

UPSTREAMING BSO: Strategies & Interventions: Recognizing barriers & improving supports for persons at risk for BPSD

Kiran Rabheru MD, CCFP, FRCP
Professor, of Psychiatry, University of Ottawa
Geriatric Psychiatrist, The Ottawa Hospital



There is no
Health without
Mental Health

No Conflict of Interest |

Objectives

Appreciate

Appreciate the importance of integrating mental, physical, social, and environmental health, and its relationship to primary prevention of dementia and maintaining brain resilience and wellness

Understand

Understand the importance recognizing mild behavioral impairment (MBI) and individualizing care planning

Being

Being more comfortable thinking of innovative strategies to care older persons with BPSD in early stages of cognitive impairment.

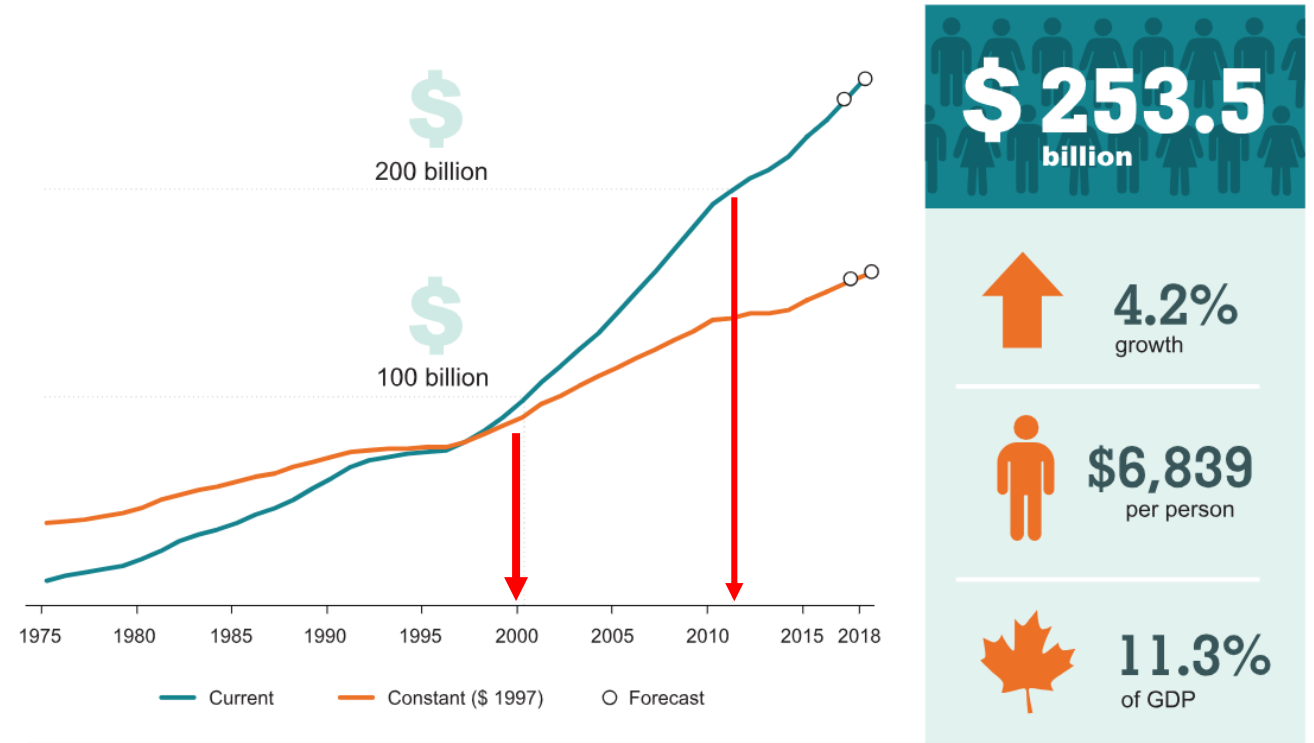
Be

Be aware of new studies to enrich knowledge for reducing risk of dementia and its complications

Total health spending is forecast to reach \$6,839 per Canadian in 2018, over \$200 more per person than in 2017 (\$6,630)



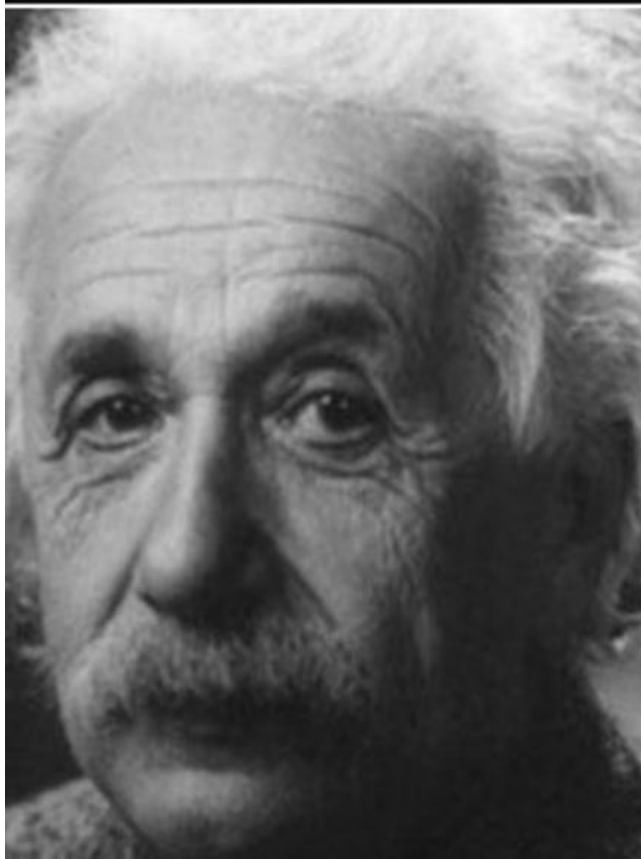
How much will we spend on health in 2018?



Source

National Health Expenditure Database, Canadian Institute for Health Information.

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In the midst of every crisis,
opportunity.

— *Albert Einstein* —

AZ QUOTES

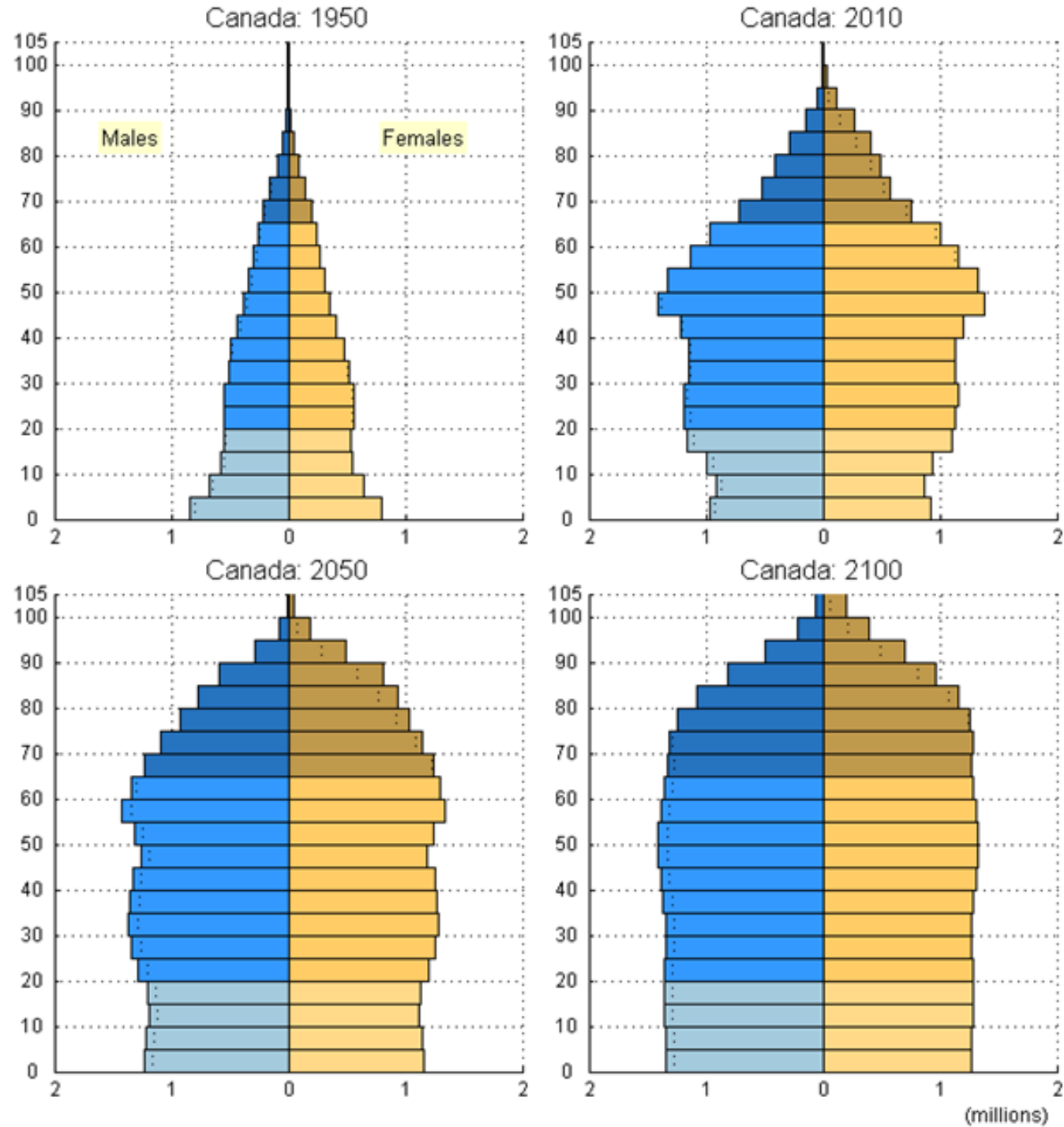
Optimizing Brain Health Across the Lifespan

- **Health: NOT SUSTAINABLE**
- **MUST Innovate**
- **Risk reduction**
- **Active promotion**
- **Resilience**
- **Target modifiable risk factors through behavior change**

Life Expectancy
1900 = 48 years
2020 = 84 years

Canada's population pyramid 1900-2100

Source: United Nations, World Population Prospects: The 2010
Revision. Available at: <http://esa.un.org/unpd/wpp>

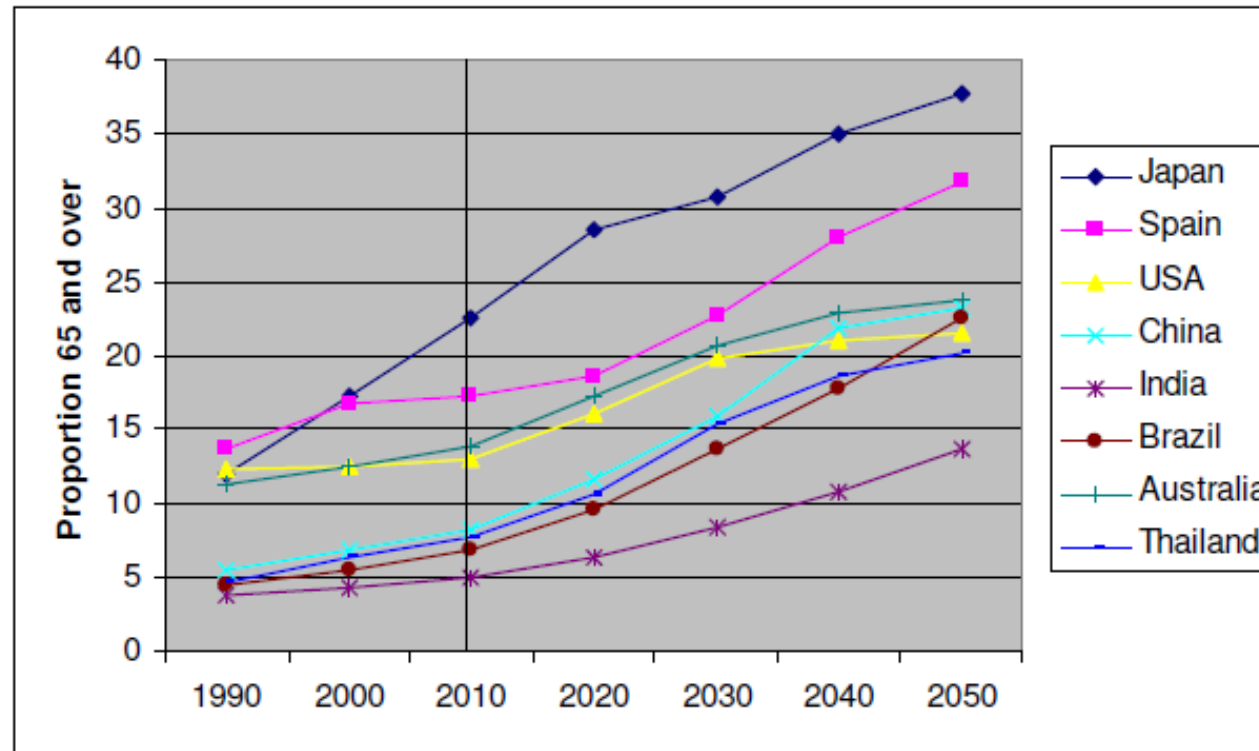


Growth:
524 million in 2010
1.5 billion in 2050

**Potential for active,
healthy aging
population**

Real ageing is just beginning

Source: World Population
Prospects: 2008 Revision





Stigma:

1. Ageism
2. Mental Health

What you permit,
You promote

In India, elders are the head of the family.



