

Food for Thought: Brain-Healthy Meals during COVID-19

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Overview

- General 'healthy brain' recommendations
- Role of diet in preventing dementia
- Diet recs for different stages of dementia
- Questions and discussion

Institute of Medicine Recs

- The top 3 actions you can take to protect your cognitive health as you age
 - 1. Reduce cardiovascular risk factors
 - 2. Be physically active
 - 3. Manage your medications

Institute of Medicine Recs

- The top 3 actions you can take to protect your cognitive health as you age
 - **1. Reduce cardiovascular risk factors**
 - **Treat blood pressure, high cholesterol, diabetes, avoid smoking**
 - **2. Be physically active**
 - **3. Manage your medications**

Institute of Medicine Recs

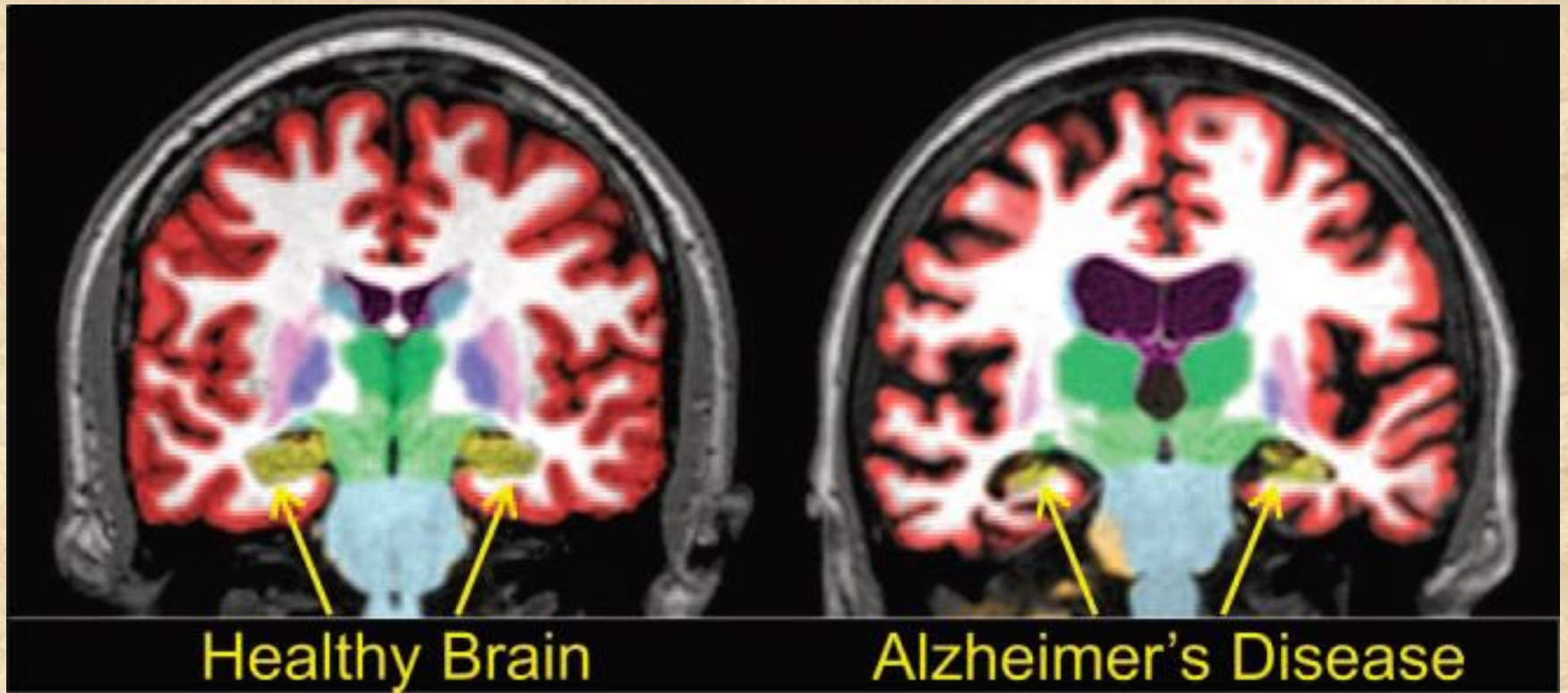
- The top 3 actions you can take to protect your cognitive health as you age
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Hippocampal Atrophy



- What is the hippocampus?
- A part of the temporal lobe of the brain (shaped like a seahorse) that is important for turning short term into long term memories
- Atrophy, or shrinkage, of this part of the brain is an early and sensitive sign of Alzheimer's disease (But other diseases can also do this, including epilepsy, strokes)

Hippocampal Atrophy



Benefits of Exercise on the Brain

- Exercise increases hippocampal volume
 - 120 older adults: 1/2 of them did a 12 month exercise program, 1/2 of them did stretching only
 - The people who exercised showed an increase in their hippocampal size
- Exercise improved thinking abilities, improved blood flow to hippocampus, and reduced Alzheimer's markers in spinal fluid
 - 65 older adults who had early stage Alzheimer's and 'pre-diabetes'
 - 6 months of exercise versus stretching

