

# Panel Finds Insufficient Evidence to Support Preventive Measures for Alzheimer's Disease

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(PhysOrg.com) -- Many preventive measures for cognitive decline and for preventing Alzheimer's disease—mental stimulation, exercise, and a variety of dietary supplements -- have been studied over the years. However, an independent panel convened this week by the National Institutes of Health determined that the value of these strategies for delaying the onset and/or reducing the severity of decline or disease hasn't been demonstrated in rigorous studies.

"[Alzheimer's disease](#) is a feared and heart-breaking disease," said Dr. Martha L. Daviglus, conference panel chair and professor of [preventive medicine](#) and medicine at Northwestern University, Chicago. "We wish we could tell people that taking a pill or doing a puzzle every day would prevent this terrible disease, but current evidence doesn't support this."

The panel's assessment of the available evidence revealed that progress to understand how the onset of these conditions might be delayed or prevented is limited by inconsistent definitions of what constitutes Alzheimer's disease and [cognitive decline](#). Other factors include incomplete understanding of the natural history of the disease and limited understanding of the [aging process](#) in general. The panel recommended that the research community and clinicians collaborate to develop, test, and uniformly adopt objective measures of baseline cognitive function and changes over time.

Although many non-modifiable risk factors have been examined, age is the strongest known risk factor for Alzheimer's disease. Additionally, a

genetic variant of a cholesterol-ferrying protein (apolipoprotein E), has strong evidence of association with the risk for developing Alzheimer's disease. Although it is hoped that improved understanding of [genetic risk factors](#) may ultimately lead to effective therapies, currently these associations are primarily useful in the clinical research setting.

The panel determined that there is currently no evidence of even moderate scientific quality supporting the association of any modifiable factor—dietary supplement intake, use of prescription or non-prescription drugs, diet, exercise, and social engagement—with reduced risk of Alzheimer's disease. The evidence surrounding risk reduction for cognitive decline is similarly limited. Low-grade evidence shows weak associations between many lifestyle choices and reduced risk of Alzheimer's disease and cognitive decline.

Although there is little evidence that these interventions lessen cognitive decline, some are not necessarily harmful and may confer other benefits. However, the panel also emphasized the need for enhanced public understanding that these proposed prevention strategies are currently, at best, only loosely associated with improved outcomes. This means that carefully-designed randomized studies may reveal that these modifiable factors enhance, detract, or have no effect on preventing Alzheimer's disease and cognitive decline.

"These associations are examples of the classic chicken or the egg quandary. Are people able to stay mentally sharp over time because they are physically active and socially engaged or are they simply more likely to stay physically active and socially engaged because they are mentally sharp?" added Dr. Daviglius. "An association only tells us that these things are related, not that one causes the other."

The panel found that certain chronic diseases, such as diabetes and depression, and risk factors such as smoking are associated with

increased risk of both Alzheimer's disease and cognitive decline. However, studies have not yet demonstrated that these medical or lifestyle factors actually cause or prevent Alzheimer's disease or cognitive decline, only that they are related.

There is insufficient evidence to support the use of pharmaceuticals or [dietary supplements](#) to prevent Alzheimer's disease or cognitive decline. Ongoing studies exploring factors including but not limited to physical activity, omega-3 fatty acids (typically found in fish), antihypertensive medications, and cognitive engagement may provide new insight into Alzheimer's disease and cognitive decline prevention.

The panel made a variety of recommendations to shape the future research agenda and fill identified gaps, while acknowledging that advancing our understanding of these complex conditions in order to develop conclusive, evidence-based prevention recommendations will require considerable time and resources. For example, the panel advocated launching long-term, longitudinal studies to better characterize the natural history and progression of these diseases in the community. They also recommended the establishment of registries for Alzheimer's disease and cognitive decline, modeled on existing registries for cancer.

Extensive research over the past 20 years has provided important insights on the nature of Alzheimer's disease and cognitive decline and the magnitude of the problem. Nevertheless, there remain important and formidable challenges in conducting research on these diseases, particularly in the area of prevention. There are numerous ongoing or planned investigations which may offer promising new insights regarding the causes and prevention of these diseases.

An updated version of the panel's draft consensus statement, which incorporates comments received during this morning's public session,

will be posted later today at [consensus.nih.gov](https://consensus.nih.gov) .

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