

# DEMENTIA IN EUROPE

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Brain health and dementia risk reduction

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# FOREWORD

I am very pleased to welcome the readers of our Dementia in Europe magazine to this special supplement dedicated to brain health and dementia risk reduction.

In Europe, the prevalence of dementia is projected to rise to 19 million by 2050 and globally the figure stands at over 55 million. The 2024 Lancet Commission found that almost half of dementia cases may be preventable and identified 14 modifiable risk factors. Adopting brain health strategies across the life course and at different disease stages could therefore dramatically change the dementia landscape, which is vital, particularly in the context of the world's ageing populations. In the European Union (EU), more than 20% of the population is currently aged 65 or over, and dementia is becoming one of the region's most urgent public health concerns.

Whilst age is the greatest known risk factor for developing dementia, dementia is not part of the normal ageing process. It is a progressive, neurodegenerative condition, which can affect an individual's memory, language skills and other cognitive abilities, as well as aspects of their behaviour and personality. There is also a broader impact on the individual's family and loved ones, as well as on health and social care systems.

The first article in this supplement looks at brain health and dementia risk reduction in more detail and explores the evidence from the 2024 Lancet Commission findings. We speak to Professor Gill Livingston (University College London), who led The Lancet Commission on Dementia Prevention, Intervention and Care, as well as hearing some thoughts from Kevin Quaid, Chair of the European Working Group of People with Dementia, and Trevor Salomon, Chair of the European Dementia Carers Working Group.

Fully harnessing the considerable potential for dementia prevention demonstrated in the Lancet Commission findings, will require modifiable risk factors to be addressed at both individual and population levels. At the national level, understanding the prevalence of these risk factors can help guide more

targeted and effective policy decisions and public health interventions. Earlier this year, Alzheimer Europe launched a project to understand the prevalence of dementia risk factors and their distribution across European countries.

The second article in this supplement shares some of our findings from this project, explains how we analysed data from more than 69,000 participants aged 50 years and older from the Survey of Health, Ageing and Retirement in Europe (SHARE), and suggests some actions for dementia risk reduction at European and national levels.

The Finnish Geriatric Intervention study to prevent cognitive impairment and disability (FINGER) study, was the first large trial to demonstrate that multidomain lifestyle interventions can improve brain health and prevent cognitive decline in at-risk older individuals from the general population. FINGER pioneered a multidomain intervention with measurable cognitive benefits, inspiring a global network of next-generation "precision prevention" trials. Our third article takes a closer look at FINGER, with a particular focus on global and European collaboration. This article also shines a spotlight on work being done by two European research projects, Multi-MeMo and LETHE, which have taken on the challenge of fully understanding how these interventions can be refined for greater impact, building on the FINGER model with complementary scientific approaches.

Next, we review healthcare system preparedness for dementia prevention, asking whether healthcare systems in Europe are prepared to act on the knowledge that a significant proportion of dementia cases could be delayed or even prevented. Our article delves into the concept of "Brain Health Services" as a new model for dementia prevention, and looks at ways to integrate new tools and interventions for dementia prevention. We then look at EU initiatives addressing barriers to healthcare system preparedness, and explore two public-private partnership projects, AD-RIDDLE and PREDICTOM, both of which aim to eliminate



Jean Georges

barriers to the early detection, diagnosis, prevention, and treatment of Alzheimer's disease and dementia.

The next article in this Special Supplement takes a look at brain health and dementia prevention from a societal perspective, highlighting some of the great work being done by our member associations to turn the principles of dementia prevention into practice.

Our penultimate article examines brain health through a policy lens, exploring evidence-based risk reduction, national dementia strategies and brain health plans, with input from Katrin Seeher, Mental Health Specialist at the WHO Brain Health Unit.

Finally, we present our recent position statement on the disclosure of dementia risk, and our recommendations on that topic. This position was developed following engagement with our members and the European Dementia Carers Working Group.

I would like to acknowledge the contributions of everyone involved in this work. A special thanks to Angela Bradshaw, Director for Research at Alzheimer Europe, who authored this report, and her team, Project Officers Christophe Bintener, Cindy Birck and Lukas Duffner, all of whom contributed articles, as did Soraya Moradi-Bachiller, from our Public Involvement team. Our thanks also go to all the individual contributors and to our member associations mentioned above.

We hope this supplement provides valuable insights into the current landscape of brain health and dementia risk reduction.

**Jean Georges,**  
Executive Director,  
Alzheimer Europe

# Understanding brain health and dementia prevention

In Europe, the prevalence of dementia is projected to rise from 9 million in 2019 to 19 million by 2050. The 2024 Lancet Commission identifies 14 modifiable risk factors for dementia, indicating that up to 45% of cases may be preventable – highlighting the potential for brain health strategies across the life course, and at different stages of disease.

Over 20% of the EU population is currently aged 65 or older (Eurostat, 2024). With an ageing population in Europe, dementia is becoming one of the region’s most pressing public health concerns. In 2019, we estimated that approximately 9 million people were living with dementia across the continent. By 2050, this number is projected to nearly double to 19 million. Globally, the figure stands at over 55 million.

While age is the greatest known risk factor for developing dementia, dementia is not a normal part of ageing. Dementia is a progressive, neurodegenerative condition, with symptoms including memory loss, confusion, problems with language and understanding, and changes in behaviour.

Dementia also has wider impacts on families, caregivers, health and social care systems: the annual cost of care for a person with dementia in Europe ranges from EUR 8,000 to EUR 70,000. There is an urgent need for actions to ensure people affected by dementia can access the care, treatment and support they need to live a life with meaning and dignity.

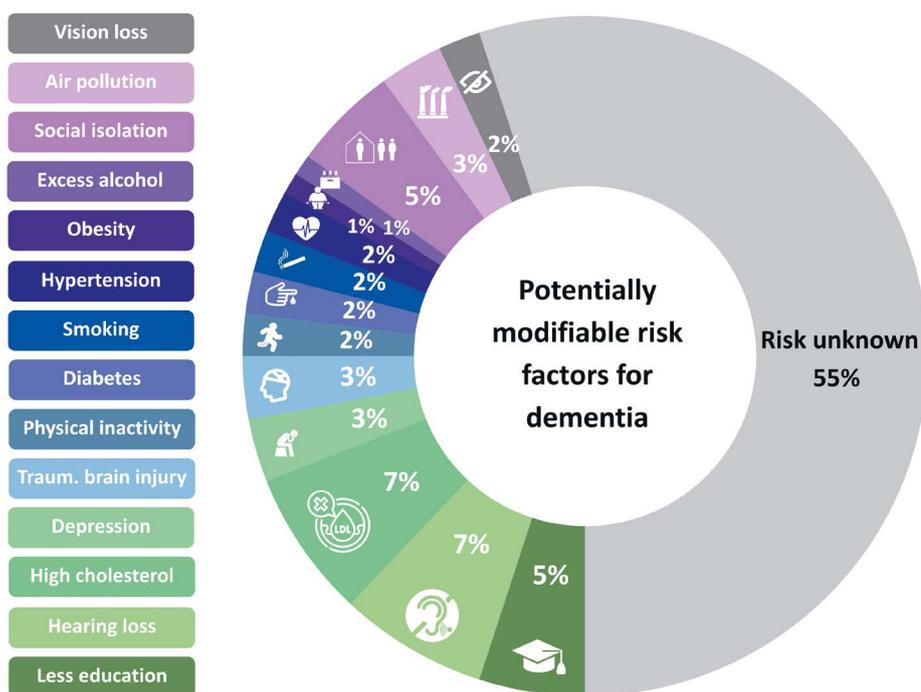
Alongside improving care and support for those already affected by dementia, there is growing evidence and interest in preventing, delaying or slowing dementia. This has been accompanied by an expanding lexicon of terms relating to dementia prevention and risk reduction, framed around a single, overarching concept: brain health.

## What’s in a name? Dementia prevention, risk reduction and brain health

To many, “dementia prevention” is a blanket term which means stopping the disease before it starts. However, public health distinguishes between three levels of prevention. Primary dementia prevention aims to reducing risk before disease develops – akin to HPV vaccination programmes designed to prevent cervical cancer. Meanwhile, secondary prevention focuses on early detection to enable slowing of the disease before symptoms are well-established. Finally, tertiary prevention aims to minimise harms through careful management of established disease - supporting those already living with dementia to maintain function and quality of life. This approach highlights that prevention is relevant at all ages, and at every stage of disease.

But what is brain health, and is it the same as mental health? The two terms are related, but not identical. Mental health typically refers to emotional well-being and the ability to cope with stress, maintain relationships, and function in daily life. Brain health, on the other hand, encompasses a wider range of functions – such as cognition, behaviour and movement - supported by the physical and structural integrity of the brain. Someone may have good mental health but still be experiencing changes in brain health due to age, injury, or disease. Brain health considers not only how we feel, but also how we think, move, remember, and interact with the world.

Importantly, brain health goes beyond disease. According to the World Health Organisation’s 2022 position paper, “Optimising brain health across the life course”, brain health is “the state of brain functioning across cognitive, sensory, socio-emotional, behavioural and motor domains, allowing a person to realise their full potential over the life course, irrespective of the presence or absence of disorders”. The life-course lens recognises that brain health is not fixed but evolves across time



“Prevention is relevant at all ages and disease stages: from primary prevention to stop disease before it starts, to tertiary prevention that supports function and quality of life in people living with dementia.”

and life stages. As such, brain health is shaped by the environments in which we live, work and age. This includes societal parameters like access to education, economic security, and exposure to clean air, as well as individual factors such as physical activity, social interactions and cardiovascular health. By understanding brain health through this broader lens, public health initiatives for dementia prevention can be designed not only to reduce risk, but to support cognitive and emotional resilience across the lifespan - and through the disease course.

Brain health, in this sense, becomes not only a goal for individuals - but a shared responsibility for society. Brain health is now a central concept in global strategies addressing noncommunicable diseases, ageing, and mental health. Its growing use reflects a wider transformation in health policy: from treatment toward prevention, from single diseases to systems thinking, and from ageing as inevitable decline, to ageing with meaning, purpose and potential.

