

Summary of National Academies Products Related to Healthy Aging and Cognitive Health

This document provides a high-level summary of major reports published by the National Academies since 2015 that discuss healthy aging, longevity, cognitive health, and the well-being of older adults.

This was developed as a resource for the Hauser Policy Impact Fund webinar, [From Longevity to Vitality: Applying the Science of Aging](#).

[Launching Lifelong Health by Improving Health Care for Children, Youth, and Families](#) (2024)

Board on Children, Youth, and Families & Board on Health Care Services

Report outlines reforms and improvements of the healthcare system for children that promote good health throughout their lives, including continued cognitive health as they age.

Five identified goals:

1. Elevate the importance of child and adolescent health for the nation through continuous public focus on children and youth
2. Finance health systems for all children, emphasizing prevention and health promotion
3. Strengthen community-level health promotion and disease prevention
4. Ensure co-creation and co-design of programs and structures with youth, family, and community voices and leadership
5. Implement measurement and accountability to ensure equitable achievement of these goals



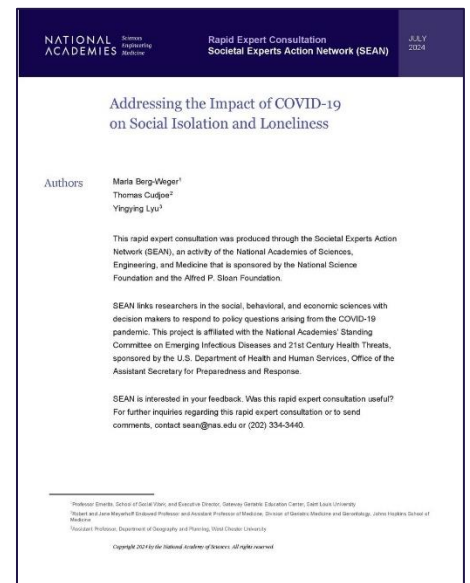
Addressing the Impact of COVID-19 on Social Isolation and Loneliness (2024)

Societal Experts Action Network (SEAN)

Rapid expert consultation that outlines strategies for different age cohorts to ameliorate issues of loneliness and social isolation that were exacerbated during the pandemic.

Key strategies:

- **Community-based supports:** Social connectedness can be enhanced by using existing community infrastructure, including schools, primary care settings, and workplaces, and by leveraging the strengths and resources of community service networks. Tailoring these supports involves understanding the specific needs of each group. For example, youth programs might focus on after-school activities and peer support, while older adults might benefit from community health outreach.
- **Community leadership:** Partnering with communities to design and deliver services and forging inclusive, action-oriented strategic alliances can enhance social connection and empower communities to identify and sustain community-level solutions. Supporting different community members in taking on leadership roles can facilitate relevant and effective solutions. For example, youth leadership programs can foster a sense of responsibility and connection among young people, while older adults can contribute valuable experience and wisdom to community projects.
- **Digital environments:** The rise in digital innovations presents opportunities to address loneliness and social isolation through online support groups, social media interactions, information discovery, resource access, and service delivery. The use of digital platforms should be tailored to the target population. Teens and young adults might be more engaged through social media and online gaming communities, while older adults might prefer accessible electronic devices to communicate with friends and family, virtual community centers, or health forums that provide a space for social interaction and support.
- **Social infrastructure:** Inclusive design is crucial for making public spaces accessible and appealing to all age groups. Designing inclusive and multifaceted public infrastructure, including libraries, community gardens, and community centers, and



offering diverse local destinations, such as shops, cafes, and restaurants, can promote social connectedness and alleviate loneliness. Mixed-use planning brings diverse amenities nearby, while transportation options enhance access to these facilities.

- Comprehensive policy initiatives: Proactive policymaking can aid the development of legislation and policies to enhance social connectedness and provide ongoing support for community and social programs, addressing different groups' unique challenges. For example, policies aimed at youth might focus on improving mental health services in schools. In contrast, policies targeting the middle-aged population might focus on promoting or modifying leave policies for workers taking care of children and aging parents, and those aimed at older adults might prioritize access to community-based health care and social services.

