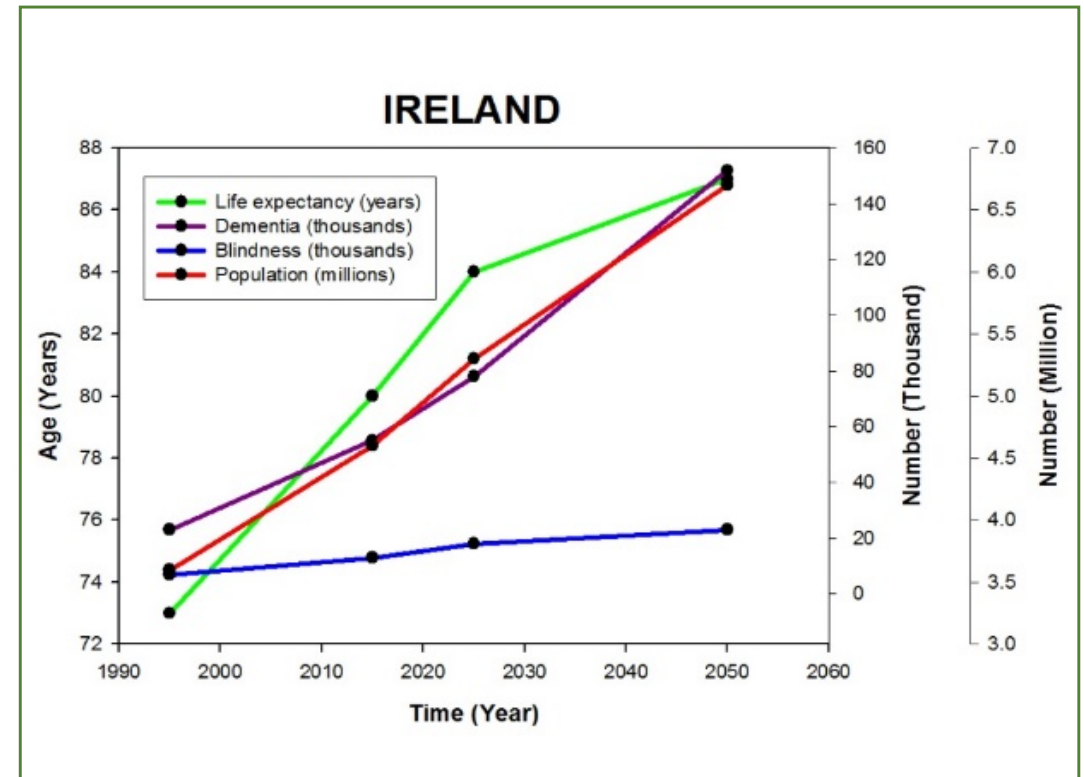
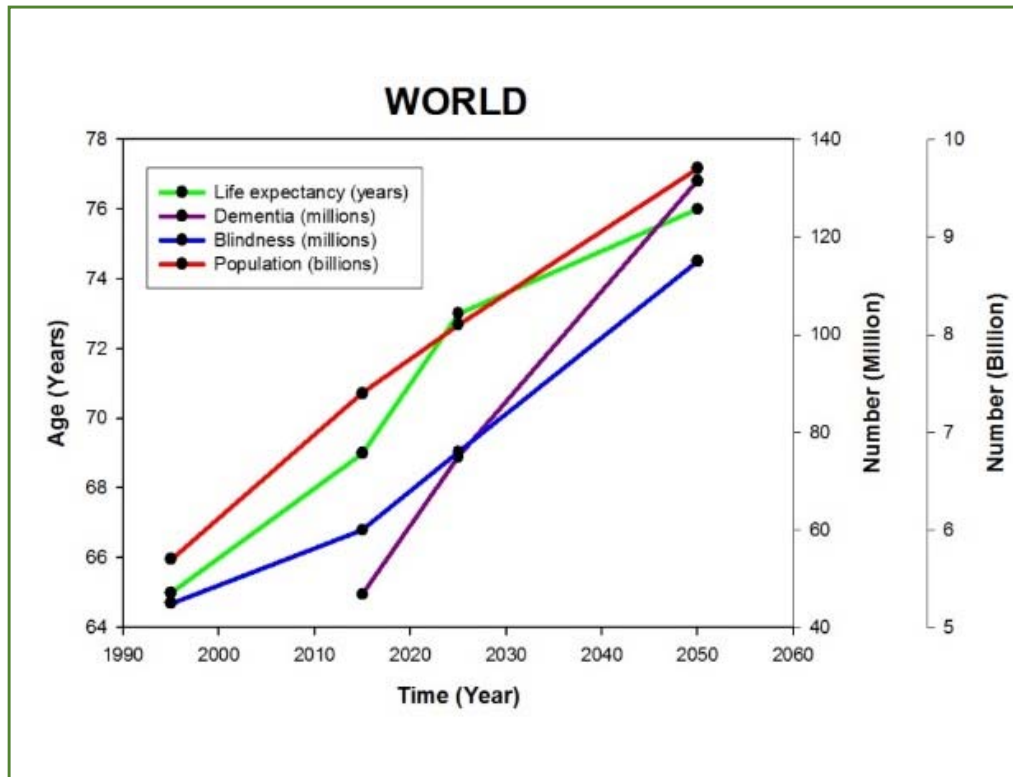