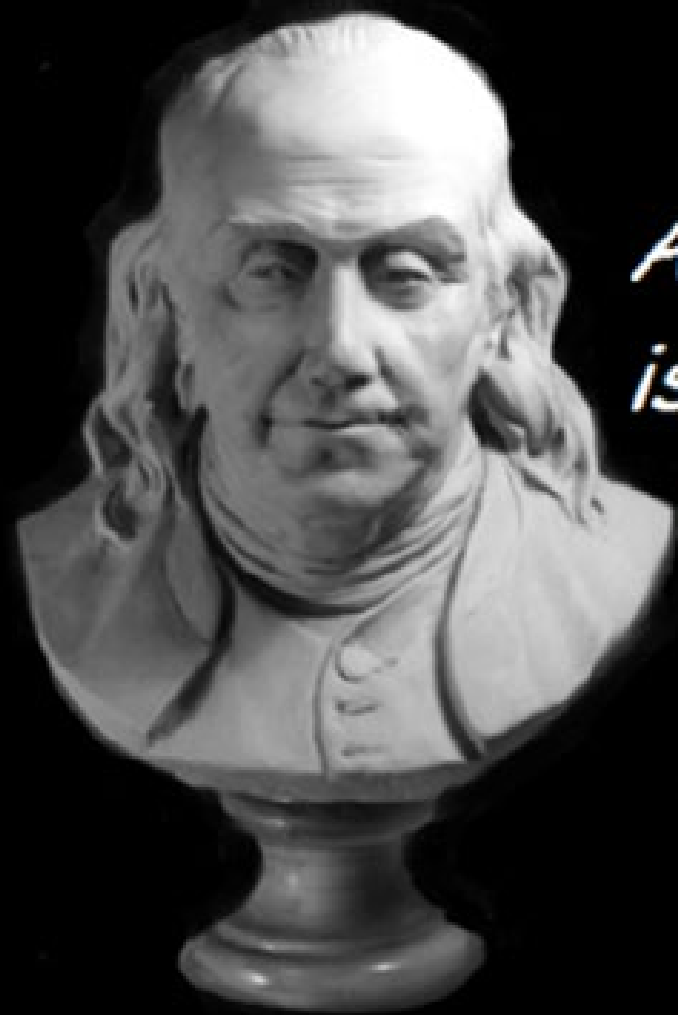
Today's Seniors

- More active
- Engaged
- Know their importance
- Involved
- Question policies
- Make decisions
- Demand attention
- Enrich lives

Native Americans pass down their knowledge



Getty Images



*An ounce of prevention
is worth a pound of cure*
- Ben Franklin

What **Makes** Us Healthy



50% of makes us healthy
is based on health behaviors

What We **Spend** On Being Healthy



Only 4% spent on healthy behaviors

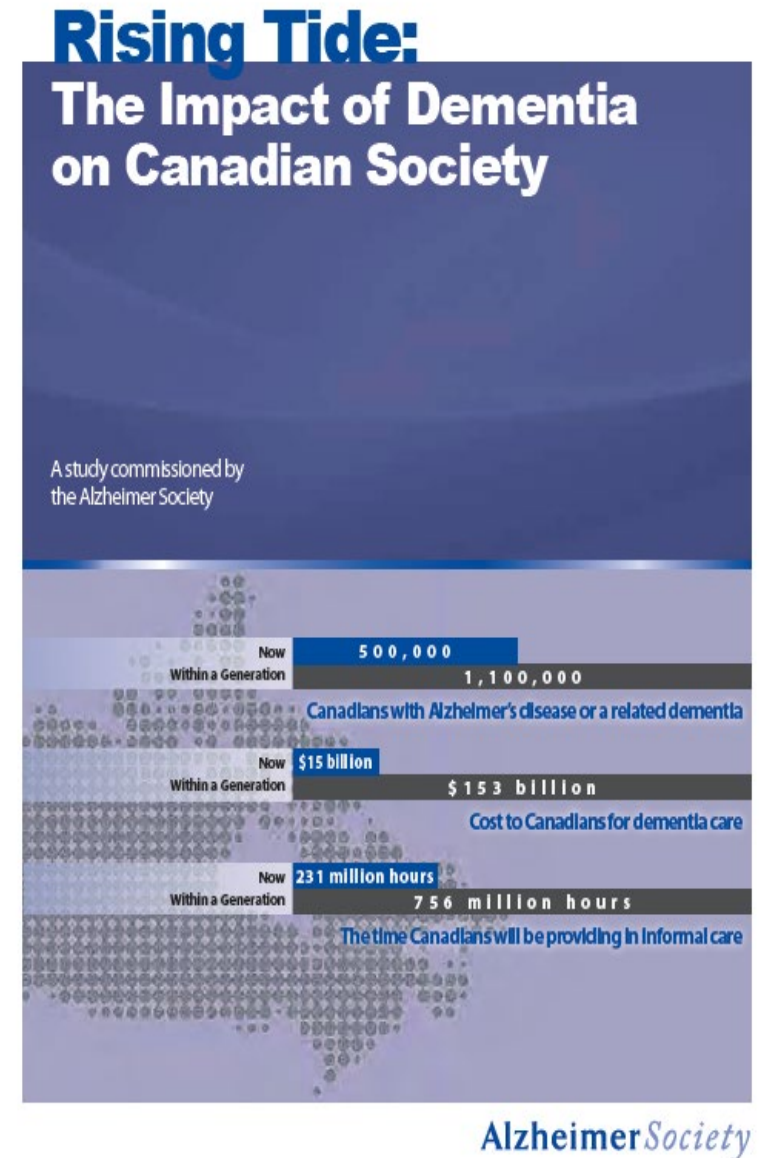
Rising Tide – The Impact of Dementia on Canadian Society

PREVENTION!

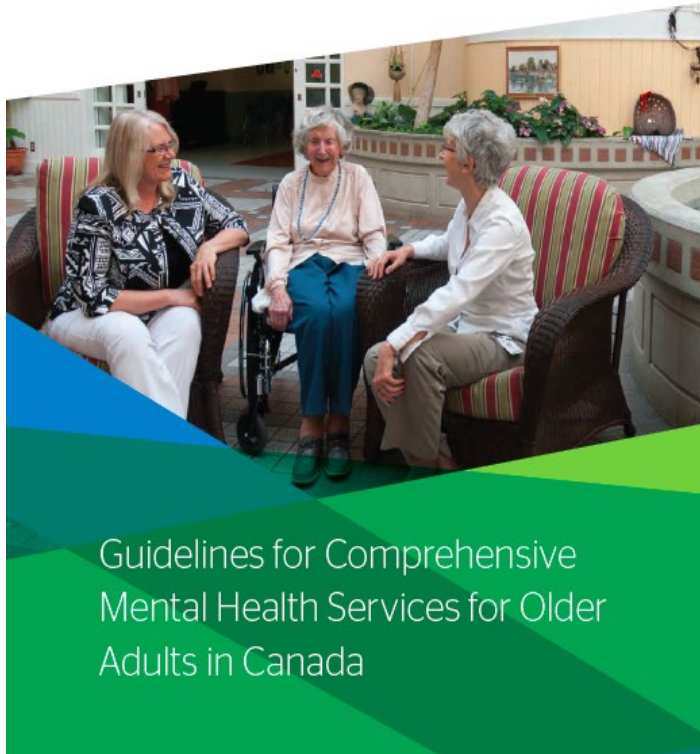
Interventions critical in reducing impact:

1. Increasing Physical Activity
2. Delay Onset of Dementia- lifestyle interventions
3. Caregiver Support

All show potential for dramatic reductions in economic impact over next 30 years...



Mental Health Commission of Canada (2011) Guidelines for Comprehensive Mental Health Care



***25% (15/60 pages)
of recommendations***

- *Prevention*
- *Health promotion*
- *Early detection*

The Lancet Commission on Dementia prevention, intervention, and care

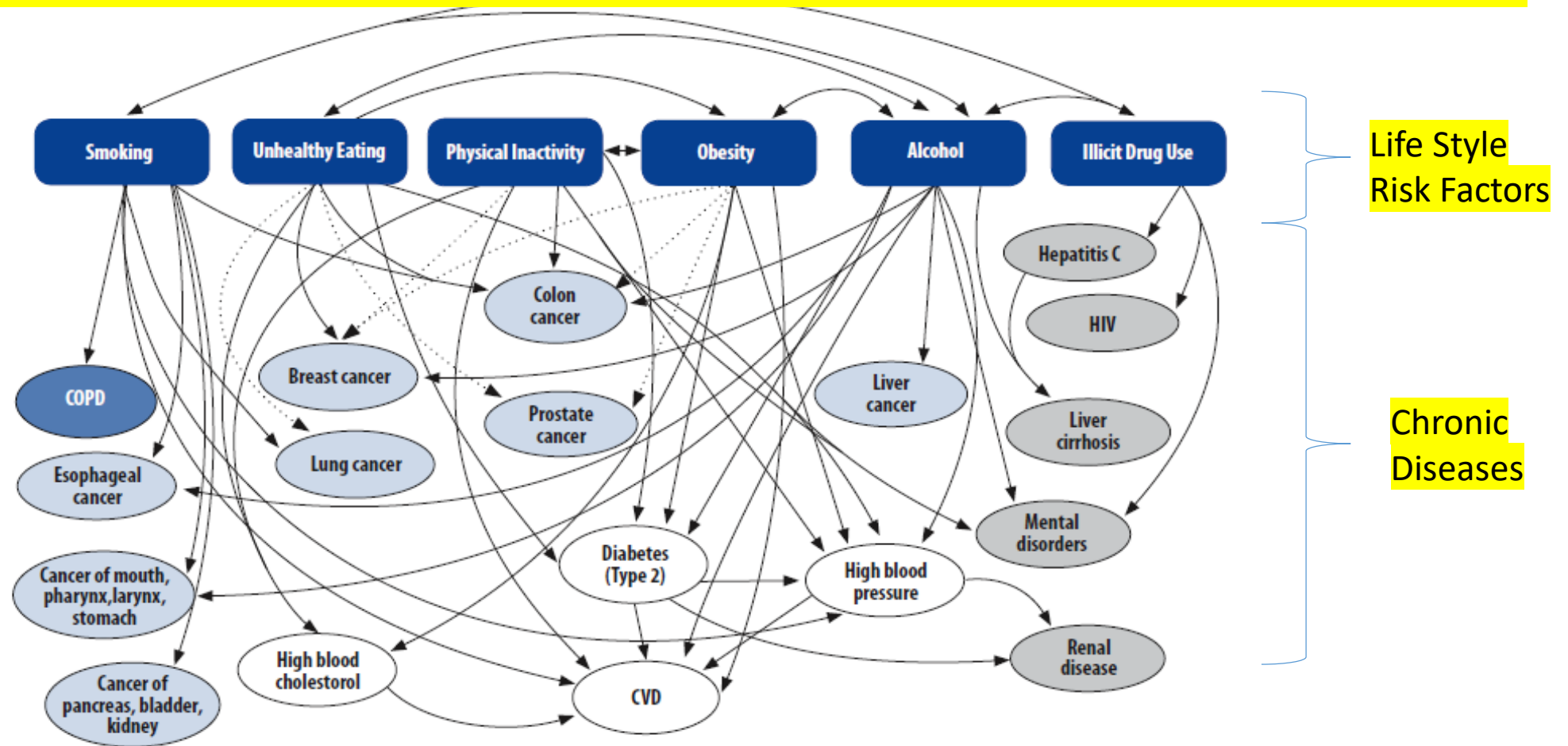
- 1/3 dementia cases may be preventable
- The Commission adds social isolation and midlife hearing loss to the list of relevant epidemiological factors
- A life course model estimates that 35% of dementia cases could be prevented if these risk factors were eliminated
- “Be ambitious about prevention”
- Focus on interventions to build up resilience (i.e., cognitive reserve) and healthier lifestyles