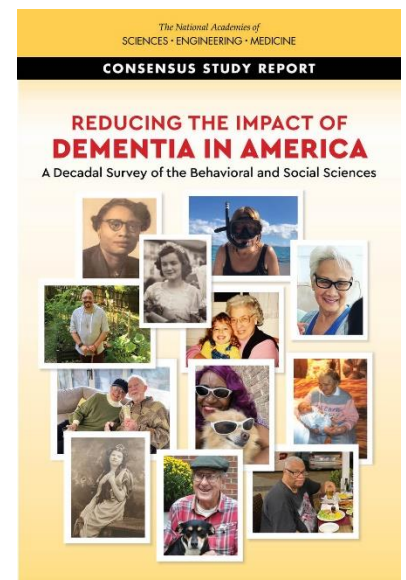
[Reducing the Impact of Dementia: A Decadal Survey of the Behavioral and Social Sciences](#) (2021)

Board on Behavioral, Cognitive, and Sensory Sciences

The report draws out several priorities for future social and behavioral science research related to dementia.

Five identified priorities (Conclusion 9-1):

1. Improvements in the lives of people affected by dementia, including those who develop it and their families and caregivers, as well as in the social and clinical networks that surround them, through research on factors that affect the development of disease and its outcomes, promising innovative practices and new models of care, and policies that can facilitate the dissemination of interventions found to be effective.
2. Rectifying of disparities across groups and geographic regions that affect who develops dementia, how the disease progresses, outcomes and quality of life, and access to health care and supportive services.
3. Development of innovations with the potential to improve the quality of care and social supports for individuals and communities and to support improved quality of life (e.g., reducing financial abuse and stressors, finding relevant affordable housing and care facilities, gaining access to important services).



4. Easing of the financial and economic costs of dementia to individuals, families, and society and balancing of long-term costs with long-term outcomes across the life span.
5. Pursuit of advances in research capability, including study design, measurement, analysis, and evidence integration, as well as the development of data infrastructure needed to study key dementia-related topics.

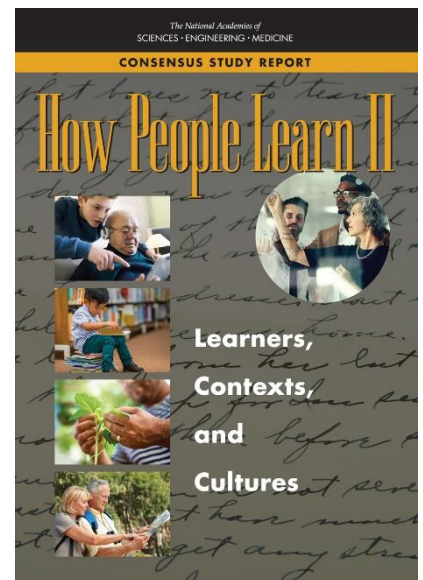
[How People Learn II: Learners, Contexts, and Cultures](#) (2018)

Board on Behavioral, Cognitive, and Sensory Sciences & Board on Science Education

Chapter 9 of the report is entitled “Learning Across the Life Span”, and it describes how adult learners differ from younger ones, as well as the opportunities for continued learning to preserve cognitive abilities.

Selected conclusions:

- 9-1: People continue to learn and grow throughout the life span, and their choices, motivation, and capacity for self-regulation, as well as their circumstances, influence how much and how well they learn and transfer their learning to new situations.
- 9-2: People learn continually through active engagement across many settings in their environments; learning that occurs outside of compulsory educational environments is a function of the learner’s motivation, interests, and opportunities. Engagement with work (especially complex work that involves both intellectual and social demands), social engagement, physical exercise, and adequate sleep are all associated with lifelong learning and healthy aging.



Preventing and Treating Dementia: Research Priorities to Accelerate Progress (2025)

Board on Health Sciences Policy & Board on Behavioral, Cognitive, and Sensory Sciences

This report evaluates the state of biomedical research on dementia prevention and treatment, including behavioral and lifestyle interventions. The report identifies research priorities, with a focus on research to be funded by the National Institutes of Health.

