



# Natural Tips to Improve Your Memory

Targeting Alzheimer's Disease via Lifestyle Modifications

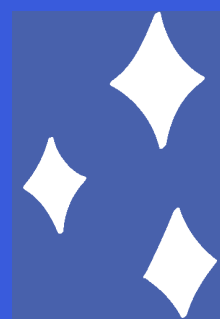
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# **Alzheimer's Disease (AD)**

- Alzheimer's disease affects more than 50 million people worldwide**
- Despite decades of research, there are still no drugs that can slow the progression, or offer a cure**
- Researchers are under great pressure to deliver an effective therapy**
- But earliest interventions would be prevention**
- - simple lifestyle changes (to some) remains debatable, but the evidence is STRONG...**



# Cognitive Dysfunction

Cognitive dysfunction ranges from mild cognitive impairment (MCI) to dementia, and can result in a progressive loss of a number of specific cognitive functions.



# 10 Warning Signs

1. Memory loss disrupts daily life
2. Challenges in planning or problem solving
3. Difficulty completing familiar tasks
4. Confusion with time or place
5. Trouble understanding visual images or spatial relationships
6. Problems with words
7. Misplacing items and inability to retrace steps
8. Decreased or poor judgment
9. Withdrawal from work or social activities
10. Changes in mood or personality



# Brain Tissue

The brain tissue of AD-affected individuals shows a significant loss of synapses and neurons resulting in a strong hippocampal and cortical atrophy.





# Risk Factors



It has been suggested that approximately a third of Alzheimer's dementia cases could be attributed to seven potentially modifiable risk factors:

Diabetes

Midlife hypertension

Obesity

Smoking

Depression

Cognitive inactivity

Low educational attainment





# ❖❖ Vitamin D

## Vitamin D Status

According to the Endocrine Society:  
Vitamin D deficiency is defined by 25(OH)D levels below 20 ng/mL (50 nmol/L)

Vitamin D insufficiency as a 25(OH)D of 21–29 ng/mL (52.5–72.5 nmol/L).

Vitamin D intoxication is observed when blood levels of 25(OH)D are greater than 100 ng/mL.



# Vitamin D deficiency and Dementia

Vitamin D is now known as an effective immune modulator and has the potential to regulate the inflammatory state in AD pathology.

Vitamin D can:

- Upregulate expression of several neurotrophins
- Increase secretion of the anti-inflammatory cytokine, IL-4
- Reduce secretion of pro-inflammatory cytokines TNF- $\alpha$  and interleukin-1 beta (IL-1 $\beta$ )
- Inhibit differentiation of dendritic cells

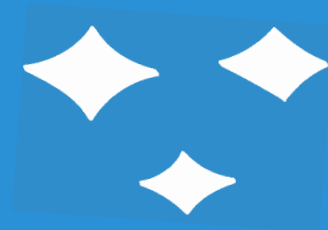


# DHA and AD ✦

Serum DHA levels were associated with pathogenesis of cerebral amyloidosis and with preservation of entorhinal and hippocampal volumes.

Findings suggest an important role for DHA metabolism in brain amyloid deposition during the preclinical or early symptomatic stages of Alzheimer's Disease.





Docosahexaenoic acid (DHA) is important for brain function, and higher DHA intake is inversely correlated with relative risk of Alzheimer's disease.

These findings suggest that DHA supplementation (2 g/day) for 12 months in MCI subjects can significantly improve cognitive function and slow the progression of hippocampal atrophy.

J Alzheimers Dis.2016 Oct 1



# Blueberries and Brain Function

Increases in Brain activity in brain areas related to  
cognitive tests  
Improvements in working memory

Bowtell. Appl Physiol Nutr Metab. 2017 Mar 1



# curcumin and memory

Small. Am J Geriatr Psychiatry. 2018; 26(3):266-277

Benefits associated with decreased plaque and tangle accumulation in brain regions controlling mood and memory





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