Your Health



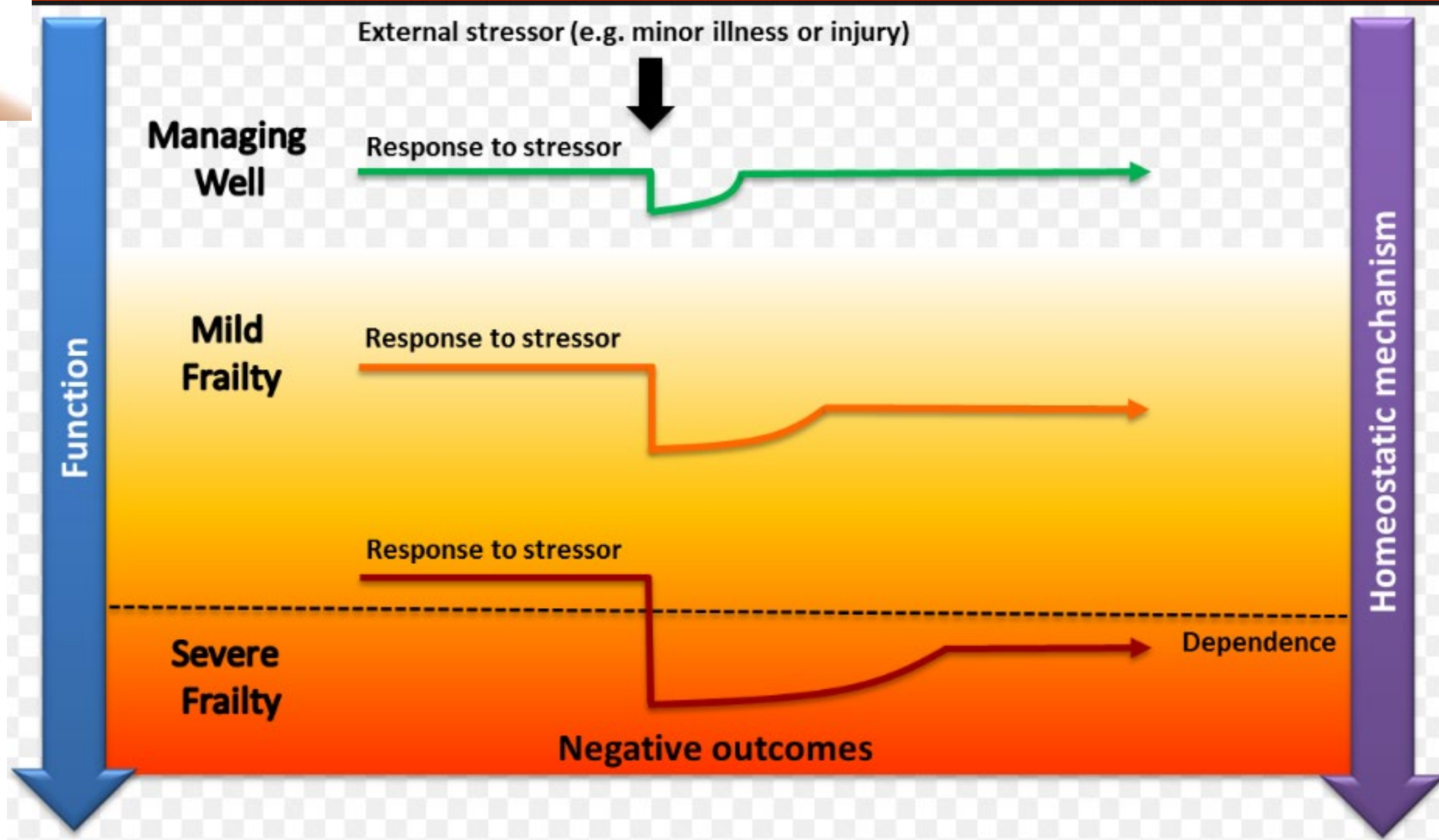
Interrelationships between Lifestyle and Chronic Diseases



Note: Alcohol also has a protective effect for CVDs among women and men 45 years and older, depending on the pattern of drinking; the link to diabetes also depends on volume and patterns of drinking.
Source: *Chronic Disease in Ontario and Canada: Determinants, Risk Factors and Prevention Priorities*. (2006, March). Prepared for the Ontario Chronic Disease Prevention Alliance and the Ontario Public Health Association.



Stress and Frailty





**United
Nations**

Dementia is expected to affect 152 million people worldwide by 2050 – triple the current 50 million – amid the aging of the global population.



**World Health
Organization**

Dementia

50 million

Approximately 50 million people worldwide have dementia.

Dementia cost

\$818 billion

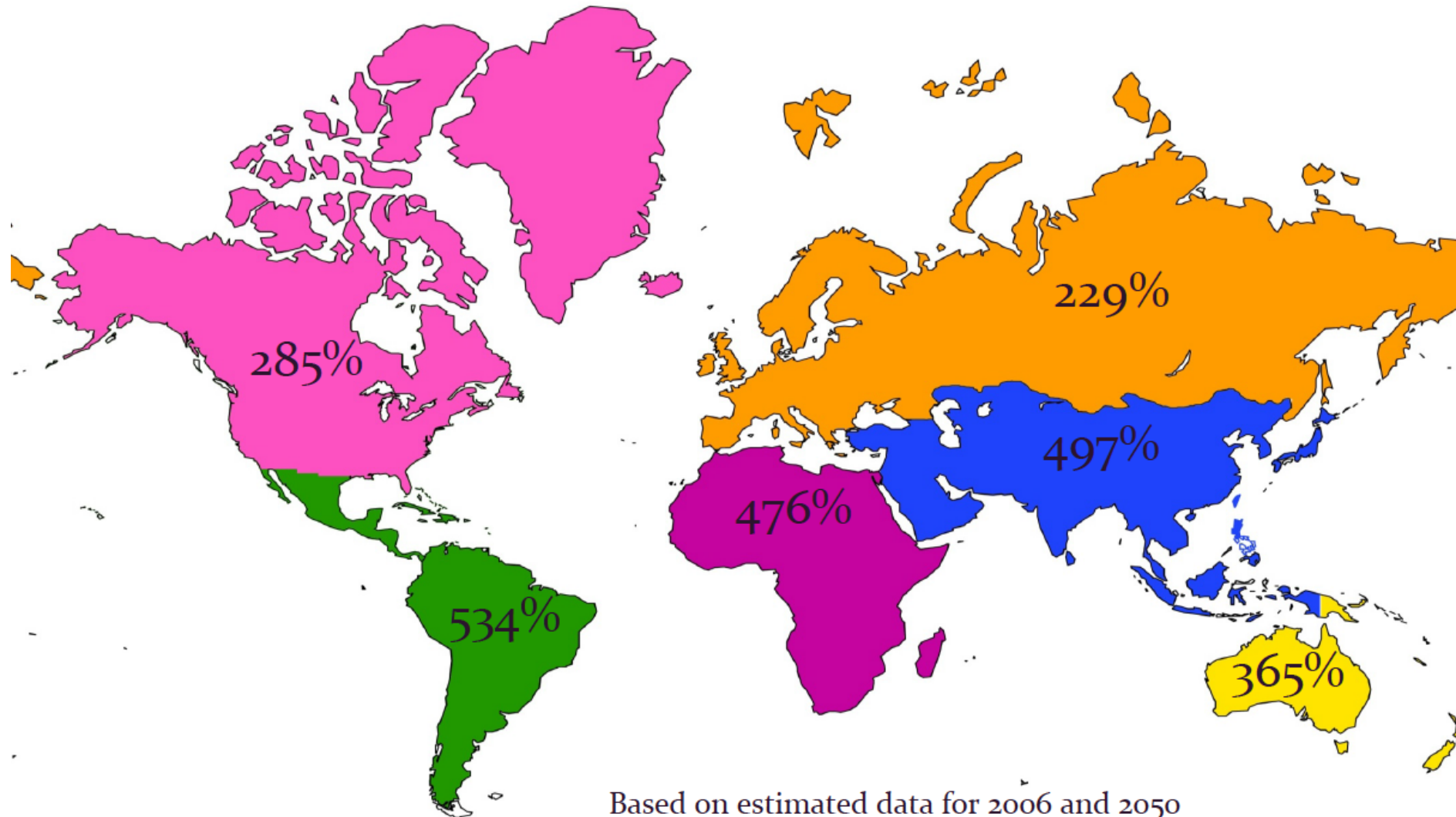
The majority of care is provided by family carers.

Mortality

7th

Dementia is now the 7th leading cause of death.

Predicted Increase in Alzheimer's Disease Prevalence by 2050



United Nations: Global Action Plan 2017-2025



- In 2017, The United Nations health agency launched the first global monitoring system for dementia
- Comprehensive, 50 countries, Blueprint for Action for all
- Global Cost of Dementia : \$818 billion- >1% of global GDP
- Total cost = direct medical costs, social care and loss of income of caregivers.
- By 2030, it will double to ~ \$2 trillion
- Impact social, economic development - overwhelm health, social services, including LTC
 - 81% of countries have dementia awareness or risk reduction campaign
 - 71 % have a plan for dementia
 - 71% provide support and training for caregivers
 - 66% have a dementia-friendly initiative

Traditional Medical Model of Health Care



What we treat:

- Medical and Psychiatric Illness

What we miss

- Stress and its impacts
- Unhealthy behaviours
- Resilience (positive psychology)

The Opportunity We Have



What we miss:

- Minimal intervention
- Empowerment through self-management
- Population impact

What we are good at:

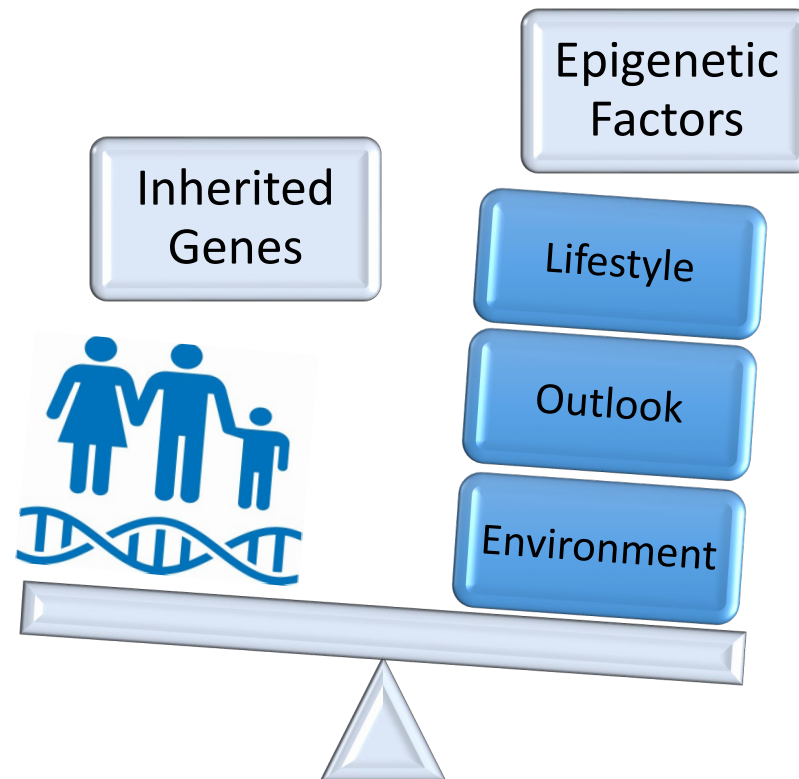
- Mental and physical health crises
- In depth interventions
- Chronic symptom management

Return on Investment: Aging Population

Investment	Benefits	Return
Health Care	Health	Physical & Mental Well Being
Lifelong Learning	Skills & knowledge	Workplace participation
Age Friendly Environments	Mobility	Innovation
Social Enrichment	Social Connectivity	Societal Cohesion
Social Protection	Safety, Security	Social / Cultural Contribution

Epigenetics

- Only 25% of longevity is accounted for by inherited genes
- Much more of our health is related to “epigenetic factors”





Risk Factors



- Living alone
- Over age 80
- Poor Health
- No contact
- No transportation
- Low income
- Young ones move away
- Moving residence
- Critical life transitions
- Access to community services and programs
- Being a caregiver
- Lower education
- Born outside of Canada
- Discrimination



Protective Factors

- Good physical and mental health
- Decent income and safe housing
- Living in safety in your neighborhood
- Communication and literacy skills to find and get needed services
- Having satisfying relationships
- Having a supportive social network

- Feeling connected to and valued by others
- Having access to health and community services
- Feeling useful to society
- Access to transportation
- Higher level of education



SOCIAL ENVIRONMENT



HOUSING



TRANSPORTATION



COMMUNITY SUPPORTS



HEALTH & WELLNESS SERVICES



OUTDOOR SPACES



Age Friendly Communities

Jeste et al. Am J Geriatr Psychiatry
24:12, December 2016

WHO: Age Friendly Communities (AFC) Network

Am J Geriatr Psychiatry 2016;
24:1158–1170

- 287 communities in 33 countries
- AARP's Network of AFCs with 77 in U.S.
- Older persons - actively involved, valued, and supported with necessary infrastructure and services.
- Active, culture-based approaches, supported and developed by local communities, including an intergenerational component are important.

Academic geriatric psychiatry needs to play a major role in the evolving AFC movement to ensure that mental healthcare is considered and delivered on par with physical care.

Older adults prefer aging in place:

Require a high level of community supports

Currently: lacking & inadequate to meet seniors' physical and mental health needs

A paradigm shift is needed:

Interventions at an individual level to more prevention-focused, community based approaches will become essential.

Recent initiatives have been proposed to promote healthy lifestyles and preventive care to enable older adults to age in place

The Brain health and Wellness Project: Clinician Training Module

**Promoting Brain Health and
Resilience in Frontline Health Care**



Canadian Coalition for Seniors' Mental Health
To promote seniors' mental health by connecting people, ideas and resources.

Coalition Canadienne pour la Santé Mentale des Personnes Âgées
Promouvoir la santé mentale des personnes âgées en reliant les personnes, les idées et les ressources.



fountain of health

Key Modifiable Health and Resilience Factors



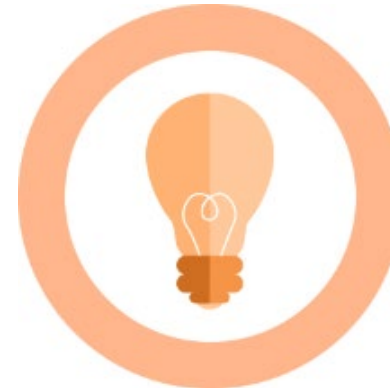
Physical Activity



Social Connection



Learning Challenge



Positive thinking



Mental Health



Physical Activity

- Best promoter of brain neuroplasticity across lifespan
- Light physical activity (15 mins) comparable benefit to giving up smoking
- For every daily flight of stairs climbed, the brain had more grey matter-to the equivalency of 0.58 years younger

Rx: Exercise!