**The first proactive
intervention for
dementia & Alzheimer's**



The ageing population

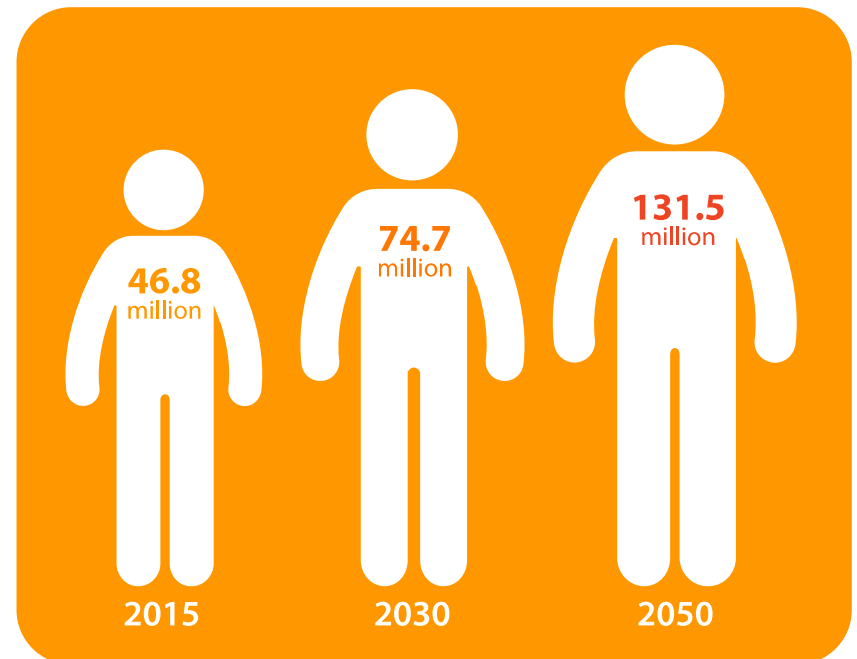
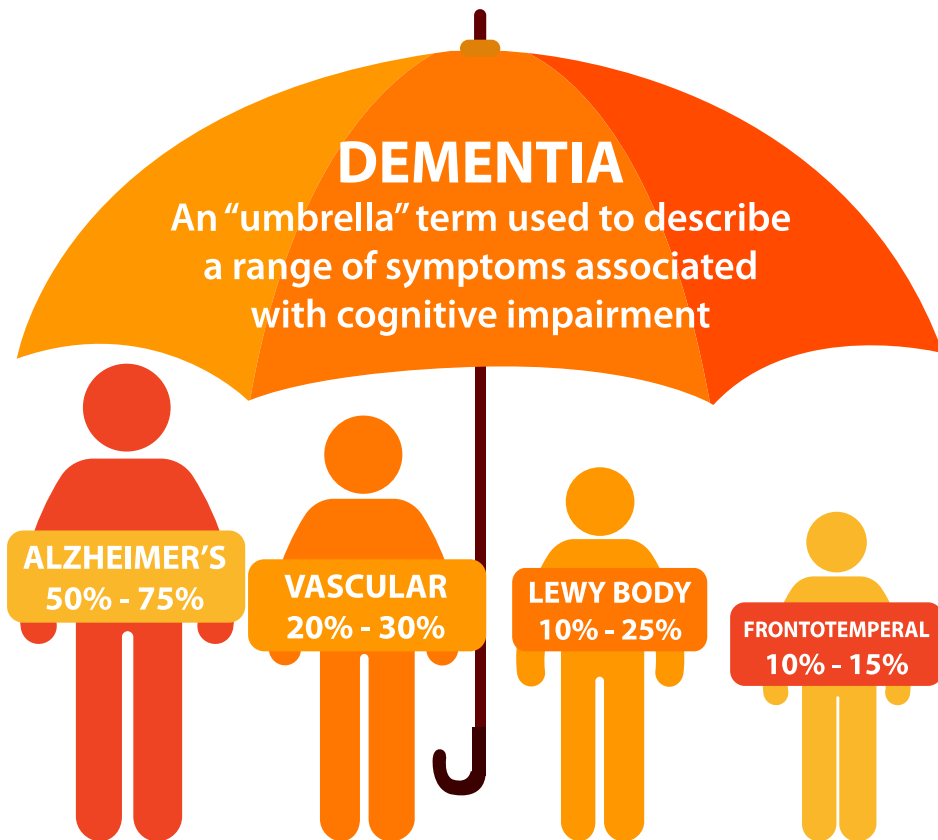