**Interventions for dementia prevention: evidence from the Lancet Commission**

Only around 2% of people with Alzheimer’s disease, the most common cause of dementia, develop the disease due to inherited genetic mutations. Growing evidence indicates that lifestyle, environmental, and social factors may play a causative role in many cases.

The first Lancet Commission on Dementia Prevention, Intervention and Care, published in 2017, started with a clear call to action: to be ambitious about prevention. Recognising the growing

prevalence, impact and cost of dementia, the Commission authors, led by Professors Gill Livingston and Naheed Mukadam of University College London, introduced a life course model for dementia prevention. This model, which was updated in the 2020 and 2024 Lancet Commissions, centres on modifiable risk factors for dementia. Modifiable risk factors for dementia are behaviours, conditions, or exposures that can be altered or managed to prevent or delay dementia. These differ from non-modifiable factors like age or genetics, which cannot be changed.

Using the latest data on the prevalence of modifiable risk factors, the Lancet Commission estimated the population attributable fraction (or PAF) for each risk factor. PAFs tells us what percentage of new dementia cases could be prevented, if an individual risk factor is eliminated. Using this methodology, the 2017 Commission identified 9 modifiable risk factors for dementia across the life course. In early life, targeting low education could prevent 8% of dementias, while addressing hearing loss in midlife (defined as 45-65 years) could prevent 9% of dementias. In late life, for those aged over 65, smoking (5%) depression (4%) and physical inactivity (3%) were identified as the most consequential risk factors. The 2017 analysis showed that together, these risk factors may account for around 35% of all dementias worldwide.

In 2020, this model was expanded to include three additional risk factors - excessive alcohol consumption, traumatic brain injury, and air pollution - raising the prevention potential to 40%. The 2024 Commission deepened the focus on early detection and introduced two additional modifiable risk factors: high LDL-cholesterol in mid-life and vision loss in later life. While the focus of the Lancet Commission is mainly on primary prevention, inclusion of these two factors strengthened the case for targeted secondary prevention. It also reinforced the importance of equity, access, and life-course approaches to brain health, especially in low- and middle-income countries, where the prevalence of modifiable risk factors is much higher.

When the 2024 Lancet Commission was published, Jean Georges, Executive Director of Alzheimer Europe, stated: “*Alzheimer Europe welcomes this updated report and the hopeful message that nearly half of all future dementia cases could potentially be prevented. The organisation calls on national governments to include these findings in their local public health and risk reduction campaigns. As some of the risk factors originate at the societal level, large-scale policy changes are necessary to seize the full potential of risk mitigation and prevention.*”

Together, the landmark reports from the Lancet Commission have catalysed a major shift in dementia research, which is gradually being translated into policy. Twenty years ago, many assumed that dementia was an inevitable consequence of ageing. Now, there is an increasing recognition of the fact that prevention is not only a possibility, but an ethical and societal necessity.

“Brain Health is how well the brain supports thinking, feeling, movement and social connection, helping people live fully and reach their potential throughout life, irrespective of the presence or absence of disorders such as dementia.”

# Understanding brain health and dementia prevention

## A few words from Professor Gill Livingston, University College London

When I began my career, the thought that it might be possible to prevent dementia by modification of risk factors was not on the horizon. I remain delighted and surprised to see how populations which have reduced smoking, increased education and treated cardiovascular disease are already showing huge reduction in the incidence of dementia. I think there are many implications of the research featured in the 2024 Commission. I want to pick out three of them.

The first is that these risk factors cluster in more disadvantaged populations, minority groups and those in low- and middle-income countries. These groups could potentially benefit more from modification of risk factors than others who are more advantaged. However, there are large numbers of people worldwide who have not yet begun to see this benefit. This indicates how much could be done, quickly, to make a difference and reduce dementia incidence further.

The second key implication is that policymakers and public health officials can do the most to make a difference, as risks are often determined by a person's lifestyle

habits and environment. These include, for example, ensuring that the environment is not obesogenic, by ensuring that obesogenic food is not the cheapest and most readily available option. Together with initiatives to encourage physical exercise, this could reduce weight, diabetes and high blood pressure. Meanwhile individuals can do a lot to reduce their risk, and in an enjoyable way – for example, by seeing friends and family, drinking in moderation and doing physical activities they enjoy.

The third key implication is that in the oldest and most physically ill individuals, less neuropathology is required for them to develop dementia. This cognitive vulnerability is the opposite of cognitive reserve and indicates that bodily health is inextricably linked to brain health. It tells us that addressing bodily health is essential to reduce cognitive vulnerability.

Overall, the 2024 report reveals that there is much more that can and should be done to reduce the risk of dementia. It's never too early or too late to take action, with opportunities to make an impact at any stage of life. We now have stronger

## Perspectives on brain health from people with lived experience of dementia

### Kevin Quaid, Chairperson of the European Working Group of People with Dementia

Kevin Quaid is the current Chairperson of the European Working Group of People with Dementia, and the Chair of the Irish Dementia Working Group. He was diagnosed with Parkinson's disease 11 years ago, at the age of 50, and later with Lewy Body Dementia.

#### What does brain health mean to you?

In order to live a healthy life, we need to have a complete life - and by that, I mean

to stay active, stay social, stay involved in our communities and above all to avoid social isolation. This is what brain health means to me.

Hearing is another important part of brain health for people with dementia: around 8% of us have hearing loss. Before getting hearing aids, I found myself becoming more and more socially isolated. I would choose to avoid situations where there would be a lot



Gill Livingston

evidence that longer exposure to risk has a greater effect and that risks act more strongly in people who are vulnerable. That's why it is vital that we redouble preventive efforts towards those who need them most, including those in low- and middle-income countries and socio-economically disadvantaged groups.

We have learned a considerable amount about preventing and slowing dementia. The stakes are high and the time for action is now!

**“It's never too early nor too late in the life course for dementia prevention.” - Gill Livingston**



Kevin Quaid

of people and noise. Now, I go to whichever events I want, because I have my full hearing back.

For me, all of these elements support my brain health. As with our bodies, it is not one

single type of food that will keep us healthy – we need to eat a variety of the right types of food!

**Why is brain health important for people with dementia and their caregivers?**

We may be living with dementia, but that doesn't mean brain health isn't relevant to us. If anything, it is even more important for us to take care of our brain health, to remain independent for longer. When people who have dementia are able to live their own lives or part of their lives independently, the benefits are tremendous. When you have a person caring for you, it can become exhausting for them. But if you are able to take trips independently, then the person with dementia feels empowered that they are able to do it and the caregiver gets a much-needed break. This makes for a happier life, and a happier home. Small things can make a huge difference!

**What can people with dementia and caregivers do, to support their brain health?**

A person's hearing is one of those things that you don't notice getting worse because it can happen slowly, over time. I knew that my hearing might not be great, but I never imagined how bad it was. After getting it checked, to my surprise, I needed hearing aids. The difference they have made, not only to my dementia but to my whole life is quite simply amazing. I would definitely encourage everyone to get their hearing checked!

One of the best things to do for brain health is to find that passion in the person who has dementia: something that they always wanted to do, or something they have always enjoyed. Then you can set a goal, and a destination. Whether you achieve the goal or reach the destination is not that important, but if you can work towards something, perhaps together with your caregiver, it can be very fulfilling and meaningful.

For both Helena my wife and myself, the day that I was diagnosed with Lewy Body Dementia was probably one of the darkest days of our lives. But since becoming an advocate I have a new focus and a new purpose in my life. There are still dark days but there are also many days when I feel I have a wonderful life despite my diagnosis. I try to live my life to the fullest each and every day - and at the moment, it is working!

**Trevor Salomon, Chairperson of the European Dementia Carers Working Group**

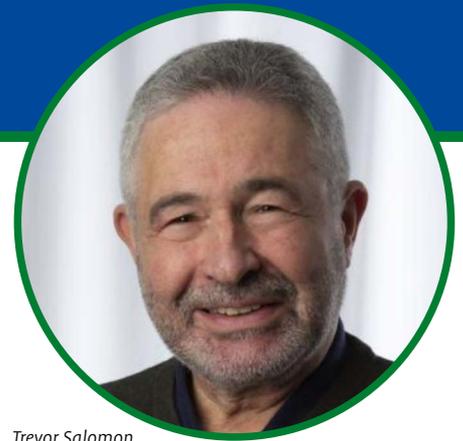
Trevor Salomon is the current Chairperson of the European Dementia Carers' Working Group (EDCWG). Trevor was nominated to the EDCWG by the Alzheimer's Society and is married to Yvonne, who was diagnosed with young onset Alzheimer's disease at the age of 53.

**What does brain health mean to you?**

I have to confess that when I was younger, I never really thought about brain health; in fact, it was a term I probably wasn't even aware of. I was fit, ate a balanced diet, socialised, worked and was interested in the world around me, from global politics to international economics.

I guess the first time I ever really stopped to think about the workings of the brain, and therefore its health as a complex organ controlling our thoughts and function, was when my father was diagnosed with Alzheimer's disease in his seventies. I realised just how much cognition and physical capability he lost over a relatively short space of time and that it would never return.

When my wife succumbed to young onset Alzheimer's dementia at the age of 53, I asked myself how this could happen to someone who was extremely active, didn't smoke or drink alcohol and had a challenging role as a bookkeeper where she spent her working day looking at numbers and creating spreadsheets. It dawned on me



Trevor Salomon

then, and especially after I retired in 2015 to look after her, that whilst nothing could probably prevent dementia, maintaining an 'active lifestyle' should be an imperative to supporting a healthy brain enabling it to function optimally to regulate the body.

**What can carers do to support their brain health?**

Personally, I continue to challenge my approach to brain health by always having a thirst for knowledge, keeping fit (even doing housework, which I hate, is a form of exercise!) and being forever the optimist who is mentally positive. I can't prove it, but I believe this helps me to think clearly and make decisions, retain information and learn new skills, all to keep stress at bay.

One aspect which I've never been able to crack is the advised 7-9 hours of quality sleep each night. I rarely manage more than 5 hours but this is nothing new. I've always functioned well on minimal sleep and this did not change even when I stepped away from the world of work. I can only assume that the role of a carer was arguably more demanding than I anticipated although I learnt early on in my career how to manage stress rather than let it get the better of me.