Exercise prescription

- American Heart Association recommends you get at least 5 days per week, 30 minutes at a time, of moderate exercise (Walking, stair-climbing, elliptical machine, dancing, light swimming, cycling on flat ground)
- Also recommended to add resistance training 2 days per week

Institute of Medicine Recs

- The top 3 actions you can take to protect your cognitive health as you age
 - 1. Reduce cardiovascular risk factors
 - 2. Be physically active
 - **3. Manage your medications**
 - **Know what drugs you're on**
 - **Bring in all your pills to your provider: prescribed, over the counter, herbal**
 - **Ask your doctor whether your medications might be causing cognitive impairment**
 - **Pharmacists can help with this too!**

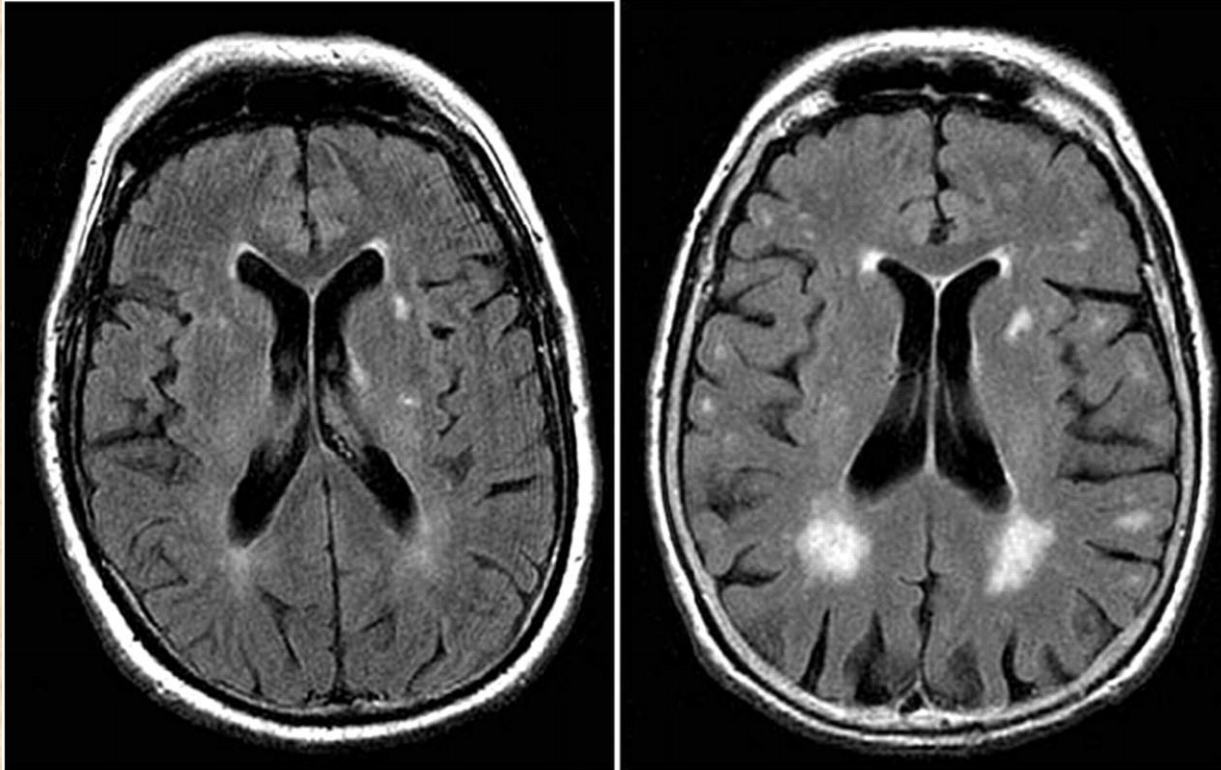
What should we be eating for a healthy brain?

- There are likely several different types of diets that are healthy
- No one food or supplement will 'cure' or prevent a complicated disease
- Pick a diet that you can live with!