Ref: World Health Organisation; Central Statistics Office; Alzheimer's Society of Ireland; Green et al 2016.

More people than ever before, living longer, suffering from more degenerative diseases. Our cells simply stop working as well as they should.

Dementia Worldwide

- 55 million people worldwide with dementia
- >10 million new cases each year
- One diagnosed every 3 seconds



Dementia in Ireland

- > 64,000 people living with dementia in Ireland, will more than double in the next 25 years to over 150,000 by 2045.*
- 11,000 new cases of dementia each year. (at least 30 people every day and anyone can get dementia – even people in their 30s/40s/50s.**)
- 65% of people living with dementia are women
- It is estimated that up to 40% of dementia worldwide is preventable
- Overall cost > €1.69 billion per annum
 - 48% family care
 - 43% residential care
 - 9% formal health and social care

*Figure referenced from Alzheimer Europe (2020) Dementia in Europe Yearbook 2019 'Estimating the prevalence of dementia in Europe'

**Figure referenced from Pierce, T., O'Shea, E. and Carney P. (2018) Estimates of the prevalence, incidence and severity of dementia in Ireland.



What is Alzheimer's disease?

- Complex & multi domain
- Continuous and progressive
- Effects
 - **Memory** – can't remember yesterday
 - **Language** – I can see the words, but they just won't come out!
 - **Everyday activities** – lose the comfort of knowing how to do simple day tasks
 - **Recognising objects & people** – who is that person sitting in my kitchen?
 - **Behaviour** – cranky & aggressive

"I don't get to chose what yesterdays I get to keep or which I won't remember"