Brain Challenge

- Higher education reduces risk of dementia
- Contributes to “cognitive reserve” : You can have dementia pathology in the brain without the symptoms of dementia
- Cognitive activity promotes brain neuroplasticity across lifespan
- Complex, novel activities help the most

Rx: Learn new things!



Social Activity

- Health risks associated with **loneliness** are of similar risk magnitude to **smoking and obesity**
- **Secure relationships** **single** most predictive variable in **well-being in late life**

Rx: Socialize!



Attachment, Social Contact & Resilience



Harvard Study of Adult Development



- 724 subjects followed over 75 years
- 60 of original subjects still alive and participating in their 90's
- 2 groups: Harvard sophomores and young adults from poorest Boston neighborhoods
- At age 50, **secure relationships** were the single most predictive variable related to **well-being** over 25 years regardless of background

Robert Waldinger et al, 2015 J Psych of Aging

Evidence Base for these 5 Key Health Areas

Physical Activity: Vital protective factor for long term resilience, yet 60%+ of Canadian adults "sedentary" - not meeting guidelines for at least moderate physical activity for 150 minutes/week (*Canadian Community Health Survey, 2017*)

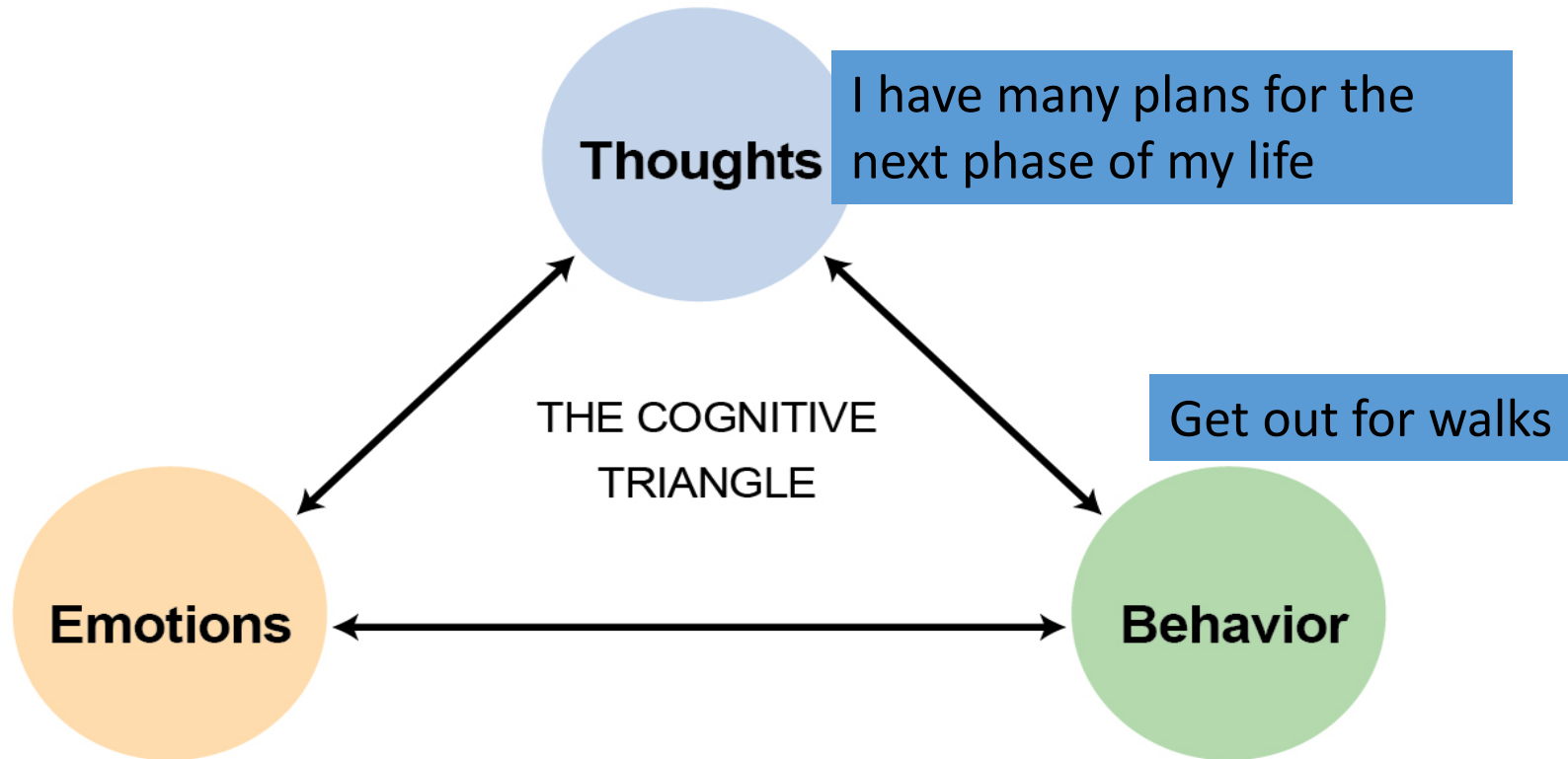
Social isolation and loneliness are health risks of the same magnitude as smoking, hypertension and obesity (*Holt-Lundstat, 2015*)

Brain Challenge: Lifelong learning is a key protective factor to support long-term brain health and prevent cognitive decline. 35% of dementias due to modifiable risk factors (*Lancet Report, 2017*)

Positive Thinking: Negative self-perceptions especially with aging is an independent risk factor that significantly impacts health behavior and longterm health outcomes(Levy et al, *Yale Public Health, 2009*)

Mental health: looking after mental health including treating depression and chronic anxiety Optimizes resilience and long term well-being (*Br. J. Psychiatry, 2017*)

Views on Aging Serve A Self-Fulfilling Prophecy



Please Register:

- *The Brain Health and Wellness Project:*

<https://fountainofhealth.ca/wellness-project>

- Click on “Wellness Project”
- You will receive your Health Behaviour Change Toolkit electronically and Paper Tools in the mail

What to do:

Visit 1

Invite: 5 or > patients

Self Rate Baseline

- Health & Resilience Questionnaire (paper or App)
- Invite, support, & help patient set ONE...
- S.M.A.R.T. health goal in 1 domain & document

Visit 2


Track Progress

Check in 1 month later *in person or by phone & document*

Send in Forms

What is a S.M.A.R.T. Goal?

- **Specific:** How exactly can your patient go about achieving this goal? What concrete steps would your patient need to take?
- **Measurable:** How can your patient measure their progress? How often? For how long?
- **Action-Oriented:** Is the goal dependent on an action the patient can take? What will those actions be?
- **Realistic:** Is this goal realistic for your patient to achieve? Is it doable in the next few weeks or months?
- **Time-Limited:** What timeframe does this goal require? When will your patient start/finish? What is the best time during the week to work on this goal?



NO GOAL is Too Small
It can lead to big health
benefits over time

Examples of small “S.M.A.R.T.” goals:

PHYSICAL

- Walking to the mailbox once a day every week day
- Getting up during the ads in the 6 o'clock news

SOCIAL

- Calling a friend or family member once a week
- Setting up a coffee date once in the next 4 weeks

COGNITIVE

- Reading the paper 3 mornings a week
- Listening to a radio program twice a week



Canadian Coalition for
Seniors' Mental Health
Coalition Canadienne pour la Santé
Mentale des Personnes Âgées

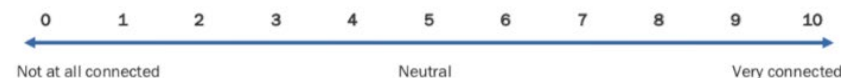
The Brain Health & Wellness Project



Health & Resilience Pre-Questionnaire

Find out how you are doing in key areas for your long-term health:
(circle **one** number for each question below)

1. How would you rate yourself in terms of being socially connected to others?



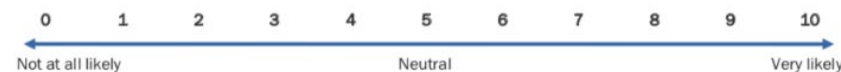
2. How would you rate yourself in terms of being interested in learning new things?



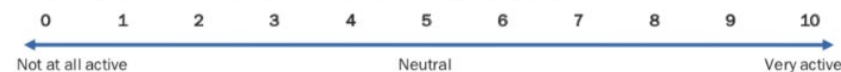
3. Using your own definition, how would you rate yourself in terms of successful aging?



4. How would you rate yourself in terms of how likely you are to seek mental health help if you needed it?



5. How would you rate yourself in terms of being physically active?



Patient Initials: _____ Date (MM/DD/YY): _____ Total Score: _____/50

Visit 1:

**Patient Completes
Self Rated Baseline**

**Health and Resilience
Questionnaire
(paper / App)**

Pre & Post

Next: Help with S.M.A.R.T. Goal Setting Invite A Small Health Behaviour Change

Physical Activity



Social Activity



Brain Challenge



Or another domain: e.g. Mental Health and Positive Thinking

MAKE IT RELEVANT FOR THIS PATIENT.

E.g.:” Based on your answers to the Health and Resilience Questionnaire, it looks like you feel there is room to improve your _____ (physical activity, or other area)”

Visit 2 – Track Progress: Follow Up- 4 weeks In Person or By Phone

- **Complete:**
- **Goal Doc Sheet:** Document 2nd visit
 - Rate patients' goal attainment
- **Post- Health and Resilience Questionnaire**
- **Appreciate** any progress with goal set and
- **Discuss** barriers to change
- **Repeat** new cycle!

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<https://fountainofhealth.ca/wellness-project>

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CONTACT INFORMATION

For more information:

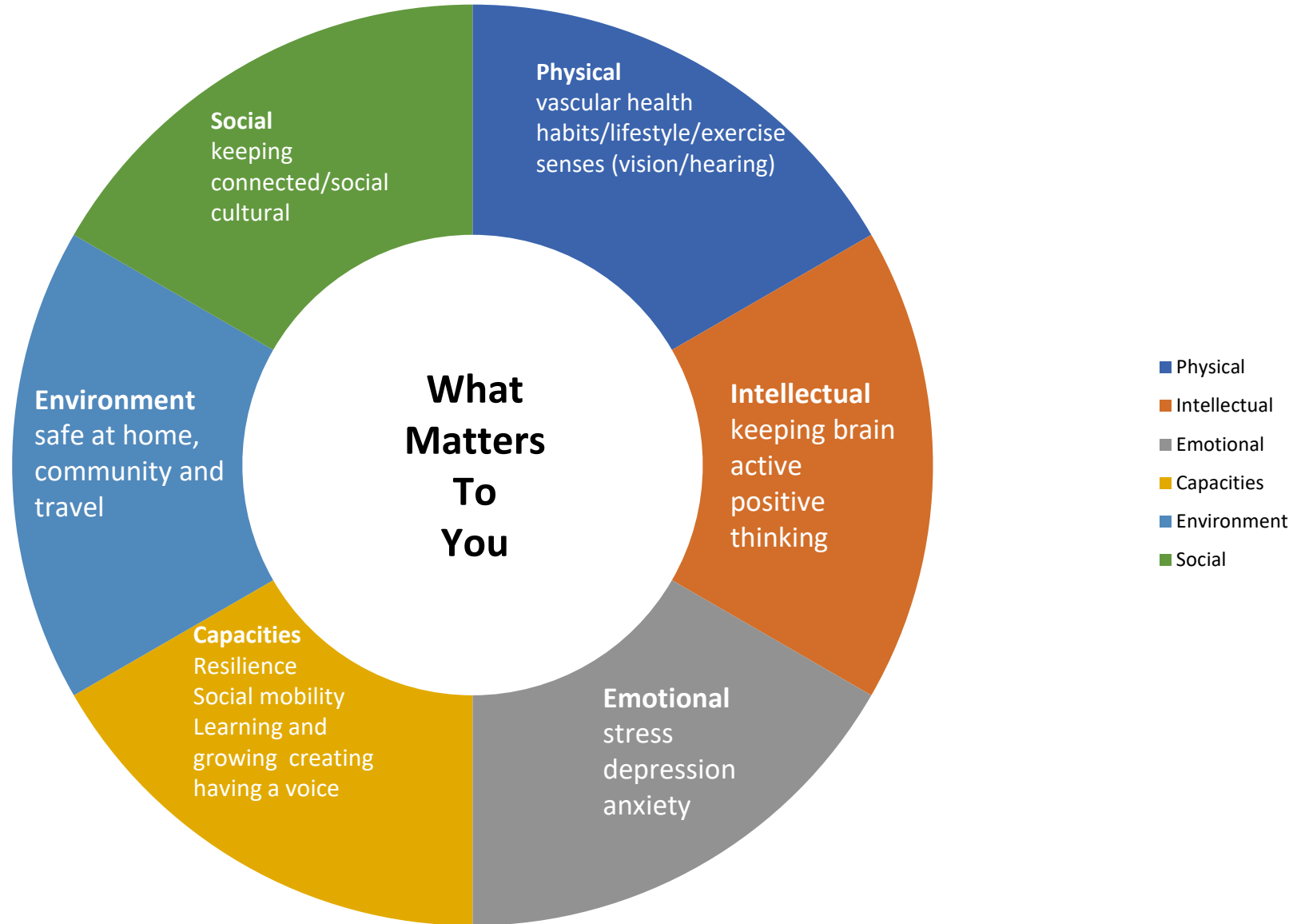
www.fountainofhealth.ca

App: wellnessapp.ca

Email: coordinator@wellnessapp.ca

Phone: 1-833-722-2151

The P.I.E.C.E.S Prevention Wheel - Brain Health & Beyond



THE KEY HERE IS AN ACTION PLAN THE PIECES CHECKLIST

Physical

a) Vascular risk factors

- 1. Blood pressure ☐
- 2. Heart Rhythm ☐
- 3. Cholesterol ☐
- 4. Diabetes ☐

b) Habits

- 1. Smoking ☐
- 2. Alcohol ☐
- 3. Healthy eating ☐
- 4. Exercise ☐

c) Senses

- 1. Good vision ☐
- 2. Hearing ☐

Intellectual

- 1. Keeping the brain active ☐
- 2. Positive thinking ☐

Emotional

- 1. Stress ☐
- 2. Depression/Anxiety ☐

Capabilities

Keeping active physically cognitively emotionally and socially

☐

Environmental

- 1. Safety at home ☐
- 2. Safety in the community ☐
- 3. Safety in our travelling (driving) ☐