Mediterranean diet (MeDi) evidence

- French study 2015:
 - Older adults who followed a MeDi diet had healthier 'white matter' brain structure
- Australian study of 970 people:
 - People who followed a MeDi diet tended to do better on memory tests, had larger hippocampal volumes, and decreased amyloid on a brain scan

White matter disease



Low white matter

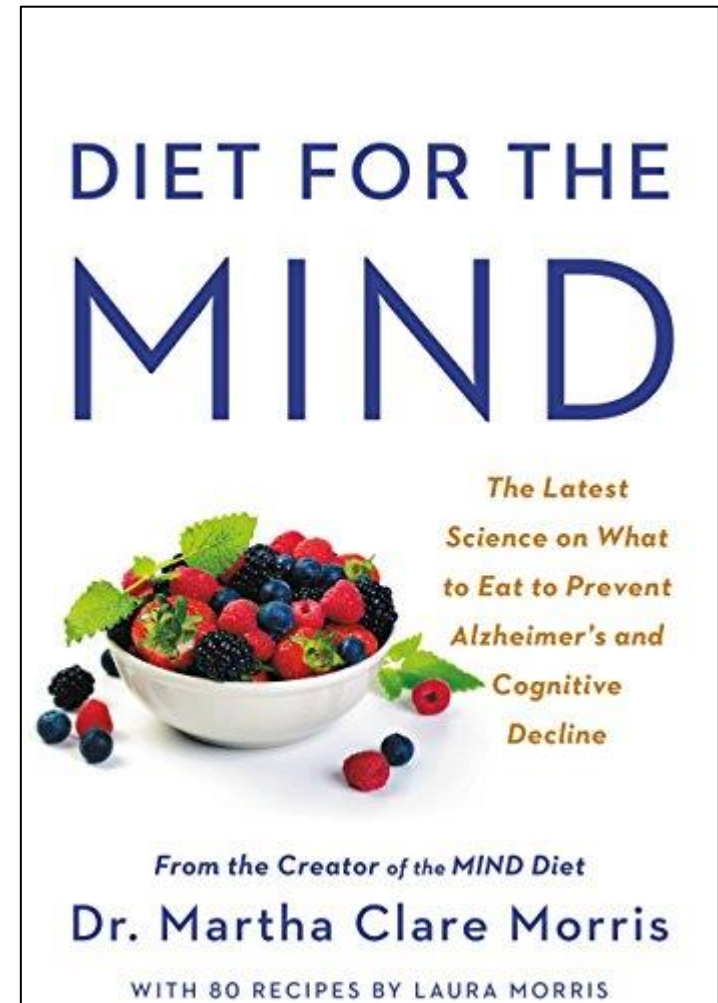
High white matter

MIND diet

- MIND diet combines MeDi diet with the blood-pressure lowering DASH diet
- Emphasizes ten healthy food groups: chicken, fish, green leafy vegetables, other vegetables, berries, nuts, olive oil, wine, beans, and whole grains.
- Avoid foods like cheese, butter and margarine, pastries and sugary foods, red meat, and fried food.

Evidence for MIND diet

- Study of 923 people in USA followed for 4.5 years: adherence to the MIND diet (high or moderate) decreased risk of developing Alzheimer's disease (Morris MC 2015)



MIND Diet: 10 foods for brain health

- Chicken
- Fish
- Green leafy veggies
- Other veggies
- Berries
- Nuts
- Olive oil
- Wine
- Beans
- Whole grains



Examples of foods for brain health

- Blueberries
 - 9 older adults that drank blueberry juice for 12 weeks showed improvements in learning and memory
- Fish
 - Study from Rush University (Chicago): people who reported eating seafood less than once a week had worse age-related memory and thinking problems than people who ate at least one seafood meal per week. In this study, seafood included fresh or canned fish as well as shrimp, lobster and crab.
 - DHA or fish oil supplements: Mixed data
- Mixed nuts: walnuts, almonds and hazelnuts
- Curry: Curcumin (aka turmeric) seem to help nerve cells in the lab

Examples of foods for brain health

- Leafy greens:
 - Also from Rush: people who ate at least 9 servings a week of leafy green vegetables scored better on cognitive tests
 - Leafy green vegetables included spinach, lettuce salad, kale, collards and greens
- Flavonols: antioxidants found in leafy greens
 - Also found in beans, apples, blueberries, olive oil, tea, tomato sauce

Alcohol

- Alcohol in moderation during midlife (age 40-65) can lower the risk of heart disease and stroke
- For older adults without dementia (>65), we rec limiting to one drink a day
- For persons with dementia: minimize alcohol because this can increase confusion and falls

Evidence for other diets:

- Low fat diet: heart healthy
 - People with diabetes, other conditions
- DASH diet: fruits and veg, low fat low salt
 - Both of these diets reduce heart disease
- Supplements:
 - There may be a role for a multivitamin, and some vitamin supplements (B complex, Vitamin D) for some people
 - But overall: Supplements have little benefit for dementia itself: better to get vitamins in diet

Different stages of dementia

- For MCI and early stages:
 - Preventing further decline an important goal: continue to work on heart health, exercise, diet!
 - Pick a diet you can live with and that is enjoyable too!
- For middle stages:
 - Some dementias can cause problems with appetite or swallowing: getting enough protein & calories = goal
 - Staying hydrated is also important: people in this stage sometimes don't feel thirsty
- For later stages: I suggest a comfort-oriented approach

Questions? Thanks!

- https://www.alz.org/help-support/brain_health/10_ways_to_love_your_brain
- <https://www.endalznw.org/alzheimers-prevention-101/risk-factors-alzheimers>