It is, of course, imperative that carers look after their brain health and everything this encompasses – both mental and physical – otherwise they will not have the strength of mind or energy to perform one of the most demanding roles: taking care of someone regressing with dementia.

# The prevalence of dementia risk factors across Europe

Earlier this year, Alzheimer Europe launched a project to understand the prevalence of dementia risk factors and their distribution across European countries, analysing existing data of more than 69,000 participants from the Survey of Health, Ageing and Retirement in Europe (SHARE).

The Lancet Commission on Dementia Prevention, Intervention and Care highlights the considerable potential for dementia prevention. To fully harness this potential, it is necessary to address modifiable risk factors at both individual and population levels. At the national level, understanding the prevalence of these risk factors can help guide more targeted and effective policy decisions and public health interventions, such as risk reduction campaigns.

In spring 2025, Alzheimer Europe launched a project to understand the prevalence of dementia risk factors and their distribution across European countries. This information can inform evidence-based prevention strategies, encourage policies that address priority risk factors in each country, and support more efficient use of resources. By highlighting geographic and sociodemographic patterns, the findings may also help focus awareness campaigns, contribute to clinical guidance, and shape future research on dementia prevention. To

achieve this, we analysed existing data of more than 69,000 participants aged 50 years and older from the Survey of Health, Ageing and Retirement in Europe (SHARE).

SHARE includes data from around 480,000 interviews and surveys performed across 27 European countries and Israel at regular intervals, making SHARE an invaluable resource for understanding how people are ageing in Europe. For the current analyses, data collected in 2021 and 2022 was used.

## How we analysed the data

Our first aim was to gain an overview of the prevalence of different modifiable risk factors for dementia across European countries. To do this, we used questionnaire data from SHARE, which included measures for nine of the risk factors identified in the Lancet Commission report. Table 1 outlines how each risk factor was measured in our analyses. When estimating prevalence, we applied a statistical adjustment

to help ensure the results more accurately represent the population of each country.

In addition to estimating the prevalence of risk factors, it's also helpful to estimate how many dementia cases in a country can be linked to those factors. This is often done using a measure called the population attributable fraction (or PAF). PAFs consider not only how prevalent a risk factor is in a population, but also how strongly it increases the risk of developing dementia. As presented in Table 2, the majority of people report exposure to more than one risk factor. To avoid overestimation, PAFs are thus typically adjusted to account for overlap between different risk factors. These adjusted estimates help identify which factors may have the biggest impact if targeted for prevention.

As a next step, we calculated PAFs for each of the 28 countries, using the approach described by the Lancet Commission. In addition to the risk factor prevalence described above, we used existing meta-analyses to gather estimates of how strongly each risk factor is linked to dementia, expressed as relative risks. To adjust our PAFs to the fact that many risk factors often occur together, we calculated a measure of overlap between them (known as communality) for each country separately. Finally, we combined all this information using

Table 1 – Included modifiable risk factors for dementia and their measurement

| Risk factor         | Way of measurement   |
|---------------------|--|
| Low education       | Less than secondary education (a)  |
| High blood pressure | Self-reported physician diagnosis of high blood pressure                       |
| High cholesterol    | Self-reported physician diagnosis of high cholesterol                          |
| Diabetes            | Self-reported physician diagnosis of diabetes                                  |
| Smoking             | Current smoking status   |
| Physical inactivity | <150 minutes moderate or <75 vigorous intensity physical activity per week (b) |
| Obesity             | Body-Mass-Index $\geq 30$  |
| Depressive symptoms | Score of $\geq 6$ on EURO-D Scale (c)  |
| Loneliness          | Score of $\geq 6$ on 3-item UCLA Loneliness Scale (d)                          |

(a) Based on highest level of education obtained. For comparability, country-specific levels of education were matched to International Standard Classifications of Education (ISCED). (b) In line with recommendations of the World Health Organization (WHO, Global Recommendations on Physical Activity for Health); (c) Prince et al., 1999, British Journal of Psychiatry (d) Hughes, 2004, Research on Ageing

Table 2 – Number of risk factors reported for people aged 50+

| Number of risk factors | Proportion of people |
|------------------------|----------------------|
| 0                      | 16.3%                |
| 1                      | 24.2%                |
| 2                      | 23.3%                |
| 3                      | 17.2%                |
| 4                      | 10.4%                |
| 5                      | 5.5%                 |
| 6                      | 2.3%                 |
| 7                      | 0.7%                 |
| 8                      | 0.1%                 |
| 9                      | <0.1%                |

established formulae to produce adjusted PAF estimates for each country.

### Prevalence of modifiable risk factors for dementia

Across countries, 83.7% of people reported at least one modifiable risk factor, with the highest proportion reporting either one (24.2%) or two (23.3%) factors. Figure 1 presents the prevalence of the nine modifiable risk factors in adults aged 50+ from 28 countries in Europe. High blood pressure was most prevalent (42.1%), followed by physical inactivity (30.2%), depressive symptoms (28.1%), and high cholesterol (23.9%). Risk factor prevalence varied substantially by gender (see Figure 2). In particular, women were more likely to report physical inactivity, depressive symptoms, low education, and loneliness, whereas smoking and diabetes were more frequently reported by men.

### Proportion of dementia cases attributable to included risk factors

As shown in Figures 3 and 4 (page 10), the proportion of dementia cases attributable to the nine factors included varied considerably across countries. In the Netherlands, eliminating these factors could potentially prevent 29.6% of dementia cases, whereas, in Malta the proportion was much higher at 64.3%.

Differences between countries were particularly large for low education. For cardiovascular risk factors, including high blood pressure, high cholesterol and diabetes, PAF estimates ranged from 9.2% in the Netherlands to 22.8% in Israel. For lifestyle-related factors including smoking, physical inactivity and loneliness, estimates ranged from 6.5% in Sweden to 20.4% in Hungary. Finally, depressive symptoms accounted for

6.9% of cases in Switzerland compared to 13.2% in Lithuania.

### Actions for dementia risk reduction at European and national levels

In line with the Lancet Commission findings, our own analyses suggest that the potential for the primary prevention of dementia across European countries remains substantial, underlining the importance of interventions targeting risk factors at both individual and population levels.

Given the high prevalence of some of these risk factors across Europe, coordinated action at the European level is key. Priority areas could include cardiovascular risk management, the promotion of a healthy lifestyle and addressing depressive symptoms. Ideally, such efforts would take the form of clearly defined, specific and measurable action points integrated into a broader European dementia strategy.

Our analyses also highlight notable differences between countries in risk factor prevalence and PAFs. These insights can help tailor national public health strategies to local demographic contexts and risk factor profiles, complementing a wider European response. Also, on a national level, strategies for risk reduction should be embedded in well-resourced and comprehensive dementia strategies.

Healthcare systems across Europe must be adequately prepared to support dementia risk reduction. This involves building capacity in primary care, ensuring access to preventive services, training healthcare professionals on dementia risk factors, and promoting early identification and intervention efforts within routine clinical practice.

While harmonised data such as that from SHARE are invaluable for enabling meaningful comparisons between countries, certain caveats should be considered when interpreting our findings. The analyses presented here are based entirely on self-reported survey data, which can be subject to

Figure 1 – Prevalence of modifiable risk factors for people in Europe aged 50+ (n=69,447).

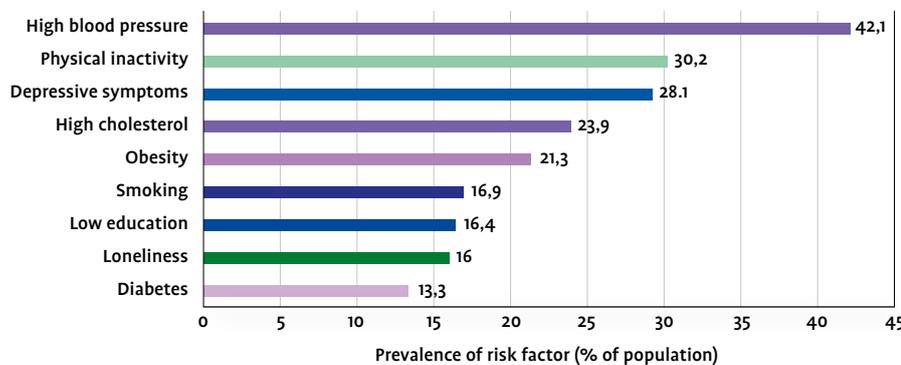
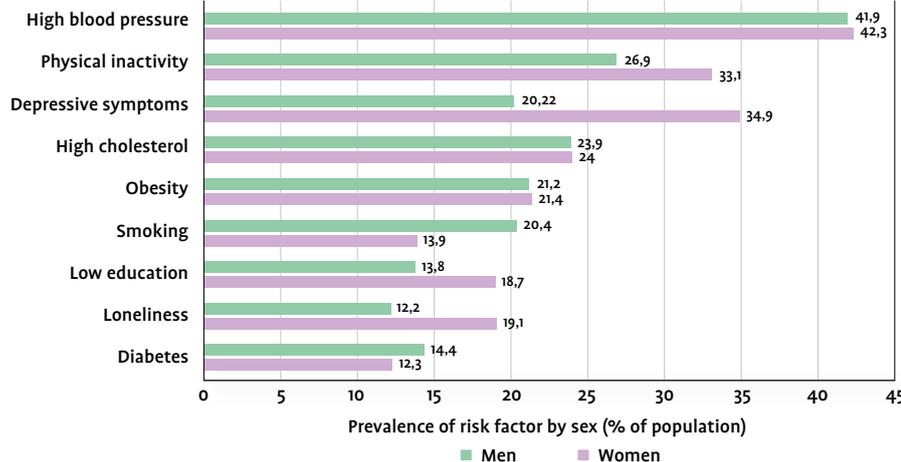
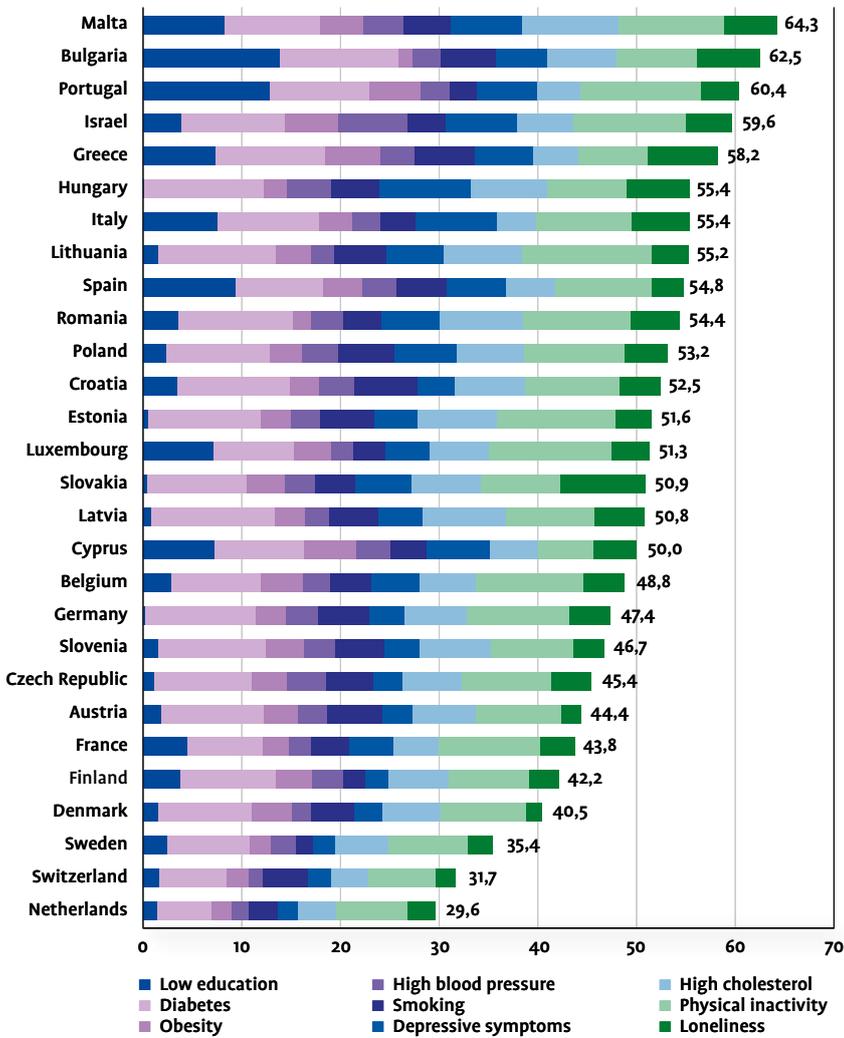