Identified research priorities:

- Develop better tools, including novel biomarker tests and digital assessment technologies, to monitor brain health across the life course and screen, predict, and diagnose AD/ADRD at scale (Research Priority 2-1)
- Implement advances in clinical research methods and tools to generate data from real-world clinical practice settings that can inform future research (Research Priority 2-2)
- Identify factors driving AD/ADRD risk in diverse populations, particularly understudied and disproportionately affected groups, to better understand disease heterogeneity—including molecular subtypes and disparities in environmental exposures—and to identify prevention opportunities and advance health research equity (Research Priority 3-1)
- Characterize the exposome and gene–environment interactions across the life course to gain insights into biological mechanisms and identify opportunities to reduce AD/ADRD risk and increase resilience (Research Priority 3-2)
- Elucidate the genetic and other biological mechanisms underlying resilience and resistance to identify novel targets and effective strategies for AD/ADRD prevention and treatment (Research Priority 3-3)
- Develop integrated molecular and cellular causal models to guide the identification of common mechanisms underlying AD/ADRD and their validation as novel targets for prevention and treatment (Research Priority 3-4)
- Integrate innovative approaches and novel tools into the planning, design, and execution of studies to accelerate the identification of effective interventions (Research Priority 4-1)



- Advance the development and evaluation of combination therapies (including pharmacological and nonpharmacological approaches) to better address the multifactorial nature of AD/ADRD (Research Priority 4-2)
- Evaluate precision medicine approaches for the prevention and treatment of AD/ADRD to better identify interventions likely to benefit specific groups of individuals (Research Priority 4-3)
- Advance the adoption of standardized outcomes for assessing interventions that are sensitive, person-centered, clinically meaningful, and reflect the priorities of those at risk for or living with AD/ADRD (Research Priority 4-4)
- Evaluate the causal effects of public health approaches on overall dementia incidence and incidence in understudied and/or disproportionately affected populations. (Research Priority 4-5)

These priorities are described further in a summary table (Table S-1), [viewable here](#).

The report makes additional recommendations to improve data infrastructure and collection, research methods, and other factors to aid the pursuit of the research priorities.

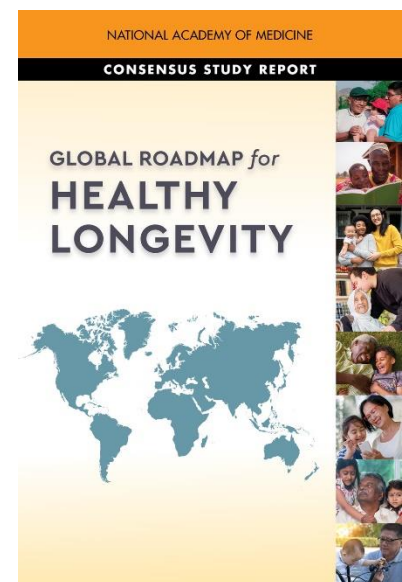
[Global Roadmap for Healthy Longevity](#) (2022)

National Academy of Medicine

Seminal report outlined several goals and associated recommendations to achieve them. In general, the report outlines a framework that leaves many opportunities for local decision-makers to customize policies for their own context. Summary of the roadmap is provided via a table, [viewable here](#).

The identified goals are:

1. Economic and social benefits generated by people living, working, volunteering, and engaging longer
2. Social infrastructure, institutions, and business systems that enable safe and meaningful work and other community engagement at every stage of life
3. Education and training opportunities that promote participation in lifelong learning and growth



4. Social cohesion augmented by intergenerational connections and the creation of opportunities for purposeful engagement by older people at the family, community, and societal levels
5. Social protections and financial security that mitigate the effects of financial vulnerability at older ages
6. Physical environments and infrastructure that support functioning and engagement for people at older ages
7. Integrated public health, social service, person-centered health care, and long-term care systems designed to extend years of good health and support the diverse health needs of older people
8. Quality long-term care systems to ensure that people receive the care they require in the setting they desire for a life of meaning and dignity

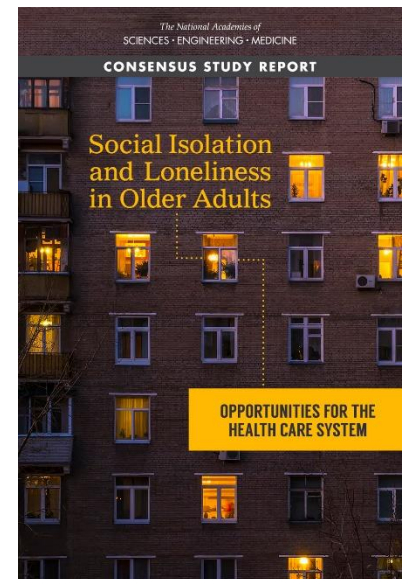
[Social Isolation and Loneliness in Older Adults: Opportunities for the Health Care System](#) (2020)

Board on Health Sciences Policy & Board on Behavioral, Cognitive, and Sensory Sciences

The report summarizes the research base surrounding social isolation and loneliness in older adults and its impact on health and quality of life. It also makes recommendations targeted at the healthcare system for how to improve outcomes in clinical settings.