Social

- 1. Keeping connections keeps the connections ☐

AREAS WE CAN WORK ON

AREAS	GOALS	ACTION PLAN
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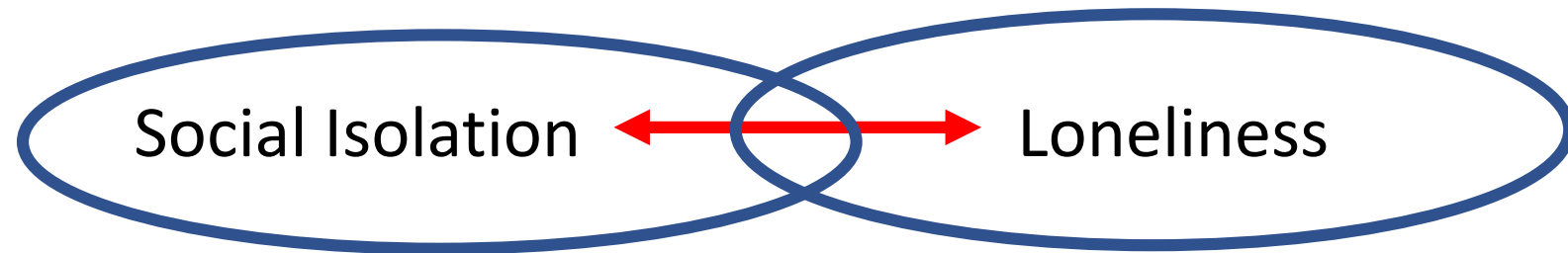


Focus Goals on:

- 1. Keeping well people healthy**
- 2. Keeping those at risk protected**
- 3. Helping those who are sick as healthy as possible**

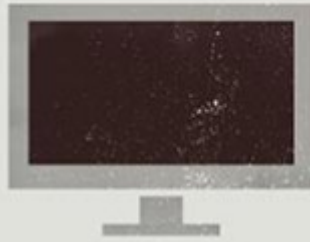
What is Social Isolation

- Low quantity and quality of contact with others, few social roles, as well as the absence of mutually rewarding relationships.
- Can lead to poor health, loneliness, emotional distress and other negative effects.



"WHY DO I FEEL ISOLATED?"

Survey respondents reveal
what's keeping them from
staying connected



29%

No access to
Internet at home



17%

No longer drive or
don't have a car



48%

Family and friends
too far away



10%

No public
transportation



13%

Caregiver
responsibilities



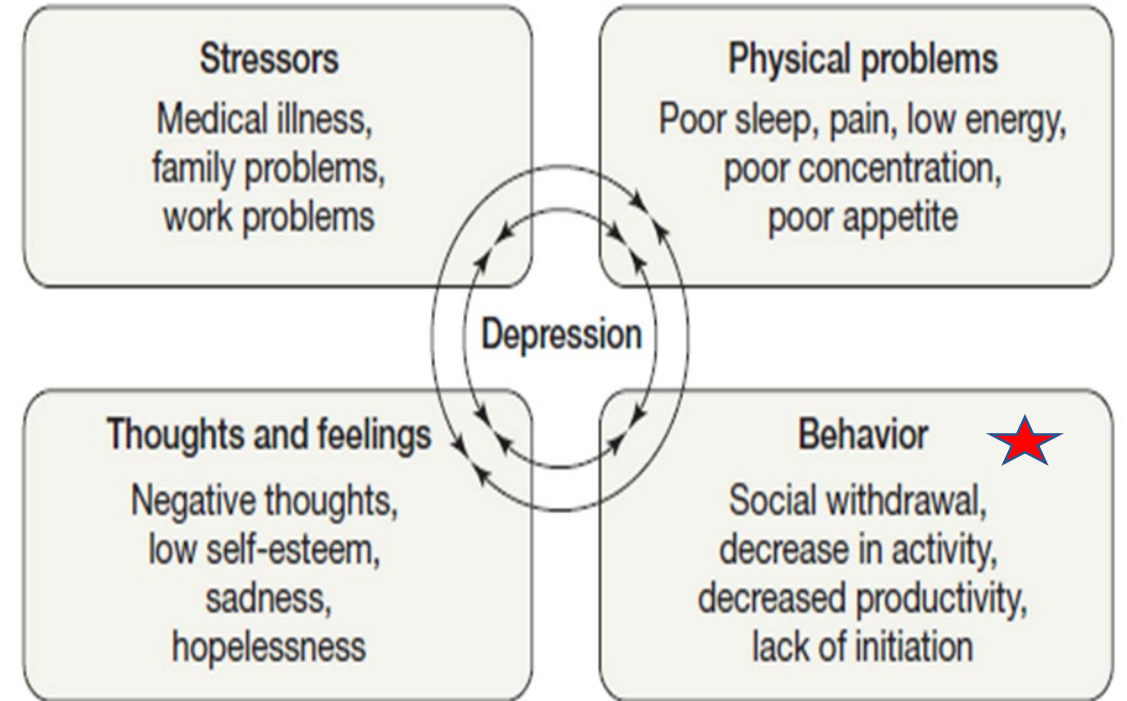
12%

Physical
limitations



42%

Family and friends
too busy



The spiral of depression

Consequences

- Premature death
- Poorer sense of well-being
- Higher rate of depression
- Higher rate of dementia
- More prone to chronic diseases
- Poorer mental health
- Increased use of health and support services
- Decreased quality of life and general health
- Higher burden for caregivers
- More falls



By Hikir



Hospital Care

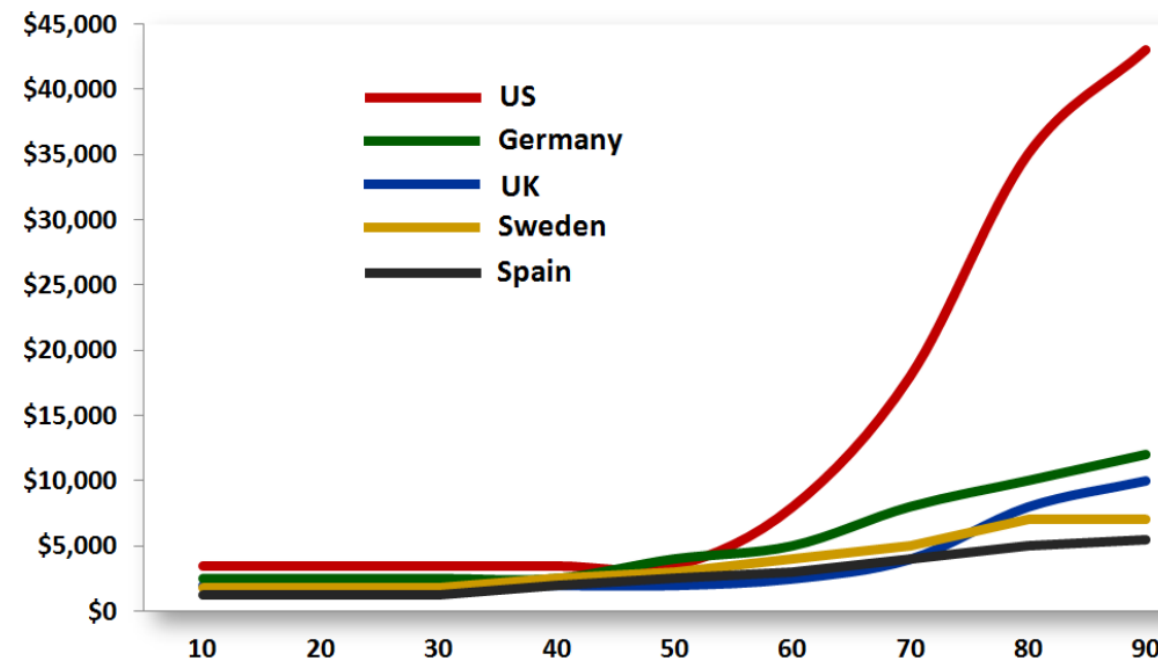
Hospital care costs about

\$65 billion

a year in Canada ...
making it the
largest category of
health spending

[Source: CIHI, 2015]

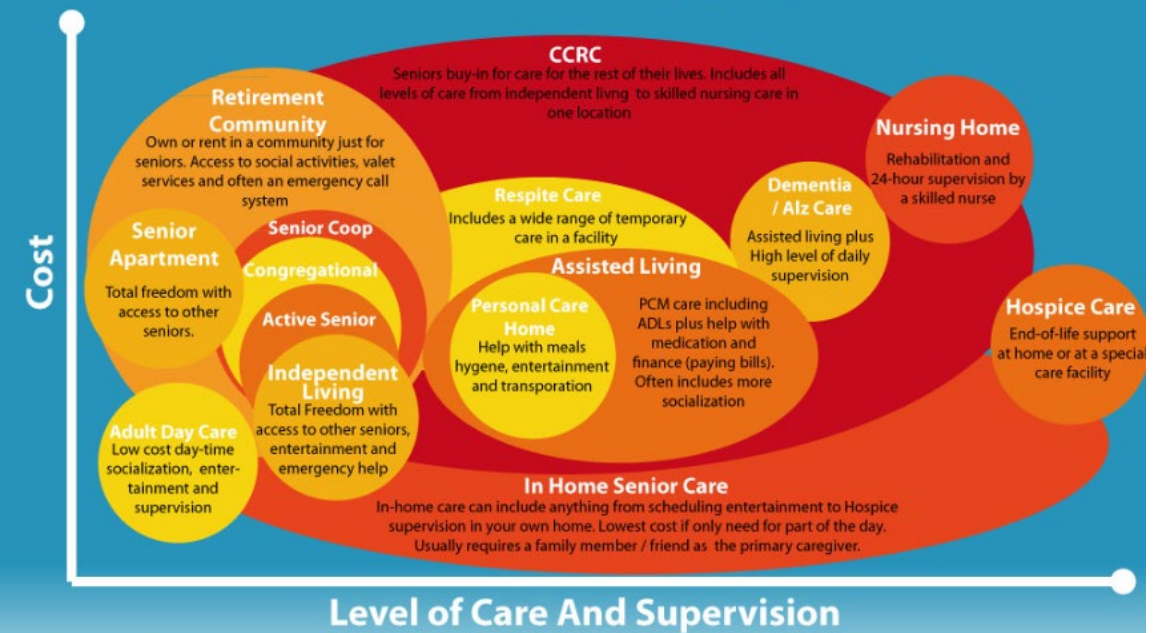
Annual Per Capita Healthcare Costs by Age



HOUSING



The Senior Living Spectrum



This bubble graph shows how different types of senior care overlap and the relationship between the level of care and the cost.



Living alone in Unsafe homes



Lack of Transportation



Falls



SLEEP OR DIE

NOT GETTING THE RIGHT AMOUNT OF SLEEP EACH NIGHT CAN HAVE SERIOUS HEALTH RISKS AND CAN LEAVE LONG-LASTING EFFECTS ON YOUR BODY AND MIND.