Figure 2 – Prevalence of modifiable risk factors for males and females aged 50+.



# The prevalence of dementia risk factors across Europe

Figure 3 – PAF estimates per country, and by risk factor (% dementia cases that could be prevented)



recall bias or misreporting. Although we used validated scales and established cut-off values wherever possible, our indicators reflect research-based definitions of risk factors rather than clinical diagnoses. As such, the estimates may not fully capture the clinical burden or severity of hypertension, diabetes, hypercholesterolemia and depression.

This project forms part of a broader initiative aiming to map the policy and practice landscape surrounding dementia risk reduction across European countries, as part of the AD-RIDDLE project. Future work will focus on validating these findings through additional data sources, exploring within-country differences in

risk factor distributions and assessing how modifiable risk factors evolve over time. This longitudinal work will be conducted in collaboration with the Alzheimer Centre Limburg (Maastricht University).

As awareness of modifiable risk factors for dementia grows, continued research and collaboration are essential to translate evidence into effective prevention policies. Alzheimer Europe remains committed to promoting risk reduction and prevention by advancing research, fostering partnerships and supporting policy development across Europe.

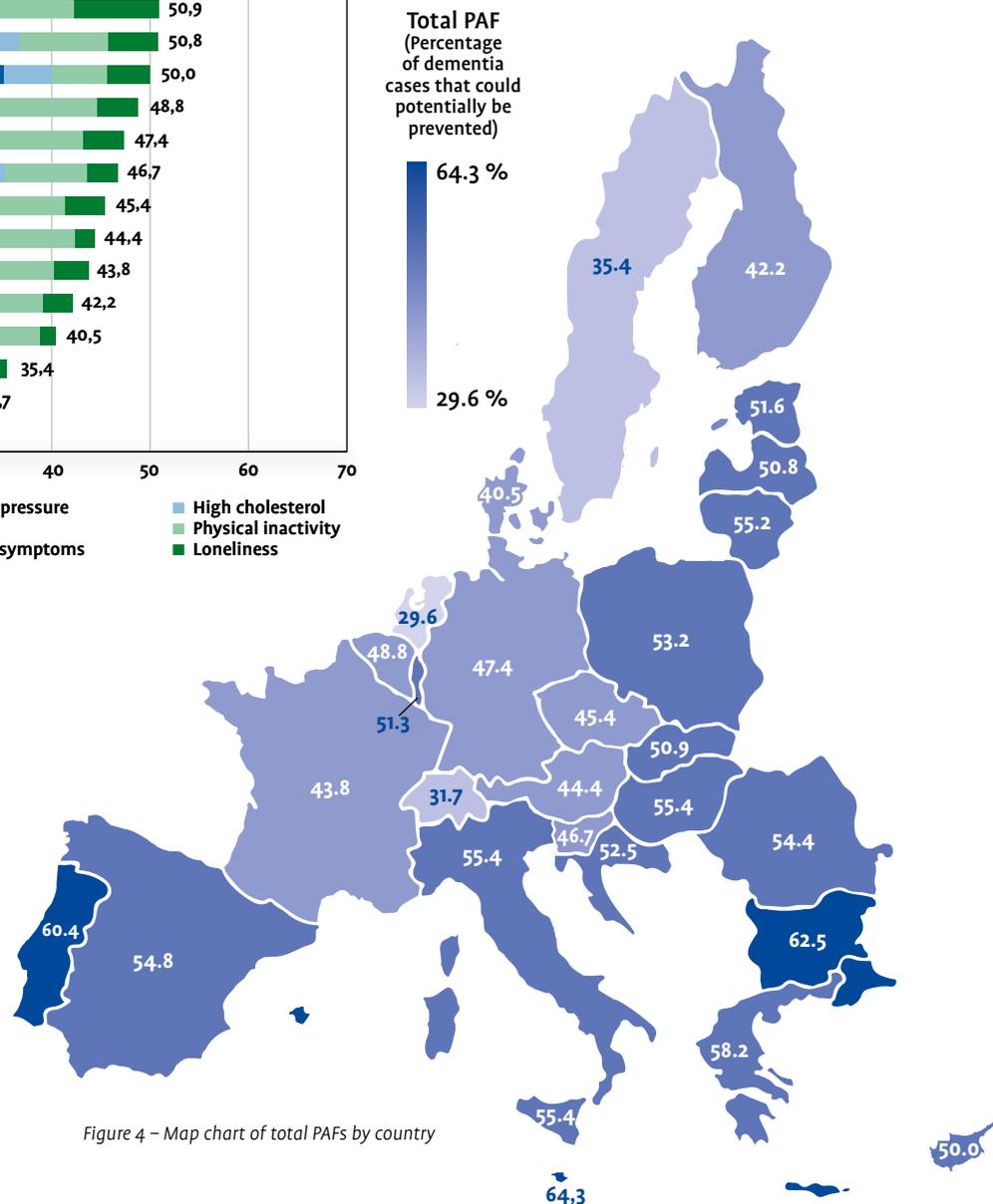


Figure 4 – Map chart of total PAFs by country

# Lifestyle-based dementia prevention: lessons from FINGER and beyond

The Finnish Geriatric Intervention study to prevent cognitive impairment and disability (FINGER) pioneered a multidomain intervention with measurable cognitive benefits, inspiring a global network of next-generation “precision prevention” trials that embed nutrition, exercise, cognitive training and cardiovascular risk management into scalable, real-world pathways.

With ageing populations, the global number of people with dementia is projected to triple by 2050. An estimated 40–45% of dementia cases are attributable to modifiable risk factors such as physical inactivity, poor diet, cardiovascular and metabolic disorders, hearing loss, social isolation and cognitive inactivity. Dementia prevention efforts have therefore shifted towards multidomain approaches that combine several lifestyle-based interventions, rather than targeting single risk factors in isolation.

## The FINGER study



The Finnish Geriatric Intervention study to prevent cognitive impairment and disability (FINGER), led by Professor Miia Kivipelto, was the first large trial to

demonstrate that multidomain lifestyle interventions can improve brain health and prevent cognitive decline in at-risk older individuals from the general population.

Launched in 2009, the FINGER study involved 1,260 participants aged 60–77 with increased risk of dementia, based on certain identified risk factors, and tested a 2-year multidomain intervention against general health advice. The intervention combined nutritional guidance, physical activity, cognitive training, social stimulation and cardiovascular risk monitoring.

Cognitive performance improved among participants in both groups, but the total average improvement of the intervention group was 25% greater than the improvement of the control group. Interestingly, APOE ε4 carriers benefited considerably from the intervention. Follow-ups to 11 years have continued to show lasting benefits, including slower cognitive decline, reduced incidence of multimorbidity, and better functional outcomes.

## Global and European collaboration

Building on this success, the World-Wide FINGERS (WW-FINGERS) network was established in 2017 under the leadership of Prof. Kivipelto. To date, the network has expanded to include over 70 countries, enabling the adaptation and testing of the FINGER model across diverse populations, cultures, and health systems. Participating trials are harmonised in terms of data collection

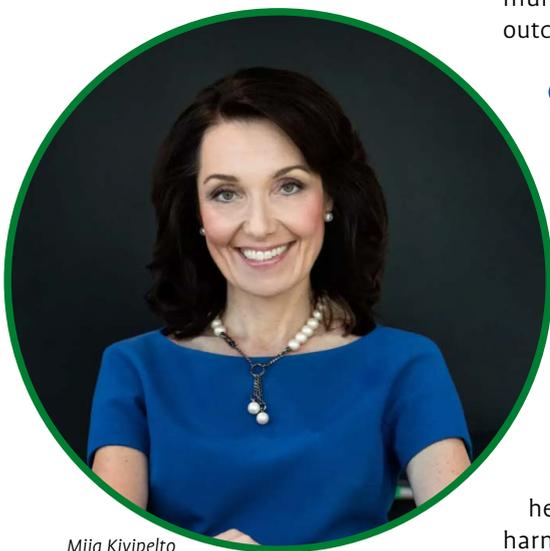
and outcome measurement, which allows for robust joint analyses and accelerates translation of findings into practice.

