Shrinking hippocampus: forgetfulness, difficulty learning, impairs ability to create new neurons, withered dendrites
 - As if hypothalamus forgot to turn off stress response
- Severely depressed/sleep deprived
 - Cortisol level stays high
 - Pre-frontal cortex affected
 - Affects personality, decision-making, problem solving, appropriate social behavior
 - Studies: those who secrete higher levels of cortisol in response to stress also tend to eat more food (carbs)
- Samantha



Stress & The Immune System



Prolonged stress (abuse, combat, perceived unrealistic pressures, illness, anger-producing situations, often related to feeling out of control) compromises immune system



- Damages brain by causing inflammation
- U of CA, San Francisco: white blood cells of mother caring for children with chronic disorders – telomeres significantly shorter

Ways to Relieve Stress





- Take One Step at a Time.
- Find a Relaxing Medium.
- Is There Anything I Can Do?
- Think Positive.
- Compare it to the Big Picture.

Effects of Low Self-Esteem



- Jens Pruessner, McGill Univ., Montreal
 - Those with low self-esteem more vulnerable to stress
 - Hippocampus responsible
 - Smaller hippocampus in subjects with low selfesteem
 - Smaller hippocampus has more trouble persuading the rest of the brain to turn off the stress response

Think Happy Thoughts

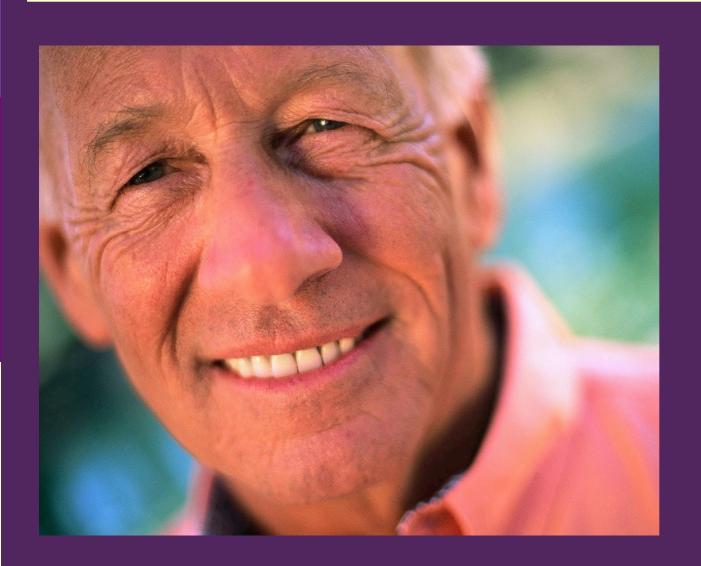


- Creates serotonin
- Strengthens the good circuits
- Positive state is a skill that can be trained
- Prepare your children with good left brain ability
- Medication alone can't do this









Left Prefrontal: Happiness

Right Prefrontal: Negative

Make Friends



Social isolation increases the physiological

damage caused by stress

StrongSocialsupport



Lyngblomsten 2008-2019 short version

Go Outside



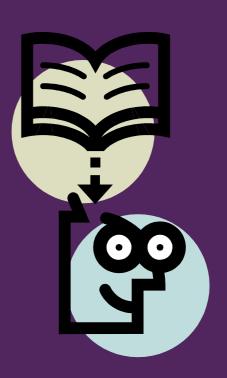
- Natureactivatesthe senses
- Naturecreatesgoodendorphins
- Vitamin D







- "Liberation Phase" after age 50
- Incredible brain reserve kicks in mid-life
- Both hemispheres MUCH more equally used
- Creative potential is NOT an aberration
- Pragmatic creativity increases with aging
- Learn!



Get a Good Night's Sleep



- Renovates the prefrontal cortex
- Important for knowledge consolidation
- Cortisol level low; serotonin high
- Losing sleep/not sleeping at regular hours unbalances hormones
- Treat sleep apnea!
- Samantha





Healthy Habits Workbook

http://extension.missouri.edu/learnforlife/documents/HealthyHabits workbook%20(1).pdf



Questions?