

# Is a healthy, balanced diet effective in trying to decrease the risk of developing Alzheimer's disease in later life?

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# Introduction

- Global life expectancy is increasing, accompanied by a rise in agerelated diseases, such as Alzheimer's disease (AD) [1].
- AD is the most common cause of dementia, currently affecting over 55 characterized million worldwide, progressive people by neurodegeneration, memory loss, and cognitive decline [6].
- The number of AD cases is projected to rise [5, 6].

### Methodology

• Narrative literature review CINAHL • Databases used: • Limits: ക്കാറ • English & • Narrative • 10 years review [4] Spanish

#### • **PIO Framework:**

P: "older I: "healthy, population" balanced diet" PIO

> O: "reduced risk of AD"

- AD has no cure and limited pharmacological treatments to partially control symptoms. [3]
- Modifiable lifestyle factors, especially **diet**, have emerged as **potential** tools for preventing AD [1, 2, 3, 4].

# Objective

Assess whether adopting a healthy, balanced diet before older adulthood can reduce the risk of Alzheimer's disease by identifying dietary patterns and key nutrients.

**Results:** 6 Articles used  $\rightarrow$  2 themes found

4.1 Dietary Patterns for Alzheimer's Prevention

## Mediterranean Diet (MeDi): ]

• Strongly linked to reduced AD risk.



- Inclusion:
  - Dietary patterns
  - Key nutrients and their effects

#### • Search strategy:



Alzheimer's disease, nutrients, dietary patterns, prevention, diet.

**4.2 Key Nutrients for the Prevention of the Development of Alzheimer's Disease** 

**Omega-3 fatty acids:** 

• Essential for brain health.

#### • Exclusion:

- Ethnicities, genetic markers, animal models.
- Diseases other than AD
- Focus on risk factors, not prevention

- Improves cardiovascular health
- Reduces inflammation and oxidative stress.
- Supports brain structure and function.
- Higher adherence is associated with slower cognitive decline and lower incidence of AD and mild cognitive impairment (MCI) [7, 8, 9, 10, 11, 12].

# **DASH Diet**:

• Helps manage blood pressure and reduces oxidative stress [8, 10, 11].

# **MIND Diet**:

• High adherence is linked to a 53% lower risk of AD and significantly slower cognitive decline over time [8, 9, 10, 11].

#### In contrast, the Western diet:

• Is associated with increased inflammation, metabolic disorders,

- Reduces neuroinflammation.
- Improving neuronal function.
- Supports cognition.
- Higher omega-3 intake is associated with a lower risk of AD and cognitive decline [7, 8, 10, 11, 12].

# **Antioxidants:**

- Critical role in combating oxidative stress
- Vitamin C prevents aging-induced oxidative damage.
- Vitamin D has anti-inflammatory properties, its deficiency is linked to increased AD risk.
- B vitamins reduce cognitive decline, with higher intake associated with better cognitive function in midlife [7, 8, 9, 10,

and a significantly higher risk of AD and cognitive decline [10, 11].

11, 12].

Bibliography



This review highlights the strong link between diet and Alzheimer's disease (AD) prevention.

Nutrient-rich diets such as the Mediterranean, DASH, and MIND have been shown to lower AD risk by reducing inflammation, oxidative stress, and managing related chronic conditions. Key components like omega-3s, antioxidants, and essential vitamins support brain health and may counteract AD-related processes.

These findings reinforce the role of diet as a vital, accessible strategy in public health efforts to prevent cognitive decline.