Several of these trials have reported positive cognitive and vascular outcomes. For instance, US POINTER, supported by the Alzheimer’s Association, aims to replicate the original FINGER trial to assess the generalisability of the findings in the North American context. The SINGER study is using a multidomain lifestyle interventions approach in older adults at risk for dementia, across Singapore, to delay cognitive decline. Also, in Africa where dementia prevention is critically underexplored, Africa-FINGERS is offering multidomain interventions tailored to the unique challenges of the region.

In Europe as well, several initiatives have been put in place. GOIZ-ZAINDU, the Basque words for “caring early”, was a one-year pilot trial testing the feasibility of the FINGER multidomain intervention in the Basque population in Spain, highlighting the importance of cultural adaptation.

Additionally, the EU-FINGERS project aimed to develop tools to advance, optimise and scale-up the FINGER model across Europe. These tools include for example methods to accurately measure the level of risk in older adults, both in terms of developing brain pathology and cognitive decline, as well as their prevention potential.

“The FINGER trial showed that targeting several risk factors at once - diet, exercise, cognitive and social activity, vascular health - can reduce cognitive decline. But this is about more than prevention: it is about optimising brain health for everyone, at every age.” Miia Kivipelto



Miia Kivipelto

# Lifestyle-based dementia prevention: lessons from FINGER and beyond

## Next-generation interventions

We know that each person is unique, so prevention programmes need to be tailored to the individual's unique characteristics. This method is called "Precision Prevention" and it is successfully used for other health conditions. The next generation of dementia prevention trials is arising with the FINGER 2.0 model, which will be expanded to develop even more personalised and therefore effective, preventative interventions.

FINGER 2.0 combines precision lifestyle interventions with nutrition-based and/or pharmacological treatments. The combination of the FINGER lifestyle intervention and medical food was tested in the MIND-AD clinical trial. Preliminary findings show good feasibility and adherence in prodromal Alzheimer's disease as well as signs of potential cognitive benefits (in the participating countries Sweden, Finland, France and Germany).

Among the most notable extensions of the original Finnish study is MET-FINGER, an ongoing trial testing a full FINGER 2.0 model, combining the lifestyle intervention and metformin treatment in older healthy adults at risk of dementia (currently ongoing in the UK, Finland and Sweden). Metformin is of particular interest given the known association between type 2 diabetes and Alzheimer's disease, and emerging data on its neuroprotective mechanisms, which may include vascular, metabolic, and anti-senescence pathways.

This represents promising progress in dementia prevention, potentially bridging the gap between public health and clinical medicine. As with all trials under the WW-FINGERS umbrella, MET-FINGER is also collecting data in a harmonised manner to allow for future pooled analyses and international comparisons. Together, these efforts are contributing to a global

knowledge base on what works to delay or prevent cognitive impairment, and for whom.

To fully understand how these interventions can be refined for even greater impact, further investigation is needed into their biological mechanisms and real-world implementation. Two European research projects (Multi-MeMo and LETHE) have taken on this challenge, building on the FINGER model with complementary scientific approaches.

## Spotlight on Multi-MeMo



The Multi-MeMo project was launched in 2023 under the EU Joint Programme – Neurodegenerative Disease Research (JPND) with the aim to elucidate how multimodal interventions trigger beneficial effects at biological levels.

Coordinated by Professor Alina Solomon from the University of Eastern Finland, this three-year initiative integrates both pre-clinical and clinical research. At the experimental level, it uses molecular and cellular methods, alongside three different rodent models of neurodegeneration to test multimodal preventive interventions mirroring those tested in human trials. Concurrently, analyses of human samples and data from both previous and ongoing clinical trials within the consortium are ongoing to identify the individual characteristics that can predict most accurately the at-risk groups that will benefit the most from different intervention.

Ultimately, Multi-MeMo seeks to develop an improved multimodal

intervention model which is tailored for specific risk profiles at individual and population level to deliver personalised strategies to effectively prevent or delay Alzheimer's disease and related dementias. This will also include supporting the combination of lifestyle changes and pharmacological treatments that have the potential to enhance each other's effects.

Reflecting on the project's scope and progress, Alina Solomon added: *"What sets Multi-MeMo apart is our integrative methodology, combining molecular, in vitro and in vivo models with human investigations. This unique approach, coupled with the use of invaluable data and samples from long-term randomised clinical trials, enable us to explore the complex mechanisms underlying dementia prevention. We are making good progress due to the collective efforts of our dedicated partners whose collaboration is pivotal in advancing this critical research. Additionally, we are actively involving members of the public through our Advisory Board which regularly meets to collect opinions and feedback on specific topics relevant to the project. Embedding patient and public involvement across Multi-MeMo is a really important activity of the project."*



Alina Solomon

Spotlight on LETHE



LETHE (“A personalised prediction and intervention model for early detection and reduction of risk factors causing dementia”) was a four-year Horizon 2020 funded project that concluded in June 2025. It developed a digitally enabled model of the FINGER intervention, combining mobile applications, passive

monitoring and Artificial Intelligence (AI)-supported risk prediction.

Building on the 11-year longitudinal analysis of the original FINGER study, LETHE integrated big data from four clinical centres across Europe (Austria, Finland, Italy, Sweden). The project aimed to identify digital biomarkers for early detection of dementia risk factors through unobtrusive, active and passive monitoring with smart watches and other digital devices. The intervention, initially referred to as FINGER 2.0, translated the original lifestyle-based prevention model into a personalised, technology-supported programme, delivering tailored recommendations, feedback and behavioural support. The approach targeted individuals stratified by cost-effective biological biomarkers to ensure better precision and impact.

in user engagement and intervention delivery.

One important component of the project was Public Involvement. Older adults and other stakeholders were involved throughout the design process to co-create the intervention and ensure it addressed their priorities and needs. Their input shaped the content and functionality of the mobile app and digital tools used to deliver personalised recommendations and track engagement.

*“The LETHE project has successfully completed its clinical study feasibility phase with outstanding adherence and minimal dropouts. Over two years, we built a rich dataset of digital and clinical biomarkers and developed a toolbox of AI models for cognitive decline risk prediction, and adherence analysis – paving the way for precision, data-driven dementia lifestyle intervention. In Austria, we are continuing this journey by validating the AI algorithms and enhancing the app with gamification elements to boost adherence in a new clinical study across three clinical centres with 300 participants. Furthermore, we aim to explore how to implement the concept of ‘brain health service centres’ for secondary prevention, with the long-term goal of integrating the LETHE setup into everyday clinical practice”,* Sten Hanke said.



Sten Hanke

Coordinated by Sten Hanke from FH Joanneum in Austria, LETHE tested a feasibility trial involving 156 older adults, with positive feedback on usability and design. The study also served to validate potential improvements

Acknowledgements



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Multi-MeMo is an EU Joint Programme – Neurodegenerative Disease Research (JPND) project. The project is supported through the following funding organisations under the aegis of JPND – [www.jpnd.eu](http://www.jpnd.eu): Finland, Research Council of Finland; Germany, Federal Ministry of Education and Research; Luxembourg, National Research Fund; Netherlands, The Netherlands Organisation for Health Research and Development; Slovakia, Ministry of Education, Science, Research and Sport of the Slovak Republic; Spain, National Institute of Health Carlos III.



# Healthcare system preparedness for dementia prevention

For decades, dementia was regarded as a disease to be diagnosed and managed once symptoms became severe. However, this view is quickly changing. Scientific progress has shown that a significant proportion of dementia cases could be delayed or even prevented. This raises an important question: are healthcare systems in Europe prepared to act on this knowledge?

Healthcare system preparedness refers to the capacity of health systems to prevent, detect, and manage disease in a timely, equitable, and effective way. In the context of brain health, preparedness goes beyond clinical diagnosis and care. It is about proactively supporting cognitive well-being across the entire life course, from early development and adulthood, through to old age and even after a diagnosis of dementia. This includes primary prevention, which focuses on reducing risk factors before disease begins; secondary prevention, which identifies early signs of disease and intervenes to delay progression; and tertiary prevention, which supports those living with dementia to maintain function and quality of life.

Currently, healthcare systems in Europe mainly focus on the later stages of dementia. Systems frequently operate under a reactive model of care: people are referred to memory clinics once symptoms become disruptive, and even then, many go undiagnosed. Statistics indicate that only 50–65% of dementia cases are diagnosed in high-income countries, and a recent systematic review has shown that there is an average time to diagnosis of 3.5 years in Europe. Moreover, while many countries have national targets for dementia diagnosis,

few integrate early detection programmes and dementia risk reduction pathways into primary and secondary care, or public health systems. Although many countries have public health strategies targeting cardiovascular risk factors such as smoking, obesity and hypertension, dementia risk factors such as social isolation or hearing loss are rarely identified or addressed systematically.

This disconnect between scientific research and clinical practice is not due to a lack of robust evidence on the value and potential for dementia prevention. As outlined in the article on page 4, the Lancet Commissions on Dementia Prevention, Intervention and Care have shown that up to 45% of global dementia cases could be prevented or delayed by addressing modifiable risk factors such as smoking, excessive alcohol use, social isolation, depression, air pollution and vision or hearing loss, among others. These risk factors act across the life course and often intersect with social and economic inequalities. However, many European healthcare systems still lack coherent frameworks to identify individuals at risk for dementia, deliver prevention programmes, and measure outcomes.