Sleep



Caregiving



Changing family roles

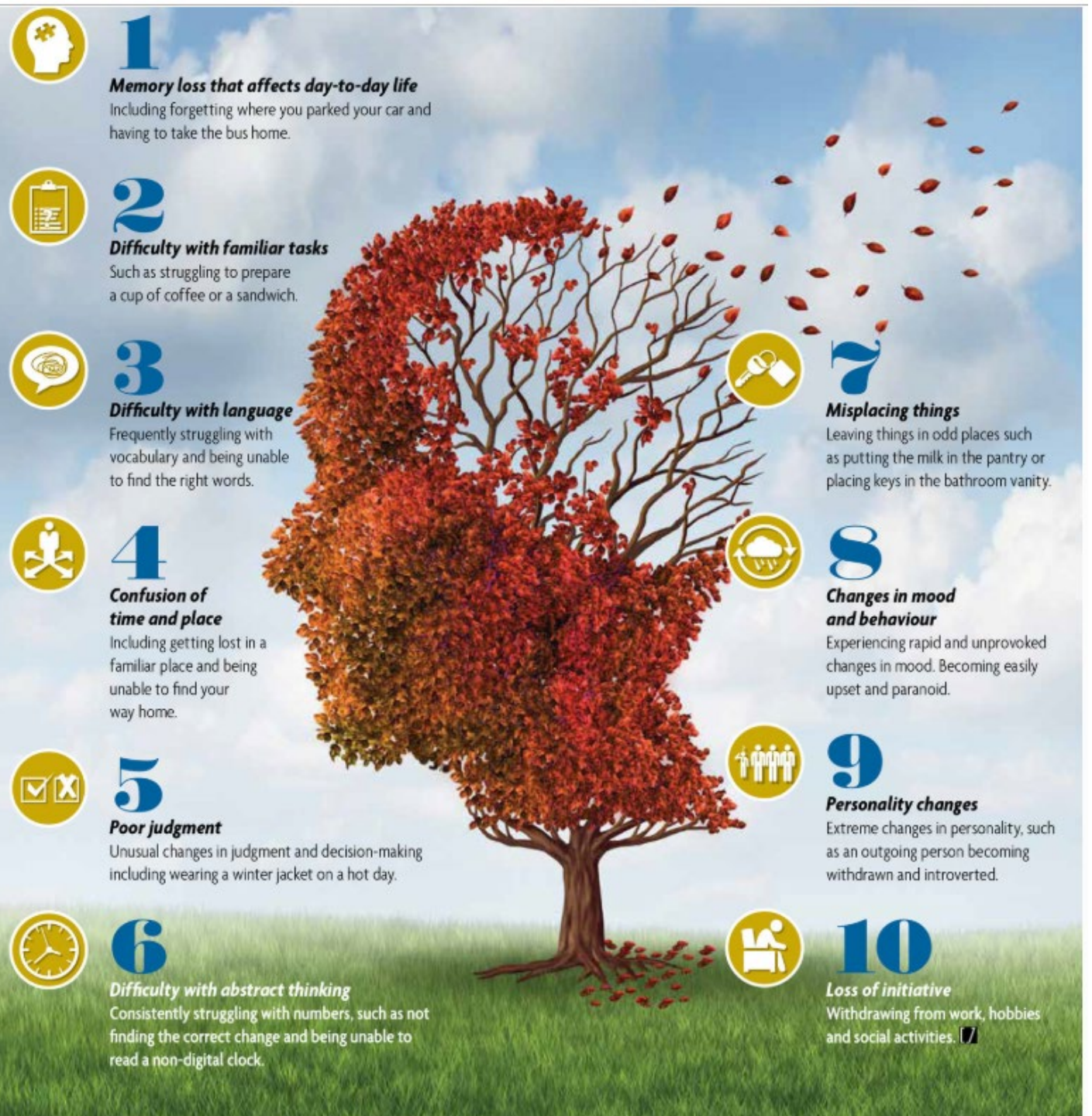


Older caregivers for spouses, older parents, children, grandchildren, and nonfamily members

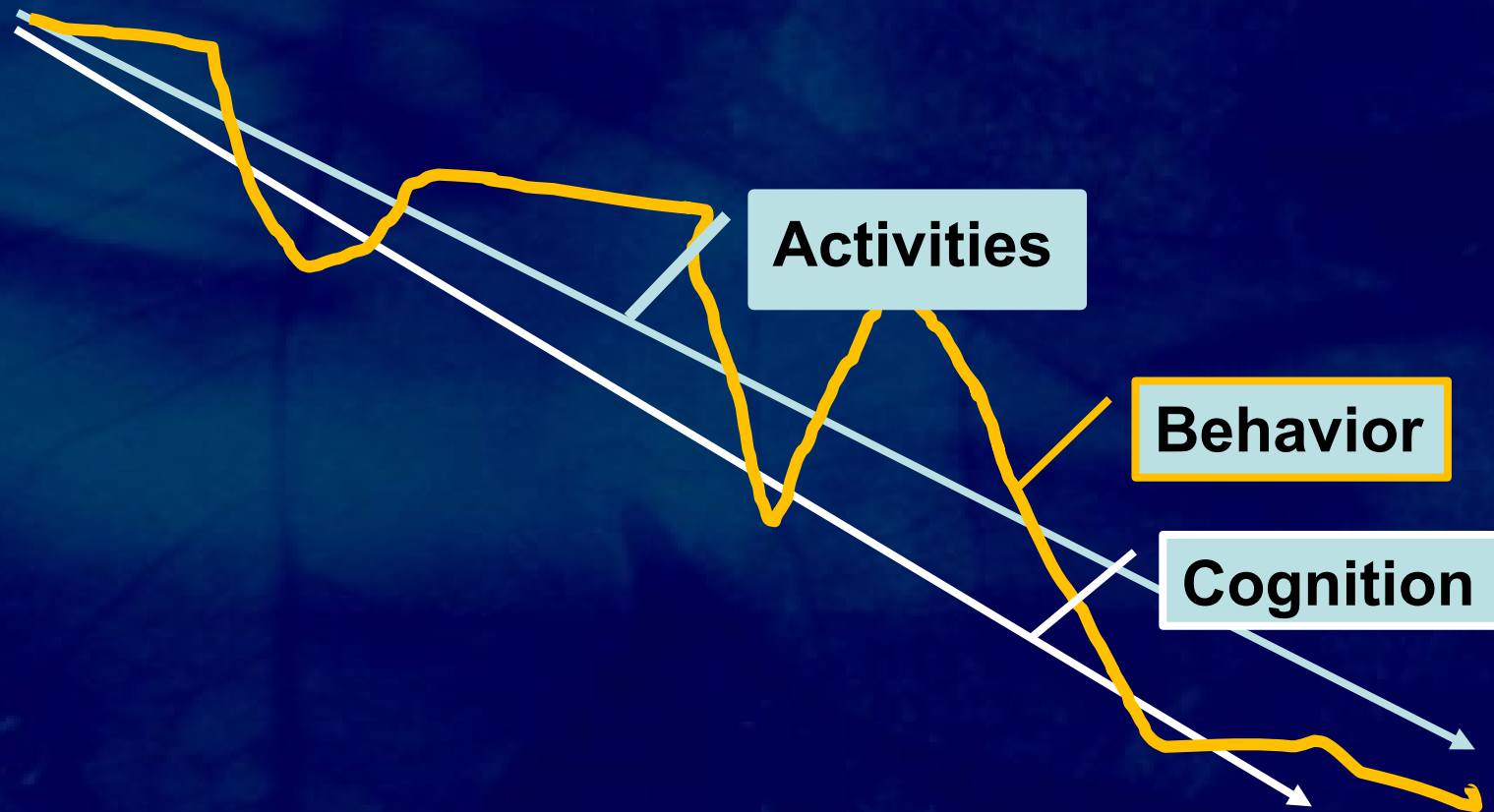


Primary source of support and care for their older relatives

10 Warning Signs to Watch For



A-B-Cs of Dementia



Behavior & Meaning

- All behaviour has meaning.
- “Responsive Behaviours” (RBs) are actions, words and gestures in response to something important in their personal, social or physical or internal environment and is *often* a form of communication of an unmet need for a person with dementia, complex mental health, substance use and/or other neurological disorder.
- RBs are *often* a result of changes in the brain affecting memory, judgement, orientation and mood.

Early Diagnosis

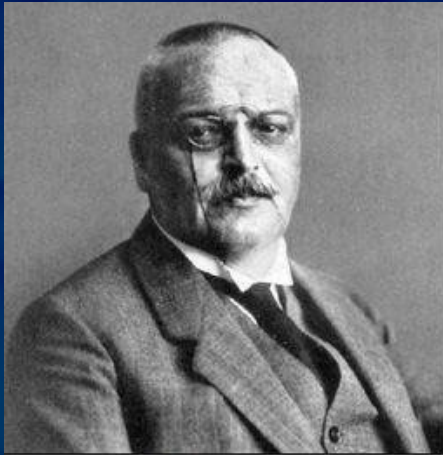


From dementia to diagnosis: a couple's cautionary tale

Two years is a long time to wait between the first symptom of dementia and a diagnosis – precious time when 62-year-old Lou Grieve might have received medication and made plans for her future.

But the time lapse wasn't because she and her husband Wayne consciously put off seeing a doctor. It was because they did not understand that her mood and behaviour changes were classic symptoms of dementia.

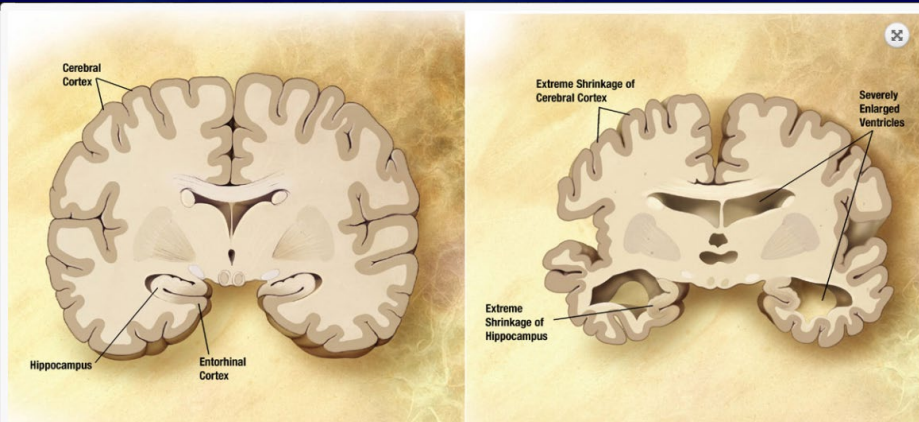
Auguste Deter – taken in 1906 shortly before her death (April 8, 1906, during her stay at Frankfurt's City Mental Institution



Alois Alzheimer

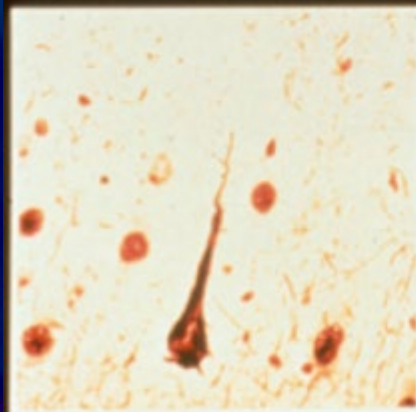


Auguste Deter

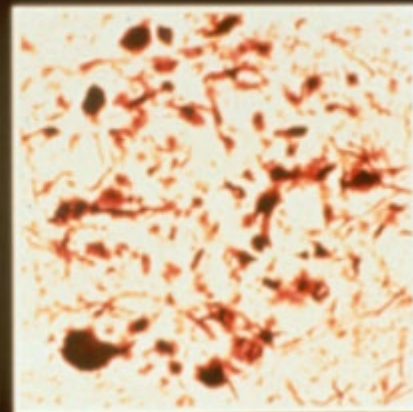


A representation of the normal human brain on the left, and the brain affected by Alzheimer's disease on the right.

**Neurofibrillary
Tangles**



**Senile
Plaque**



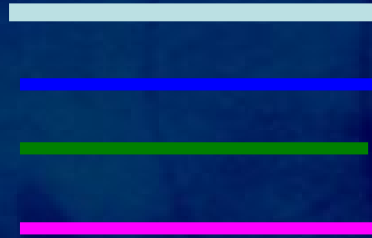
What is “BPSD”?

- Occurs in all types of dementia
- BPSD leads to earlier institutionalization, hospitalization, decreased quality of life

