

The following two slides focus on brain reserve versus cognitive reserve; and MCI specifically



HOW CAN WE PROTECT BRAIN AND COGNITIVE RESERVE

Brain Reserve (i.e healthy blood vessels)

The WHO strongly recommends:

- ▶ **Physical activity** (probably aerobic is most important)
- ▶ **Smoking cessation**

In addition, the following **may** protect the brain:

- ▶ **Mediterranean diet** (high in vegetables, fish, seeds, olive oil; low in red meat)
- ▶ **Managing diabetes**
- ▶ **Managing hypertension**
- ▶ Interventions to reduce or cease hazardous and harmful **drinking**

Cognitive reserve

- ▶ **Cognitive training** *may* promote cognitive reserve
- ▶ **Hearing loss** is a known risk factor for dementia. Protecting hearing, checking hearing and wearing hearing aids, if needed, **may** all help.
- ▶ **Social interaction, lifelong learning**, keeping cognitively active - these all appear to be important.

WHAT CAN WE DO FOR PEOPLE WITH MCI?

General MDT measures:

Medication review to stop medications that may be worsening cognition

Brain health measures may help reduce the progression to dementia:

Physical activity is key

Smoking cessation

Mediterranean diet

Interventions to reduce or cease harmful **drinking**

Managing hypertension, diabetes

Referral to local Memory Assessment and Support Service for:

Further brain health support if required

Cognitive Stimulation therapy

Cognitive rehabilitation

Access to Memory Technology Resource Rooms for holistic assessment and possible technology support

Consideration for cognitive enhancing medication or other medical intervention

(at least every 1-2 years)

The following two slides are based on the WHO guidelines (focus on healthy people mainly)





KEY MESSAGES ON DEMENTIA RISK REDUCTION FOR HEALTHY PROFESSIONALS

The following **have been shown** to reduce the risk of dementia in “healthy” people of any age (i.e. strong recommendation from WHO):

- ▶ **Physical activity** (best type is not yet conclusive, but probably aerobic)
- ▶ **Smoking cessation** (limited evidence as yet that this will reduce risk of dementia, but given overwhelming benefit of cessation, this is strongly recommended)

The following **may** reduce risk of dementia in “healthy” people of any age (i.e. conditional recommendation from the WHO)

- ▶ **Mediterranean diet** (high in vegetables, fish, seeds, olive oil; low in red meat)
- ▶ **Managing diabetes**
- ▶ **Managing hypertension**
- ▶ Interventions to reduce or cease hazardous and harmful **drinking**

In addition, managing **dyslipidaemia** and interventions for **overweight/obesity** **may** reduce the risk of later dementia in middle-aged people
Source: WHO Risk Reduction guidelines 2019: https://www.who.int/mental_health/neurology/dementia/guidelines_risk_reduction/en/

Adapted by a national working group, led by NDO, in 2019- see <http://dementiapathways.ie/resources-for-practice> for other resources
While **Cognitive training** **may** reduce the risk of dementia in older people, with little evidence for benefit in middle-aged adults



For People with Mild Cognitive Impairment

Following **may** reduce risk of progressing to dementia in people who already have Mild Cognitive Impairment (conditional recommendation):

- **Cognitive training** in older adults
- **Mediterranean diet**
- **Physical activity**
- Interventions to reduce or cease harmful **drinking**

Other risk factors for dementia that need more evidence

Hearing loss – people who don't wear their prescribed hearing aid are at a higher risk of developing dementia than people who do. We can't say yet that wearing a hearing aid will definitely reduce dementia risk or slow progression, but hearing testing should be considered for people with memory problems.

Social interaction, lifelong learning, keeping cognitively active - these all appear to be important, and can be endorsed by healthcare professionals.

Depression – depression and other mental health illnesses can hinder a person making other lifestyle changes, or benefitting from cognitive therapy for memory problems. Therefore, asking about and optimizing mental health is very important. It is not known however whether antidepressants affect risk of dementia.

Certain medications with high anticholinergic burden (e.g. tricyclic antidepressants, antipsychotics, bladder relaxants) appear to increase dementia risk. Evidence is still evolving, but caution is advised when prescribing these, particularly to older people or to those with other dementia risk factors.

Key take home messages:

1) Dementia risk factor modification needs to start in middle-aged people, not in old age

2) We may not always be able to prevent dementia, but delaying the age of onset in Ireland by 5 years would halve the prevalence