## Brain Health Services – a new model for dementia prevention

To address this gap, researchers and clinicians have begun to develop new models of clinical care specifically for brain health. A 2023 article published in the Lancet Regional Health – Europe journal introduced the concept of Brain Health Services. Developed by the European Task Force for Brain Health Services, the model is designed not for diagnosing dementia in

people with established symptoms, but for supporting people who are still cognitively unimpaired or in the early stages of disease. Brain Health Services operate around 4 pillars, offering individual risk assessment, clear communication about dementia risk, access to interventions for personalised prevention, and ongoing cognitive support. In contrast to traditional memory clinics, which prioritise diagnosis and medical management of symptoms, Brain Health Services primarily focus on detecting risk and preventing further cognitive decline. Pilot programmes already exist in several European countries, including Switzerland, Spain, Germany and Sweden.

*“We based this model on the experience of all the members of the Task Force. Some of the recommended interventions are ready to be applied or are already applied. Others are still under development,”* explained Giovanni Frisoni, Full Professor of Clinical Neuroscience at the University of Geneva (Switzerland), who leads the Task Force.

The broader vision is of a healthcare system that incorporates dementia prevention at every step of the patient journey. This might, for example, include routine screening for risk factors in primary care, supported by decision-making tools and clear referral options. In specialist settings, Brain Health Services would perform more detailed risk assessments, communicate dementia risk, and offer personalised prevention interventions. Alongside, existing memory clinics would continue to focus on diagnosis, treatment, follow-up and care for people with cognitive impairment. In parallel, public health policies would aim to reduce population-level risk by promoting education, tackling air pollution, encouraging social engagement, and ensuring access to hearing and vision care. An important consideration is health equity, to ensure that people from disadvantaged groups, rural areas, and minority communities have equal access to prevention and support.



## Integrating new tools and interventions for dementia prevention

Health systems must adapt as new technologies and interventions emerge. Over the past decade, ultrasensitive tools to detect Alzheimer’s disease pathology have advanced rapidly. First-generation, gold standard approaches use brain PET scans or cerebrospinal fluid biomarkers obtained by lumbar puncture. These tools are now widely integrated into diagnostic pathways, although availability and accessibility vary across countries. A new generation of biomarker tests now offers the possibility of detecting Alzheimer’s disease pathology from a blood sample; research shows that when combined with clinical, lifestyle and genetic information, these assays could inform individualised dementia risk profiles.

Individualised risk profiling opens the door to personalised prevention. As discussed in the FINGERS article on page 11 personalised (“precision”) dementia prevention is taking shape on the European continent, with the FINGER 2.0 model tailoring multidomain lifestyle interventions to an individual’s risk profile and layering nutrition-based and/or pharmacological components. Funded by the national Ministry of Health, Luxembourg’s “Programme Démence Prévention” offers people with mild cognitive impairment a diverse range of activities and services tailored to their individual dementia risk factors, following a neuropsychological assessment and risk factor profiling. In Monza, a Brain Health Service nested within the memory clinic of Fondazione IRCCS San Gerardo dei Tintori performs detailed clinical tests to assess risk, offering personalised preventive strategies (e.g. dietary advice, cognitive stimulation) or entry to ongoing clinical trials on dementia prevention. The Davos Alzheimer’s Collaborative has supported the launch of brain health programmes involving digital cognitive assessments, blood-based biomarker testing and preventive interventions. Two examples are described on pages 17 and 18 by Jane Mahakian, founder of Alzheimer’s Care Armenia and leader of the “Brain

Health Armenia Project”, and Gillian Councill, Executive Lead of Alzheimer Scotland’s “Brain Health Scotland” initiative.

## EU initiatives addressing barriers to healthcare system preparedness

Although these and other pilot initiatives show that it is possible to provide brain health services across different healthcare systems, it is important to acknowledge the barriers facing implementation. Many clinicians lack training on brain health and are unfamiliar with tools and strategies to reduce dementia risk before symptoms emerge. Even where resources exist, patient education often overlooks cultural differences, literacy levels and social context. Time constraints, fragmented care pathways and competing demands in primary and specialty care further limit integration of preventive services into routine practice. As a result, opportunities for early intervention are frequently missed, especially for marginalised or high-risk groups who already face greater barriers to access.

Preparedness is therefore not only about having the right tools or knowledge; it is about ensuring they are used equitably, consistently and effectively across populations. The vision of “brain health for all” requires healthcare systems to address disparities in access, quality and cultural sensitivity through coordinated action at three interconnected levels: individuals, communities and the health system itself. At the healthcare system level, this means new clinical pathways, adequately resourced and supported by trained professionals, to enable routine, precision prevention of dementia. Healthcare systems will also require robust frameworks to govern the use of innovative screening technologies and tests, an important, first step towards risk detection and reduction.

Within the EU, research and innovation programmes are supporting interdisciplinary projects aiming to advance healthcare systems preparedness. A 2023 Innovative Health Initiative funding call focused on

“Screening platform and biomarkers for prediction and prevention of diseases of unmet public health need.” Within this call, two public-private partnership projects were funded: AD-RIDDLE, and PREDICTOM. Both initiatives aim to eliminate barriers to the early detection, diagnosis, prevention, and treatment of Alzheimer’s disease and dementia.

## Spotlight on AD-RIDDLE



AD-RIDDLE coordinators Miia Kivipelto (Professor in Clinical Geriatrics, Karolinska Institutet) and Niranjana Bose (Managing Director, Gates Ventures) said:



Miia Kivipelto

*“We understand that taking a one-size-fits-all approach to Alzheimer’s disease detection, prevention and treatment is unlikely to be successful. Diagnostic and clinical management pathways differ significantly across and within countries, with a range of approaches to testing, follow-up and reimbursement. At an individual level, patients are also more likely to benefit from personalised interventions and therapies that are tailored to their risk profile, symptoms and disease stage.*”

*This is why AD-RIDDLE is creating a modular toolbox platform, enabling health systems and healthcare providers to mix, match and*

# Healthcare system preparedness for dementia prevention



Niranjan Bose

*tailor its component tools to their specific requirements. The tools include some of the latest, innovative tests to detect early signs of Alzheimer’s disease and cognitive impairment, as well as evidence-based protocols for personalised prevention. The platform will also have an accessible, digital engagement portal for patients, caregivers and clinicians.*

*Our goal is to make AD-RIDDLE as flexible and inclusive as possible. So, we are providing solutions, tools and resources that can be easily adapted to different healthcare settings, community contexts, and individual needs. These elements will be tested in a real-world clinical study, spanning five EU countries and healthcare settings.*

*Over the next four years, we expect AD-RIDDLE to generate evidence for clinical implementation of precision diagnostics, as well as dementia prevention interventions, and therapies for Alzheimer’s disease. Together, we can advance the “last mile” of innovation, bridging research to the real-world setting.”*

## Spotlight on PREDICTOM



PREDICTOM coordinator, Dag Aarsland (Research Director at the Center for Age-Related Medicine, Stavanger University) said:

*“The goal of PREDICTOM is to develop an AI-enabled early-detection pathway that starts at home and dovetails with GP-led care. Screening can be initiated remotely: individuals provide biosamples and complete brief digital assessments (e.g., eye-tracking and cognitive tests), allowing risk stratification before any specialist visit.*

*To minimise burden on patients and services, the platform is built around sampling of finger-prick blood, saliva and stool, so that biological and digital signals can be captured where people live and receive routine care. We are also evaluating accessible readouts of brain activity, using EEG as a fast, scalable*

*measure of early changes suitable for primary care and community settings, alongside harmonised MRI protocols that support multi-site deployment.*

*Because general practitioners will be the front door for many people, we are actively engaging them through a cross-European survey to map current guidance and real-world workflows, ensuring the pathway is practical, acceptable and implementable in everyday practice. Altogether, this design aims to deliver earlier, more precise triage, reduce avoidable referrals, and provide robust evidence on safety, accessibility and efficiency, bringing precision screening and risk reduction within reach of routine European care.”*



Dag Aarsland

AD-RIDDLE is supported by the Innovative Health Initiative Joint Undertaking (IHI JU) under grant agreement No. 101132933. The JU receives support from the European Union’s Horizon Europe research and innovation programme and COCIR, EFPIA, EuropaBio, MedTech Europe and Vaccines Europe, with Davos Alzheimer’s Collaborative, Combinostics OY., Cambridge Cognition Ltd., C2N Diagnostics LLC, and neotiv GmbH. The UK partners (NICE, Imperial College London, University of Leicester) are supported through the UK Research and Innovation (UKRI) Horizon Europe guarantee scheme, under respective grant numbers 10083470, 10106509 and 10102029.

PREDICTOM is supported by the IHI JU under grant agreement No. 101132356. The JU receives support from the European Union’s Horizon Europe research and innovation programme and COCIR, EFPIA, EuropaBio, MedTech Europe and Vaccines Europe. The UK partners (NICE, King’s College London, University of Exeter) are supported through the UKRI Horizon Europe guarantee scheme, under respective grant numbers 10083467, 10083181 and 10091560.



# Brain health and dementia prevention: the societal perspective

Alzheimer Europe’s 41 member organisations include national Alzheimer associations from 36 different countries across Europe. This section highlights some of the fantastic work they are doing to turn the principles of dementia prevention into practice, advancing brain health for individuals and communities.

Brain health is shaped over the life course by the conditions in which people live, learn, work and age. Together with cardiovascular factors such as obesity, high blood pressure and raised LDL cholesterol levels, limited early-life schooling, chronic stress, air pollution and late-life isolation can drive cognitive decline and raise dementia risk. These societal factors, which have a major impact on our health, are often out of individual control; instead, they are determined by where we live, as well as the cultures and communities we belong to.

The societal and cultural dimensions of brain health make patient organisations important partners in advancing dementia prevention. Grounded in the lived experience of dementia, these organisations help ensure people affected by dementia receive the care and support they need, to live a life with meaning and dignity. They challenge stigma, raise awareness, provide guidance and support, advocate for better services, and amplify the voices of people living with dementia and their carers.

In its Global Action Plan on the Public Health Response to Dementia, the World Health Organization recognises the importance of meaningfully involving patient organisations in policy and service design, stating that: “A comprehensive and coordinated response to dementia requires collaboration among all stakeholders to improve prevention, risk reduction, diagnosis, treatment and care. Achieving such collaboration requires engagement at the government level [...] as well as partnerships with civil society.”

In this section of the magazine supplement, we hear how national Alzheimer associations are turning the principles of dementia prevention into practice, supporting brain health for people at risk of, and living with dementia.