It's often too late

**DELIRIUM
VIOLENCE**

PSYCHOSIS
&
AGGRESSION



DELIRIUM

DEPRESSION

DEMENTIA

GENETICS

PERSONALITY

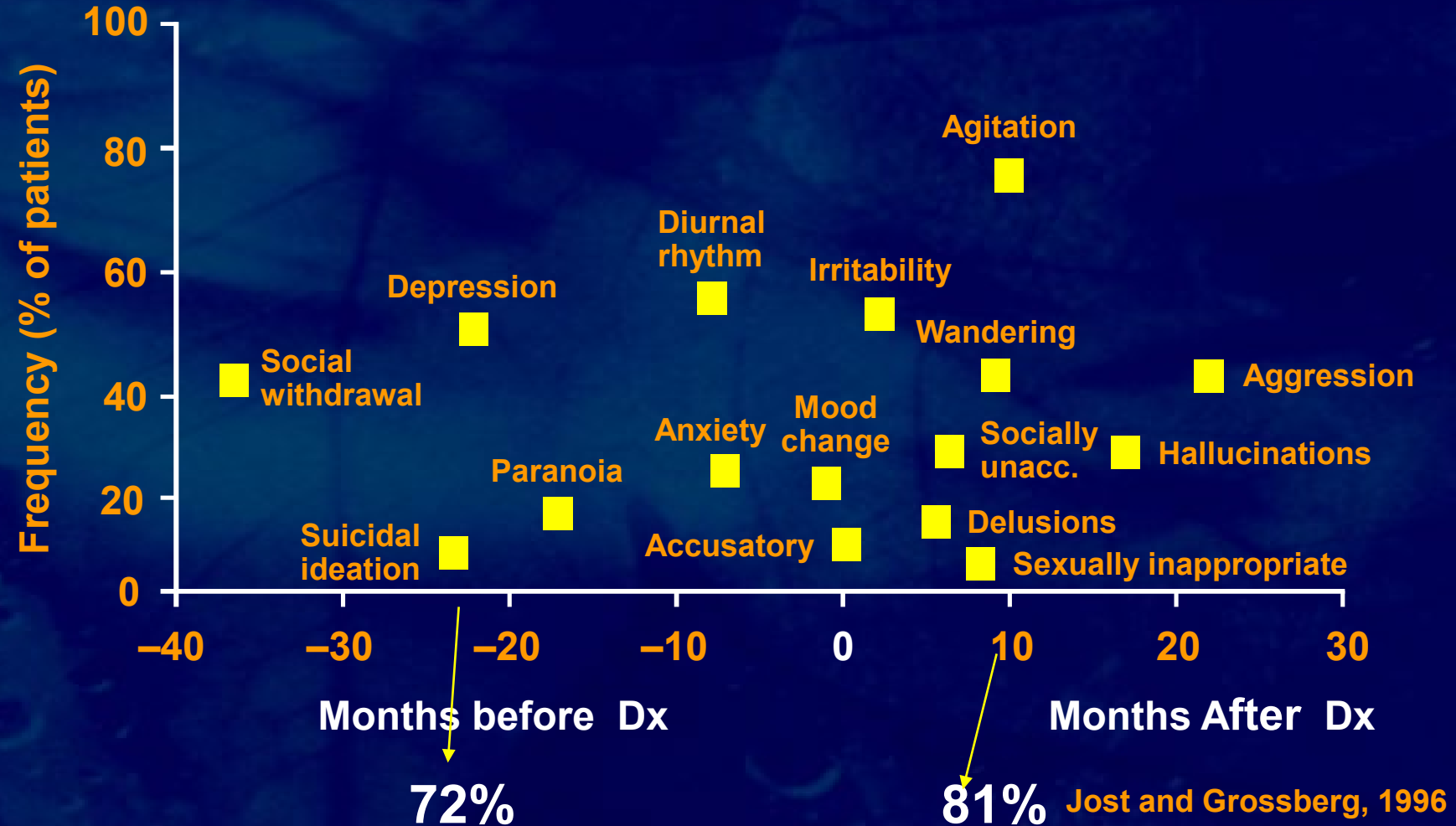
PARENTING

PSYCHO-SOCIAL

ENVIRONMENT



Symptoms of PTSD



Mild Behavioral Impairment (MBI)

Ismail Z, Smith EE, Geda Y, et al.
Neuropsychiatric symptoms as early
manifestations of emergent dementia:
Provisional diagnostic criteria for mild
behavioral impairment. *Alzheimers
Dement.* 2016;12(2):195-202.

- Mild behavioral impairment: Early warning sign of neurodegeneration
- Early prognosticators in advance of signs of cognitive decline

MBI

Changes in behavior or personality among patients who are functionally independent and typically younger (≥ 50) than dementia patients.

At least 6 months and severe enough to affect at least one area of the patient's life, e.g., interpersonal relationships or workplace performance.

MBI

Greater caregiver burden, higher rates of institutionalization, faster cognitive decline, and faster progression to severe dementia and death, greater neuropathological burden of plaques and tangles

MCI to dementia → 13% per year; with NPS, → 25% per year

Further studies are needed

MBI

Family feedback + .

They observed the behaviors before they developed dementia.

Caregivers felt empowered and believed they were heard

Big picture

Fundamental ensuring that physicians also speak to family and include them in planning

Personality & Behavior

Personality: describes a **tendency toward a certain reaction or behavior**, not the reaction or behavior itself.

Behaviors vary by situations, personality remains stable

Personality: A 22 year Arizona study (1994-2016)

- Cognitively normal residents > aged 21 year recruited. Every 2 years had
 - APOE
 - Longitudinal neuropsychological assessment
- The youngest transitioner to MCI was aged 54
- N=277 APOE Cohort met inclusion criteria
- Of whom 25 had incident MCI and 252 were non-transitioning controls
- Neuroticism, Extraversion, and Openness Personality (NEO-PI-R)22
- The NEO-PI-R is designed to measure personality traits and not psychological abnormality



First study to
demonstrate
that changes in
personality with
transition from
preclinical AD to
incident MCI

- Higher neuroticism & less openness
- Subclinical somatization, depression, anxiety, irritability, & aggression.
- Observed for 7 years pre-MCI
- Direct responses rather than proxy estimates.
- Baseline scores no different
- Not represent a reaction to diagnosis or a complication of treatment
- Hypothesis → changes intrinsic to the disease process itself.

Early Diagnosis:
Fisk JD, Beattie BL,
Donnelly M, Byszewski
A, Molnar FJ.
Disclosure of the
diagnosis of dementia.
Alzheimers
Dement.2007;3(4):404
-410.

- Early Dx-The reticence in providing a dementia diagnosis is a complex issue
- Provide families with a care plan including behavioral planning
- It's important to hone in on providing these patients with the healthiest life that they can have
- Finances, Residence
- The Health Outcomes, Planning, and Education (HOPE) for Alzheimer's Act
- Medicare → helpful
- Dx is documented, a comprehensive care plan is made, considering comorbidities and behaviors, educating providers on how to address barriers faced in their care

Anorexia of aging -
dramatic consequences,
early identification and
effective interventions are
needed

Mechanisms of the
anorexia of aging -a
review. Wysockiński, Adam
; Sobów, Tomasz ;
Kłoszewska, Iwona ;
Kostka, Tomasz. AGE,
2015, Vol.37(4), pp.1-14

Many older adults fail to adequately regulate food intake and lose weight

“Anorexia of aging” - multi-factorial

Physiological, (decline in smell and taste, reduced central and peripheral drive to eat, delayed gastric emptying)

Pathological; depression, dementia, somatic diseases, medications and iatrogenic interventions, oral-health status.

Social factors: poverty, loneliness.

further studies - mechanisms of the anorexia of aging should employ accurate measurement of body fat and lean mass

Protein-energy malnutrition, sarcopenia, frailty, functional deterioration, morbidity, and mortality.

One of the most important goals in the geriatric care is to optimize nutritional status of the elderly.

Relationship between BPSD
and caregiver well-being: A
systematic review:
A systematic review of the
relationship between
behavioral and psychological
symptoms (BPSD) and
caregiver well-being.
Feast, Alexandra ; Moniz-
Cook, Esme ; Stoner,
Charlotte ; Charlesworth,
Georgina ; Orrell, Martin.
International psychogeriatrics,
Vol.28(11), pp.1761-1774
2016

- BPSD: Important predictors of institutionalization , caregiver burden and depression
- Individual symptoms of BPSD in relation to the impact
- Depressive behaviors were the most distressing for caregivers followed by agitation/aggression and apathy.
- Euphoria was the least distressing.
- Irritability, aberrant motor behavior and delusions were the most strongly correlated to distress, disinhibition was the least correlated.
- CONCLUSIONS
- Need more research: BPSD impact well-being by including caregiver variables so that interventions can be designed to target BPSD more effectively

Behavioral and psychological symptoms: A contribution for their understanding based on the unmet needs model
Ferreira, A.R. ; Martins, S. et al.

- BPSD are symptoms of needs that are not being met due to patients' decreased ability to communicate or fulfil them. This model also implies that if needs were met, BPSD would improve.
- N= 166 elderly with an average of 80.9(sd=10.2) years.
- Significant correlations between NPI and unmet and global needs were found ($r_s=0.181, P=0.020$; $r_s=0.254, P=0.001$, respectively).
- Additionally, the unmet needs of daytime activities ($P=0.019$), company ($P=0.028$) and behaviour ($P=0.001$), presented significant correlations with NPI.
- **Conclusion: A high number of unmet needs were found.**
- **The absence of daytime activities, company and behaviour contributed to the identified BPSD,**
- This not only provides a framework for understanding BPSD, but also points to the identification of unmet needs as pivotal in prevention and treatment of these symptoms.

Psychosocial interventions for people with dementia: Systematic Review Conclusions

Psychosocial interventions for people with dementia: Systematic Review. Mcdermott, Orie ; Charlesworth, Georgina ; Hogervorst, Eef ; Stoner, Charlotte ; Moniz-Cook, Esme ; Spector, Aimee ; Csipke, Emese ; Orrell, Martin. Aging & Mental Health, 01 January 2018, p.1-11. Between January 2010 and February 2016,

N=22 Reviews (8 physical, 7 cognitive, 1 physical/cognitive and 6 other psychosocial interventions); with a total of 197 unique studies.

- **Good Evidence:**
- Exercise improves global physical and cognitive functions and activities of daily living skills
- Group cognitive stimulation consistently show benefits, improves cognitive functions, social interaction and quality of life.
- Potential importance of group activities to improve social integration for people with dementia.

Home and Community-Based Support Services for Dementia must include:

- Coordinated and integrated delivery
- Based on individualized assessment and care plan
 - visiting nursing
 - personal support
 - homemaking
 - physiotherapy
 - occupational therapy
 - physician visits
 - meal services
 - respite care
 - friendly-visiting

Home and Community-Based Service Utilization Patterns

Many community-based seniors with dementia do not access formal supports

Informal caregivers provide the majority of care in the community

Heavy care needs requiring extensive assistance
resident caregivers most frequently spouses →
high risk

High levels of caregiver stress have been linked to elder abuse including physical, psychological, financial and sexual abuse

Home & Community Supports

Research: Home and community based services → positive impacts for both patients and caregivers

Decreased patient mortality, rates of caregiver depression, health, & social isolation

(Bass, Noelker & Rechlin, 1996; Gaugler *et al.*, 2003b; Kumamoto, Arai & Zarit, 2006; Kuzuya *et al.*, 2006).

Must flag low formal care users among the high informal support groups and intervene with education, support & referrals is critical

A 2 year multidomain intervention of diet, exercise, cognitive training, and vascular risk monitoring versus control to prevent cognitive decline in at-risk elderly people (FINGER): a randomised controlled trial



Tiia Ngandu, Jenni Lehtisalo, Alina Solomon, Esko Levälahti, Satu Ahtiluoto, Riitta Antikainen, Lars Bäckman, Tuomo Hänninen, Antti Jula, Tiina Laatikainen, Jaana Lindström, Francesca Mangialasche, Teemu Paajanen, Satu Pajala, Markku Peltonen, Rainer Rauramaa, Anna Stigsdotter-Neely, Timo Strandberg, Jaakko Tuomilehto, Hilkka Soininen, Miia Kivipelto

Lancet 2015; 385: 2255–63

Published Online

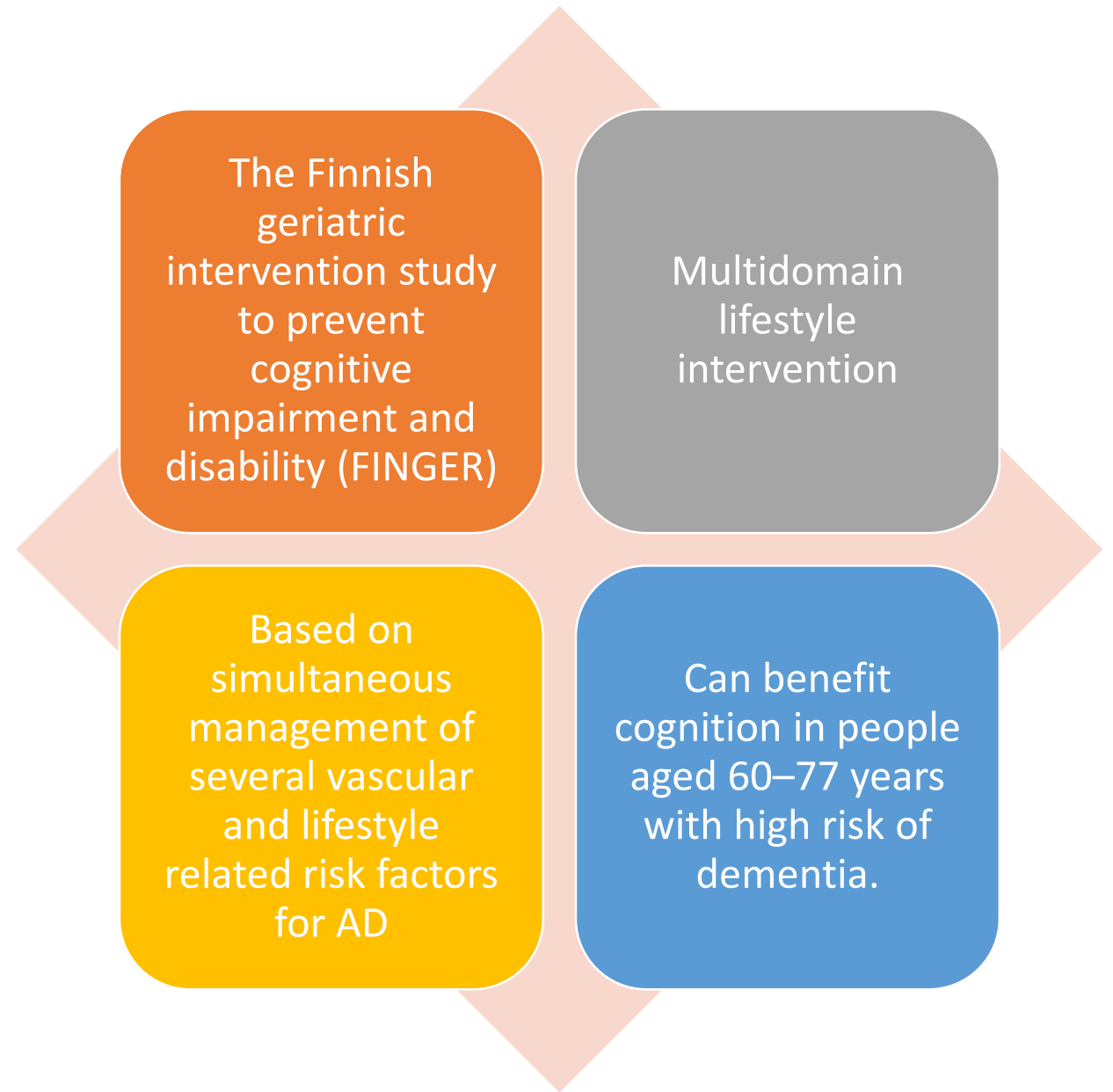
March 12, 2015

[http://dx.doi.org/10.1016/](http://dx.doi.org/10.1016/S0140-6736(15)60461-5)