Report structured around five goals that each have recommendations:

1. Develop a more robust evidence base for effective assessment, prevention, and intervention strategies for social isolation and loneliness;
2. Translate current research into health care practices in order to reduce the negative health impacts of social isolation and loneliness;
3. Improve awareness of the health and medical impacts of social isolation and loneliness across the health care workforce and among members of the public;
4. Strengthen ongoing education and training related to social isolation and loneliness in older adults for the health care workforce; and



5. Strengthen ties between the health care system and community-based networks and resources that address social isolation and loneliness in older adults.

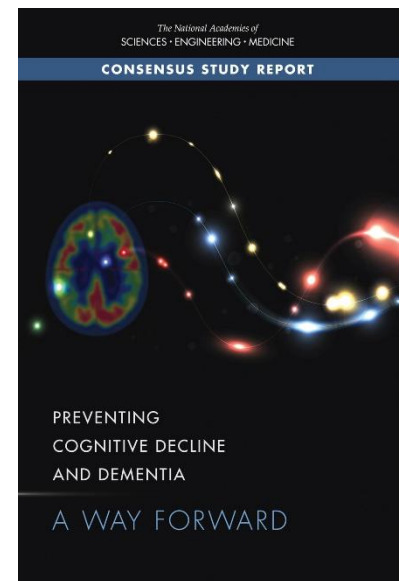
[Preventing Cognitive Decline and Dementia: A Way Forward](#) (2017)

Board on Health Sciences Policy

This report uses a systemic review commissioned by the Agency for Healthcare Research and Quality to investigate interventions to delay or prevent dementia onset. Leaning on that evidence, it makes some recommendations for public messaging and further research.

Recommendations:

1. When communicating with the public about what is currently known, the National Institutes of Health, the Centers for Disease Control and Prevention, and other interested organizations should make clear that positive effects of the following classes of interventions are supported by encouraging although inconclusive evidence:
 - a. cognitive training—a broad set of interventions, such as those aimed at enhancing reasoning, memory, and speed of processing—to delay or slow age-related cognitive decline
 - b. blood pressure management for people with hypertension to prevent, delay, or slow clinical Alzheimer's-type dementia
 - c. increased physical activity to delay or slow age-related cognitive decline
2. When funding research on preventing cognitive decline and dementia, the National Institutes of Health and other interested organizations should improve the methodologies used in this field by supporting studies that to the extent possible
 - a. identify individuals who are at higher risk of cognitive decline and dementia and tailor interventions accordingly
 - b. increase participation of underrepresented populations to study intervention effectiveness in these populations



- c. begin more interventions at younger ages and have longer follow-up periods
 - d. use consistent cognitive outcome measures across trials to enable pooling
 - e. integrate robust cognitive outcome measures into trials with other primary purposes
 - f. include biomarkers as intermediate outcomes
 - g. conduct large trials designed to test the effectiveness of an intervention in broad, routine clinical practices or community settings
3. The National Institutes of Health and other interested organizations should support further research to strengthen the evidence base on the following categories of interventions, alone or in combination, which are supported by encouraging but inconclusive evidence:
- a. cognitive training
 - b. blood pressure management
 - c. increased physical activity
4. The National Institutes of Health and other interested organizations should support research to strengthen the evidence base on the following categories of interventions, alone or in combination, for which there is currently insufficient evidence to determine their effectiveness:
- a. new antimentia treatments that can delay onset or slow disease progression
 - b. diabetes treatment
 - c. depression treatment
 - d. dietary interventions
 - e. lipid-lowering treatment/statins
 - f. sleep quality interventions
 - g. social engagement interventions
 - h. vitamin B12 plus folic acid supplementation

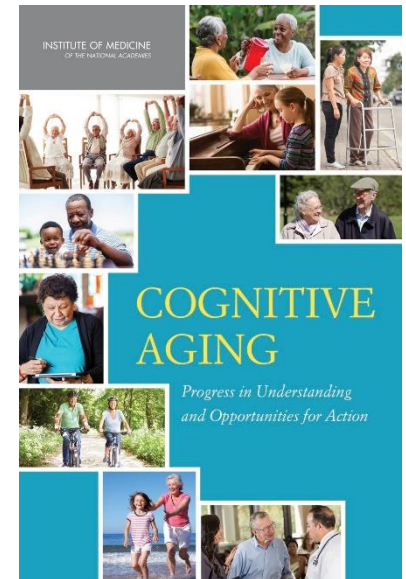
Cognitive Aging: Progress in Understanding and Opportunities for Action (2015)

Institute of Medicine

This report explores the science of cognitive aging (more broadly than just dementia) and its public health dimensions, with focus on epidemiology, prevention, education of health professionals, and public awareness.