## The Brain Health Armenia project

*The view from Alzheimer’s Care Armenia, by Jane Mahakian*

Alzheimer’s Care Armenia’s (ACA) Brain Health Armenia project, thanks to the generous funding of the Davos Alzheimer’s Collaborative, was aimed at increasing early detection of cognitive impairment (CI) and training physicians, nurses and caregivers across Armenia. This initiative encompassed nationwide mobile CI screenings through

administration of the Montreal Cognitive Assessment (MoCA) and creating one of the country’s first comprehensive databases on dementia and related health conditions and chronic illnesses. Through collaboration with organisations like the Armenian Eyecare Project to conduct outreach across 39 villages and towns in eight provinces between June 2022 and May 2023, this project was successful in screening 4,388 individuals, hosting 65 training sessions for approximately



Jane Mahakian

660 primary care physicians and nurses as well as conducting 12 caregiver workshops.

A preliminary analysis of the entire participant group revealed that about 31.22% of individuals showed signs of cognitive impairment: 24.75% mild, 5.29% moderate, and 1.18% severe. Additional secondary analyses of this participant database revealed differences across urban and rural residents such that male urban residents (OR=1.86 [1.08, 3.20], p=0.02) and rural residents with self-reported hearing loss (OR=1.34 [1.04, 1.71], p=0.02) had increased likelihood of presenting with mild CI.



Alzheimer’s Care Armenia collaborated with the Armenian Eye Care Project (AECP) to carry out thousands of screenings for the Brain Health Armenia project

# Brain health and dementia prevention: the societal perspective

In efforts to contextualise the biological and environmental risk factors across this understudied population, a deeper dive into the data also revealed the potential protective effects of urban residence (OR=0.72 [0.59, 0.88],  $p < 0.05$ ) and obese BMI level (OR=0.70 [0.55, 0.90],  $p < 0.05$ ). It is also significant to note, that across these secondary analyses, statistical models indicated significant association with varying levels of cognitive impairment and other related health conditions and chronic illnesses, namely, diabetes,

depression, sleep difficulties, heart disease and hypertension. Recognising the need for increased community outreach, education and intervention, ACA built upon the impact of the Brain Health Armenia project by transitioning at-risk participants to the new In-Home Cognitive Rehabilitation Program and enhancing the curriculum of Memory Cafes in Yerevan and Gyumri. Beyond caring for elderly individuals grappling with cognitive decline, these initiatives have helped caregivers and families learn more about the signs and symptoms of dementia,

introduced healthy lifestyle programs to help in risk reduction, encouraged awareness and stigma-reduction across rural communities and even collaborated with local law enforcement to expand public recognition and resources.



## Never Too Early, Never Too Late: A Lifelong Approach to Brain Health in Scotland

*The view from Alzheimer Scotland/Brain Health Scotland, by Gillian Council (Executive Lead for Brain Health and Innovation)*

At Alzheimer Scotland, we believe in the power of prevention. It's never too early, and never too late, to take steps to protect and maintain your brain health.

Brain Health Scotland, the prevention arm of Alzheimer Scotland, is leading our work to promote lifelong brain health and reduce the risk of dementia across the life course. Our programmes reach people at every stage of life, from school pupils to older adults with accessible, evidence-based support. With the latest research suggesting that up to 45% of dementia cases could be prevented, this work has never been more vital.



Gillian Council

Across our network of Brain Health and Dementia Resource Centres, we're delivering awareness sessions, personalised action planning, and a free online tool- My Brain Health Plan, to help people take small, meaningful steps toward better brain health. These interventions are grounded in behaviour change science and delivered by trained staff in supportive, community-based settings.

Our message is simple: small, positive changes in daily life can add up to lasting impact. We empower individuals to understand their risk factors, set achievable goals, and create environments that support long-term brain health.

By integrating prevention into communities, education, and everyday conversations, our charity is helping to shape a future where fewer people are affected by dementia, and where everyone has the opportunity to protect their brain health throughout life.

We're also developing targeted programmes for workplaces and for people at increased risk of dementia, including those with Mild Cognitive Impairment. Our STARS programme introduces brain health in schools, helping young people establish healthy habits early in life.

Did you know there are as many connections between brain cells as stars in the galaxy?

Alzheimer Scotland Action on Dementia | Brain Health Scotland

Brain Health Scotland prevention campaign graphic

**Brain Health Scotland**

Your brain is amazing. Let's keep it that way.

brainhealth.scot

## The Healthy Generation ‘de gezonde generatie’ in the Netherlands

Insights from Alzheimer Nederland, by Gerjoke Wilmink (CEO) and Anne de Boer (Team Leader, Advocacy)

In the Netherlands, 22 health foundations (including Alzheimer Nederland) have joined forces because we share a common mission: helping everyone live a longer, healthier life. However, the number of chronically ill people in the Netherlands has been increasing for years, while the number of years we live in good health is declining. The pressure on our healthcare system is rising, and our youth is facing increasingly severe—yet avoidable—health risks. Many young people still smoke, many children and adolescents consume unhealthy food and drinks, and many suffer from stress and performance pressure. We want to turn the tide, which is why it is essential to prioritise health and prevention.

That’s why we launched “The Healthy Generation” in 2017. In this initiative, we focus on children and young people. As a coalition, we want to create an environment that

encourages healthy behaviour among the youth. We focus on the following key areas:

- Reducing unhealthy stress
- Creating a healthy food environment
- Alcohol prevention
- A smoke-free generation
- An active generation
- Protection against online gambling

These focus areas not only help prevent dementia, but also cancer, gastrointestinal and liver diseases, diabetes, and more.

As a coalition, we engage policymakers, organisations, and citizens - because everyone can play a role in prevention. For example, a supermarket can create a healthier food environment, a municipality can create an environment that encourages physical activity, and a restaurant can make its terrace smoke-free. By providing education to the younger generation, and with national campaigns, we inspire action by the citizens as well.



Anne de Boer



Gerjoke Wilmink

Together, we are stronger. By addressing the cross-cutting risk factors which lead to poor health, we are taking a stand against the unhealthy environment we currently live in.



# Brain health and dementia prevention – the societal perspective

## The contribution of social determinants and patient organisations to the reduction of risk in Switzerland

*The view from Alzheimer Schweiz/Suisse/Svizzera, by Stefanie Becker (Director)*

Brain health is determined not just by genetics and biology but also by the conditions under which people live, work, and age. Addressing brain health determinants such as education, social inclusion and environmental pollution requires moving beyond a purely biomedical model towards inclusive, prevention-focused policies that address brain health across the life course.

Patient organisations play a crucial role in advancing prevention and risk reduction. Close to patients and communities, they build trust, raise awareness, and ensure prevention messages reach underserved groups. To be effective, these organisations must be structurally embedded in public health frameworks, to ensure that initiatives are both evidence-based and socially inclusive.

We have embraced this approach at Alzheimer Schweiz/Suisse/Svizzera. Through our patient advisory board Impuls Alzheimer, people with dementia provide feedback and shape projects with their lived experience. Its 21 regional sections involve patients and carers in surveys and evaluations. We also launched alzpeer, a

community where carers share knowledge, coach others, and provide peer counselling. This reduces stigma, depression and isolation, while fostering dementia-friendly communities that enhance brain health and social engagement.

At the national level, the organisation leads or partners in three major initiatives:

1. **Cooperation with Swiss Memory Clinics (SMC)** – Since 2021, Alzheimer Switzerland has worked closely with SMCs to optimise patient pathways from diagnosis to counselling, collaborate on political advocacy, and co-publish papers such as Recommendations of Dementia Therapy with the Swiss Ministry of Public Health.
2. **Partnership with the Brain Health Registry (BHR)** – A cooperation agreement was signed to encourage participation in research on Alzheimer’s and memory-related diseases. By promoting the registry, the organisation helps accelerate study recruitment and ensure dementia-friendly protocols.
3. **Swiss Brain Health Plan (SBHP)** – we contributed to the development of this plan, aligned with the WHO and European Academy of Neurology Brain Health Strategy. The SBHP is built on five pillars, including raising awareness



Stefanie Becker

and empowering patients and carers. Dementia perspectives are central to ensuring disease-specific needs are addressed.

Dementia prevention means more than lowering risk of disease onset. For those already diagnosed, non-pharmacological interventions can improve quality of life and independence. With new disease-modifying therapies on the horizon, this message is more important than ever: while not everyone will qualify for these treatments, all can benefit from evidence-based, person-centred interventions that remain underused today.



## A few words from Jean Georges, Executive Director, Alzheimer Europe

I am so impressed by the wide variety of fantastic work being done by our member associations, to help improve brain health and support efforts to prevent or delay dementia. Many of the themes covered in this article are also covered in our regular capacity-building ‘Alzheimer’s Association Academy’ workshops, in which our members take

part, both as speakers and contributors. I want to sincerely thank all of them and to recognise their vital work and their unwavering dedication, as well as their willingness to exchange ideas and share best practices with each other. All of this enhances our collective effort to raise awareness of brain health and prevention.



Jean Georges

# Advancing brain health policy in Europe

**A**s Europe faces rapid population ageing, dementia prevalence and costs are projected to rise. This article examines brain health through a policy lens, exploring evidence-based risk reduction, national dementia strategies and brain health plans.

Europe is the fastest-ageing continent in the world, with significant implications for its health and social care systems. According to Eurostat, more than 22% of the EU population was aged 65 or older in 2024, a figure expected to rise to 30% by 2050. This demographic shift is placing increasing pressure on services, particularly as age is the strongest risk factor for chronic diseases. Our 2019 prevalence figures indicate that the total number of people living with dementia in Europe is expected to rise sharply due to population ageing. The economic cost of dementia is substantial: dementia-related health care, social care, and informal care are estimated to cost the EU hundreds of billions of euros annually, placing growing pressure on health systems, long-term care services, and unpaid family carers.

While these trends point to a growing burden, they also underline the potential of prevention. As highlighted in the opening article to this magazine supplement, research shows that addressing modifiable risk factors across the life course could prevent up to 45% of dementia cases, delaying onset and reducing severity for many others. Even modest reductions in incidence could translate into significant savings in health and social care costs, while easing the strain on families and carers. Prevention is therefore not only a health priority, but an economic and social imperative for Europe.

