INTEGRATING PREVENTIVE HEALTH STRATEGIES TO SLOW COGNITIVE DECLINE IN OLDER ADULTS

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Introduction

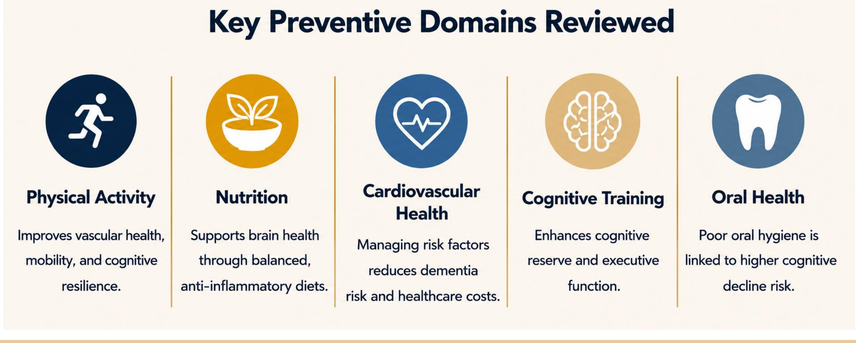
Aging populations worldwide are experiencing rising rates of cognitive decline and dementia, creating major challenges for healthcare systems, caregivers, and older adults. Emerging evidence suggests that many risk factors are modifiable through preventive strategies such as physical activity, nutrition, cardiovascular risk management, and oral health interventions. Multidomain preventive approaches have demonstrated potential to preserve cognitive function, maintain independence, and improve quality of life among older adults. However, these strategies are rarely delivered together in routine geriatric or rehabilitation care and that gap is where the most preventable cognitive decline occurs.

Objective

To evaluate the evidence supporting multidimensional preventive health interventions including physical activity, dietary modification, cardiovascular risk management, and oral health strategies in slowing cognitive decline and promoting healthy aging outcomes among older adults.

Results

1. Multidomain interventions combining exercise, dietary modification, cognitive training, and vascular risk monitoring reduced cognitive decline risk by 25–35%.
2. Physical activity combined with cognitive training showed the strongest improvement across multiple studies.
3. Poor oral hygiene was associated with higher prevalence of subjective cognitive decline (13.6% vs 7.7% in those with good oral health).
4. Cardiovascular risk management was identified as the most cost-effective single dementia prevention strategy, with telehealth reducing costs by USD 223–3,846 per event.
5. Preventive interventions combining these strategies may delay institutionalization and produce substantial long-term healthcare savings.



Methodology

A narrative synthesis was conducted using PubMed, PsycINFO, and Scopus to identify peer-reviewed studies published between 2010 and 2024. Eligible studies examined preventive health strategies linked to cognitive outcomes among older adults, including physical activity, dietary modification, cardiovascular risk management, and oral health. Findings were organized across health impact, cost-effectiveness, implementation feasibility, and policy relevance. Studies with fewer than six months of follow-up were excluded.

Discussion

- Combining physical exercise with cognitive training shows the strongest effect; adding more domains does not automatically improve outcomes.
- Oral health is the most underutilized lever; poor oral hygiene links to higher cognitive decline rates yet remains absent from most prevention protocols.
- Cardiovascular risk management is the most cost-effective single intervention but remains inconsistently applied in primary care.

Conclusion

- Preventive health interventions show strong potential to slow cognitive decline and support healthy aging.
- Multidomain strategies addressing physical, cardiovascular, nutritional, and oral health appear most effective.
- The evidence is sufficient, what is missing is a standardized framework to deliver these strategies together within routine care.

Key Sources & Acknowledgements

Primary references and supporting materials can be accessed via the QR code.

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