Recommendations:

1. The National Institutes of Health, the Centers for Disease Control and Prevention, research foundations, academic research institutions, and private-sector companies should expand research on the trajectories of cognitive aging and improve the tools used to assess cognitive changes and their effects on daily function.
2. The Centers for Disease Control and Prevention (CDC), state health agencies, and other relevant government agencies, as well as nonprofit organizations, research foundations, and academic research institutions, should strengthen efforts to collect and disseminate population-based data on cognitive aging. These efforts should identify the nature and extent of cognitive aging throughout the population, including high-risk and underserved populations, with the goal of informing the general public and improving relevant policies, programs, and services.
3. Individuals of all ages and their families should take actions to maintain and sustain their cognitive health, realizing that there is wide variability in cognitive health among individuals.
4. The National Institutes of Health, the Centers for Disease Control and Prevention, other relevant government agencies, nonprofit organizations, and research foundations should expand research on risk and protective factors for cognitive aging and on interventions aimed at preventing or reducing cognitive decline and maintaining cognitive health.



5. The Food and Drug Administration and the Federal Trade Commission, in conjunction with other relevant federal agencies and consumer organizations, should determine the appropriate regulatory review, policies, and guidelines for
 - a. over-the-counter medications (such as antihistamines, sedatives, and other medications that have strong anticholinergic activity) that may affect cognitive function, and
 - b. interventions (such as cognitive training, nutraceuticals, supplements, or medications) that do not target a disease but may assert claims about cognitive enhancement or maintaining cognitive abilities such as memory or attention.
6. The Department of Health and Human Services, the Department of Veterans Affairs, and educational, professional, and interdisciplinary associations and organizations involved in the health care of older adults (including, but not limited to, the Association of American Medical Colleges, the American Association of Colleges of Nursing, the National Association of Social Workers, the American Psychological Association, and the American Public Health Association) should develop and disseminate core competencies, curricula, and continuing education opportunities, including for primary care providers, that focus on cognitive aging as distinct from clinical cognitive syndromes and diseases, such as dementia.
7. Public health agencies (including the Centers for Disease Control and Prevention and state health departments), health care systems (including the Veterans Health Administration), the Centers for Medicare & Medicaid Services (CMS), health insurance companies, health care professional schools and organizations, health care professionals, and individuals and their families should promote cognitive health in regular medical and wellness visits among people of all ages. Attention should also be given to cognitive outcomes during hospital stays and post-surgery.
8. The Centers for Disease Control and Prevention, National Institutes of Health, and the Administration for Community Living, in conjunction with other health and consumer protection agencies, nonprofit organizations, and professional associations, should develop, test, and implement cognitive aging information resources and tools that can help individuals and families make more informed decisions regarding cognitive health.
9. Relevant federal and state agencies (including the Administration for Community Living [ACL], the Centers for Disease Control and Prevention [CDC], the National Highway Traffic Safety Administration [NHTSA], and the Consumer Financial Protection Bureau), nonprofit organizations (such as the Financial Industry

Regulatory Authority), professional associations, and relevant private-sector companies and consumer organizations should develop, expand, implement, and evaluate programs and services used by older adults relevant to cognitive aging with the goal of helping older adults avoid exploitation, optimize their independence, improve their function in daily life, and aid their decision making.

10. The Centers for Disease Control and Prevention, the Administration for Community Living, the National Institutes of Health, other relevant federal agencies, state and local government agencies, relevant nonprofit and advocacy organizations and foundations, professional societies, and private-sector companies should develop, evaluate, and communicate key evidence-based messages about cognitive aging through social marketing and media campaigns; work to ensure accurate news and storylines about cognitive aging through media relations; and promote effective services related to cognitive health in order to increase public understanding about cognitive aging and support actions that people can do to maintain their cognitive health.