The core principles of dementia prevention, including acting early, addressing multiple risk factors and promoting resilience, are also central to the broader concept of brain health. The World Health Organisation (WHO) defines brain health as “the state of brain functioning across cognitive, sensory, socio-emotional, behavioural and motor domains, allowing a person to realise their full potential over the life course, irrespective of the presence or absence of disorders.” This life-course

perspective emphasises that brain health is shaped by both individual and societal factors, from physical activity and cardiovascular health to access to education, economic security, and clean air. Policies designed with this broader understanding can not only reduce dementia risk but also support cognitive and emotional resilience throughout life, even in the presence of disease.

## Policy frameworks for dementia prevention

The growing awareness of the potential for dementia prevention is increasingly visible in global and regional policy frameworks. Brain health is cited in European and national strategies addressing noncommunicable diseases, ageing, and mental health, reflecting a broader transition from treatment toward prevention, and to promotion of healthy ageing rather than management of progressive decline. Meanwhile, at the global level, the 2019 WHO guidelines on risk reduction of cognitive decline and dementia recommend interventions across physical activity, diet, cardiovascular risk management, cognitive stimulation, and sensory health. These guidelines are currently being updated and will be published later this year.

However, prevention strategies must be understood across all three levels: primary, secondary, and tertiary. While primary prevention focuses on avoiding disease onset, secondary prevention involves early detection and intervention to slow progression, and tertiary prevention aims to maintain quality of life and function for those already living with dementia. A comprehensive policy approach should ensure that investment in primary prevention does not come at the expense of timely diagnosis, access to disease-modifying and symptomatic treatments, rehabilitation, long-term care, and caregiver support.

Public health strategies at EU level still focus heavily on cardiovascular risk factors for dementia, such as smoking, hypertension, and high LDL cholesterol. Initiatives like the EU’s Beating Cancer Plan, which aims for a Tobacco-Free Generation by 2040, and the Healthier Together initiative, which embeds blood pressure and cholesterol screening into primary care, have clear benefits for brain as well as heart health. Yet dementia-specific risk factors such as hearing loss, depression, and social isolation receive far less attention. These lack dedicated EU funding, workforce targets, and systematic monitoring. As a result, Europe’s prevention framework omits major opportunities for dementia risk reduction.

## Dementia strategies and brain health plans

The WHO’s Global Action Plan on the Public Health Response to Dementia 2017–2025 set a target for 75% of countries to have national dementia strategies by 2025. However, by mid-2024, only 20 European countries had stand-alone strategies. Moreover, a 2025 progress report to the World Health Assembly found that only 39 of 78 participating countries were running stand-alone or integrated dementia risk reduction campaigns. In response, Member States extended the Global Action Plan to 2031, aligning it with the intersectoral global action plan on epilepsy and other neurological disorders.

During their 2023 Brain Health Summit, the European Academy of Neurology (EAN) launched the Brain Health Mission, aiming to improve public understanding of brain health, strengthen health systems for underserved populations, and expand education for healthcare professionals. It aligns with the WHO’s Intersectoral Global Action Plan on Neurological Disorders (iGAP) and promotes collaboration, policymaking support, research, education, and awareness. A key focus of the Mission is the development of national Brain Health plans, aiming to integrate brain health into national policy, healthcare, and research. These plans take a broad approach, covering prevention, care,

“Brain health plans intersect with national dementia strategies, but they are not a substitute for them. Dementia plans remain essential for ensuring that people at all stages of disease receive the support, treatment and care they need.”

research, and societal engagement for neurological and mental health conditions - also addressing stroke, epilepsy, Parkinson’s disease, and depression alongside dementia.

Brain health plans intersect with national dementia strategies, but they are not a substitute for them. As stated by the WHO in their Global Action Plan on the Public Health Response to Dementia, “the development and coordination of policies, legislation, plans, frameworks and integrated programmes of care through a comprehensive, multisectoral approach will support the recognition, and address the complex needs, of people with dementia within the context of each country...in line with the principle of universal health coverage and the standards outlined in the Convention on the Rights of Persons with Disabilities.” Dementia strategies remain essential for ensuring that people at all stages of the disease receive the treatment, care and support they need. However, brain health plans can complement elements of national dementia strategies by addressing shared risk factors, integrating services, and creating synergies across neurological conditions.

Examples show these approaches working together. Spain’s Plan Español del Cerebro (PEC), launched in 2025, sets out a multisectoral roadmap while complementing, rather than replacing, the country’s existing National Plan on Alzheimer’s and Other Dementias. Norway’s National Brain Health Strategy (2018–2024) follows a similar model, embedding dementia priorities within a broader neurological health framework. By advancing both brain health plans and dementia strategies, countries can address wider determinants of brain health while ensuring the specialised needs of those affected by dementia are not overlooked. The effectiveness of these policies will depend on

their ability to integrate practical measures that can be delivered at scale.

As Europe prepares to meet the dual challenge of an ageing population and the rising prevalence of dementia,

### Comment from Katrin Seeher, Mental Health Specialist at the WHO Brain Health Unit

The number of people living with dementia is expected to rise substantially in the coming decades. The recent extension of the WHO Global Action Plan on the Public Health Response to Dementia helps to encourage national and international action across key areas, including risk reduction. Despite this, the need for the implementation of effective strategies aiming at risk reduction and prevention continues to grow.

Published in 2019, the WHO Guidelines for Risk Reduction of Cognitive Decline and Dementia provided evidence-based recommendations for interventions such as increasing physical activity, improving nutrition, stopping tobacco use, reducing harmful alcohol consumption, and managing hypertension, diabetes, and high cholesterol. Developed through systematic reviews, meta-analyses, and expert consensus, the guidelines reflect carefully evaluated evidence on dementia risk reduction. They have since informed national dementia strategies and helped place prevention more firmly on the policy agenda.

the forthcoming update of the WHO’s dementia risk reduction guidelines will be a valuable resource for governments, clinicians and public health agencies. These revised recommendations are expected to strengthen the evidence base for prevention, provide clearer guidance on implementation, and help countries align policies and strategies with the latest science.



Katrin Seeher

Since 2019, new evidence has further strengthened the case for risk reduction and highlighted the importance of acting across the life course. We are thus currently working on an update of the guidelines, together with academic collaborators and other stakeholders from around the world. This revised version will reflect the latest science and offer practical recommendations that take into account different resource levels, especially in low- and middle-income countries. This is essential to support implementation in places where health systems face the greatest challenges. The review process has now been completed, and we hope to publish the updated guidelines in early 2026.

There is now a clear opportunity to embed dementia risk reduction into health, ageing, and noncommunicable disease strategies. Doing so requires political commitment, coordination across sectors, and policies that support healthier environments and reduce inequalities.

# Alzheimer Europe’s position on risk disclosure

On 30 November 2023, Alzheimer Europe published a position statement on disclosure of dementia risk. Developed following engagement with its national members and the European Dementia Carers Working Group (EDCWG), the position calls for open, honest, empathetic and compassionate disclosure of dementia risk in both research and clinical practice.

Alzheimer’s disease (AD) research has recently shifted its focus towards the development of diagnostic tools for earlier detection and risk prediction of dementia. There has also been increased attention on strategies to keep the brain healthy and reduce modifiable risk factors contributing to the disease’s onset and progression.

This shift would allow dementia researchers to recruit more suitable participants for clinical trials testing new AD treatments that would hopefully benefit more than just those in the latest stages of the disease. Within this context, people with no known cognitive problems or in the early stage of AD, i.e. Mild Cognitive Impairment (MCI) due to AD, could have their risk of developing cognitive problems or progressing to AD dementia predicted and estimated as part of the research study in which they participate. These risk assessment tools could be ultimately implemented in clinical practice, where people could be tested for their risk of developing dementia.

Although dementia risk prediction is happening in research and may be integrated

into clinical practice in the near future, very little focus has been on the disclosure of such risk. To address this lack of focus on risk disclosure, Alzheimer Europe developed general and specific recommendations, in collaboration with Alzheimer Europe’s national members and the EDCWG. They are grouped as follows:

1. General recommendations when disclosing risk for cognitive impairment to cognitively healthy people, or disclosing risk for AD dementia to people with MCI due to AD.
2. Specific recommendations when disclosing risk for cognitive impairment to cognitively healthy people.
3. Specific recommendations when disclosing the risk for AD dementia to people with a diagnosis of MCI due to AD. The recommendations are aimed at both clinicians and researchers, as the risk disclosure may happen during someone’s participation in research or as part of a person’s proactive search for their risk status in a clinical practice.

### Recommendations include:

- Clinicians should be transparent about the capacity current therapies and interventions have to create beneficial change and about their limitations. When recommending the adoption of healthy lifestyle choices, clinicians should clarify that the healthiest of lifestyles cannot,

unfortunately, guarantee that someone will not experience cognitive impairment or AD dementia.

- Clinicians should also be transparent about the uncertainty of the clinical progression toward cognitive impairment or AD dementia. Risk prediction for cognitive impairment or AD dementia does not bring certainty or information about the likely course or progression of the disease.
- Clinicians, researchers or counsellors should guide and inform the person on positive actions they can take upon receipt of results, such as positive lifestyle changes, support groups they can join and clinical trials from which they might benefit. Regular appointments should be offered to both monitor the person’s clinical progression and support the person.
- Clinicians should consider the personal utility that risk prediction for cognitive impairment may have for the individual. Some people may want to use this information to participate in a dementia prevention clinical trial, and/or to prepare themselves and their families for a possible future with AD.
- Clinicians should also consider personal factors such as age, employment status and their views about available drugs to prevent the development of AD. These factors may contribute to the impact that risk prediction will have on a person’s personal and working life, and how they plan to approach life such as accelerating travel plans, taking on new challenges, or devoting more time to voluntary work.
- If different factors such as time constraints make it unrealistic for clinicians to manage the disclosure process, then other professionals like counsellors should be involved in this process.

Our full position statement can be accessed on the Alzheimer Europe website, here: [https://bit.ly/AE\\_RiskDisclosurePosition](https://bit.ly/AE_RiskDisclosurePosition)





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