[S0140-6736\(15\)60461-5](http://dx.doi.org/10.1016/S0140-6736(15)60461-5)

The FINGER Study

The FINGER Study – A Landmark Trial



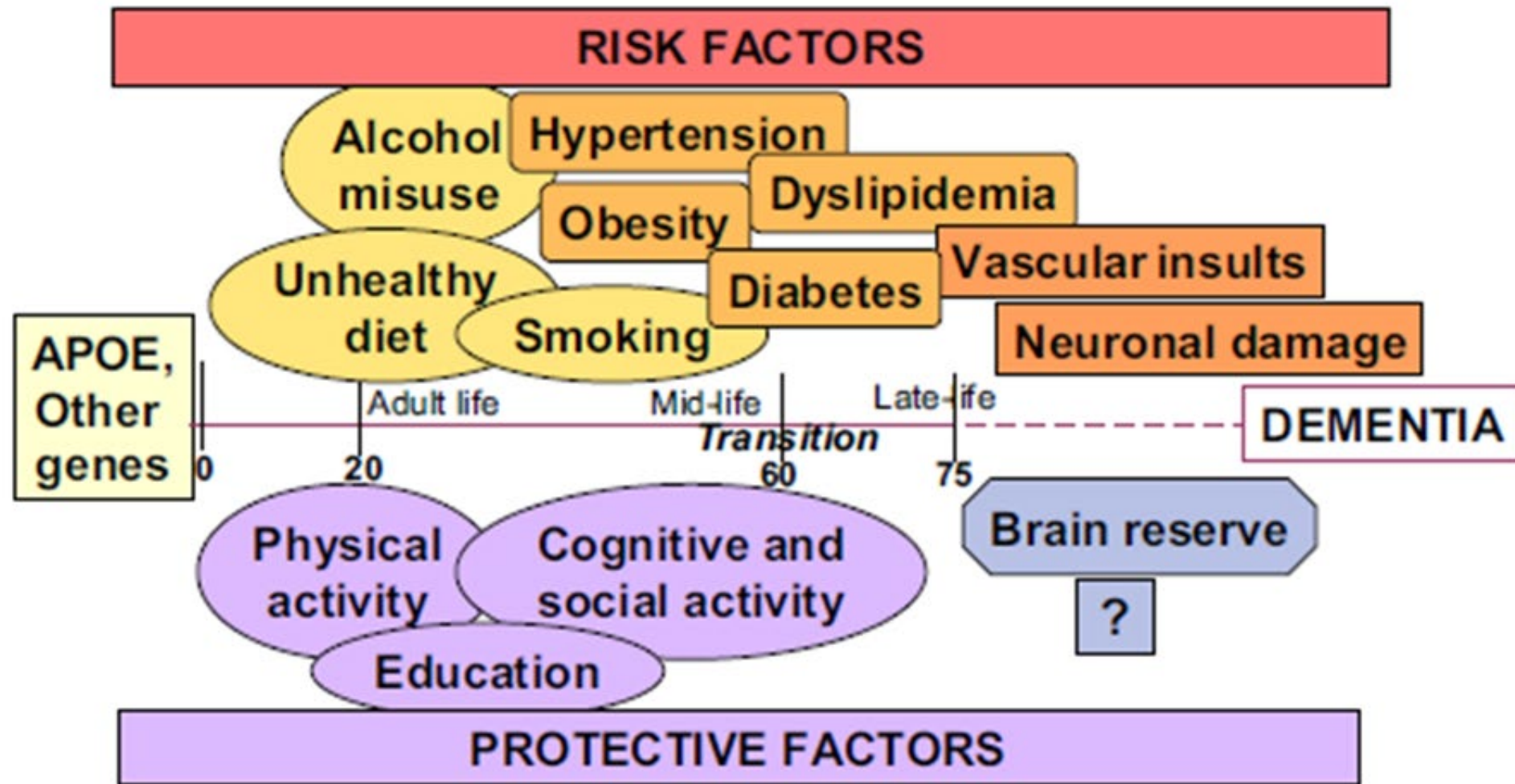


Fig. 1. Risk and protective factors for dementia.

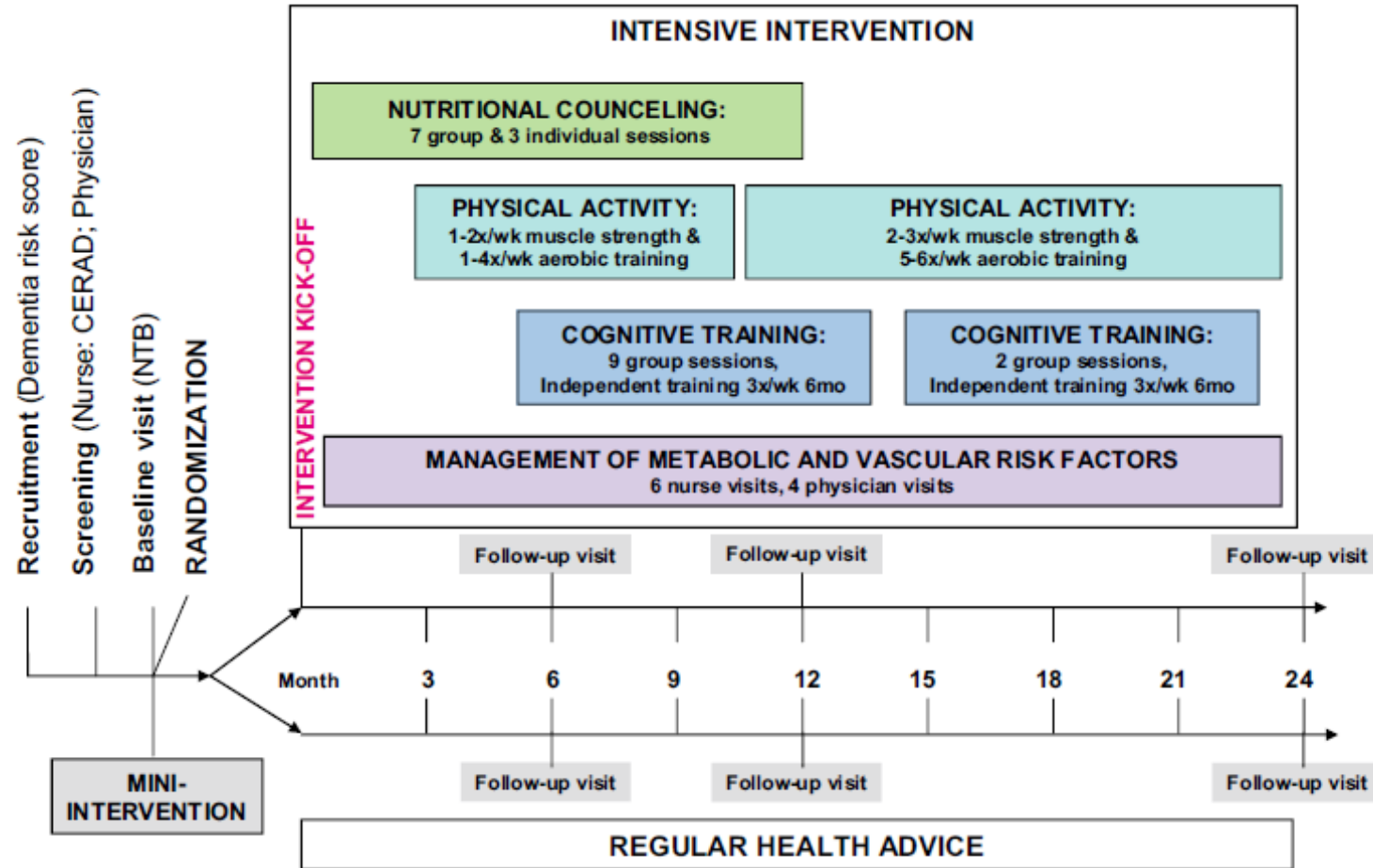


Fig. 2. FINGER protocol.

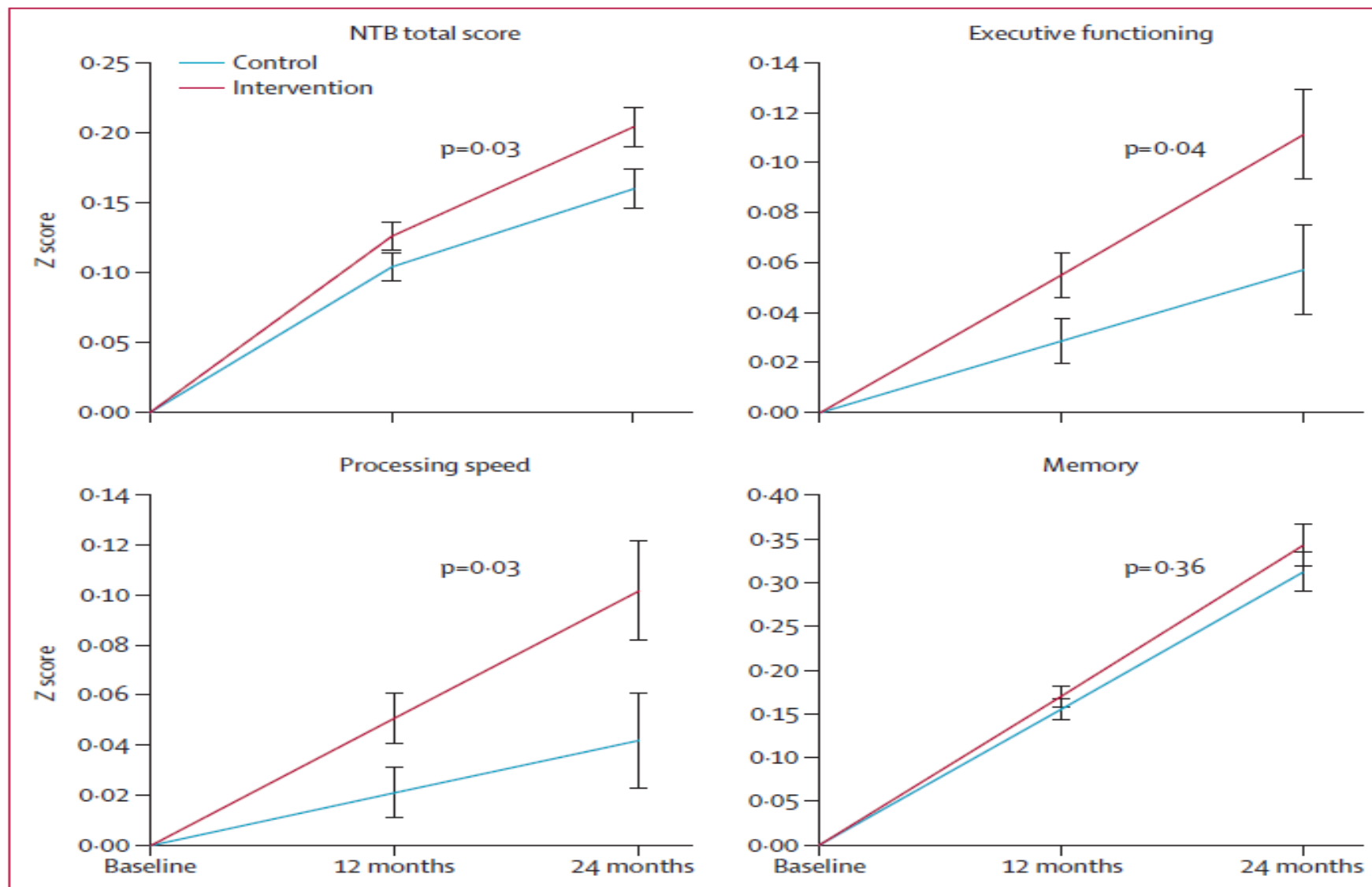


Figure 2: Change in cognitive performance during the 2 year intervention

Figure shows estimated mean change in cognitive performance from baseline until 12 and 24 months (higher scores suggest better performance) in the modified intention-to-treat population. Error bars are SEs. Mixed-model repeated-measures analyses were used to assess between-group differences (group \times time interaction) in changes from baseline to 24 months based on data from all participants with at least one post-baseline measurement. NTB=neuropsychiatric test battery.

The FINGER lifestyle: Several countries:
China, Singapore, the USA, UK



Harmonizing methodology and data
Generate robust evidence
Effectiveness of combined interventions
Different settings and populations
Guide public-health policies
Reduce the enormous burden of dementia
and its costs for health-care systems
worldwide.



“By the year 2050, one in five people in the world will be aged 60 and older. It's our goal to ensure that all older people can obtain the health services they need, whoever they are, wherever they live,” said Tedros Adhanom Ghebreyesus, Director-General of the World Health Organization (WHO)

Change is
never easy!