Risk factors for Alzheimer's

Irreversible

Ageing

Gender

Head injury

Reversible

Nutrition/Obesity

Smoking

Physical inactivity

Excessive alcohol use

High blood pressure

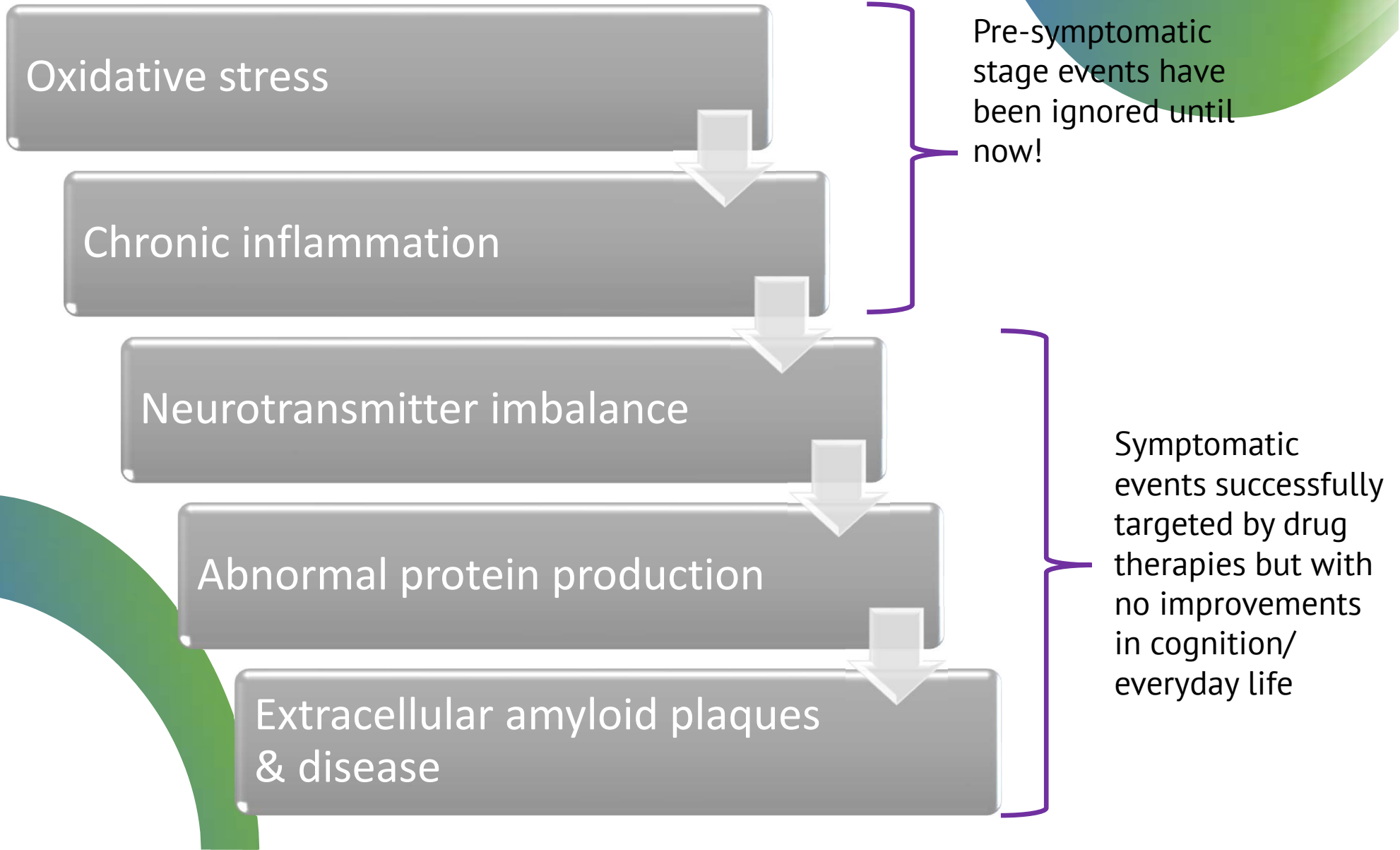
Social isolation

Diabetes

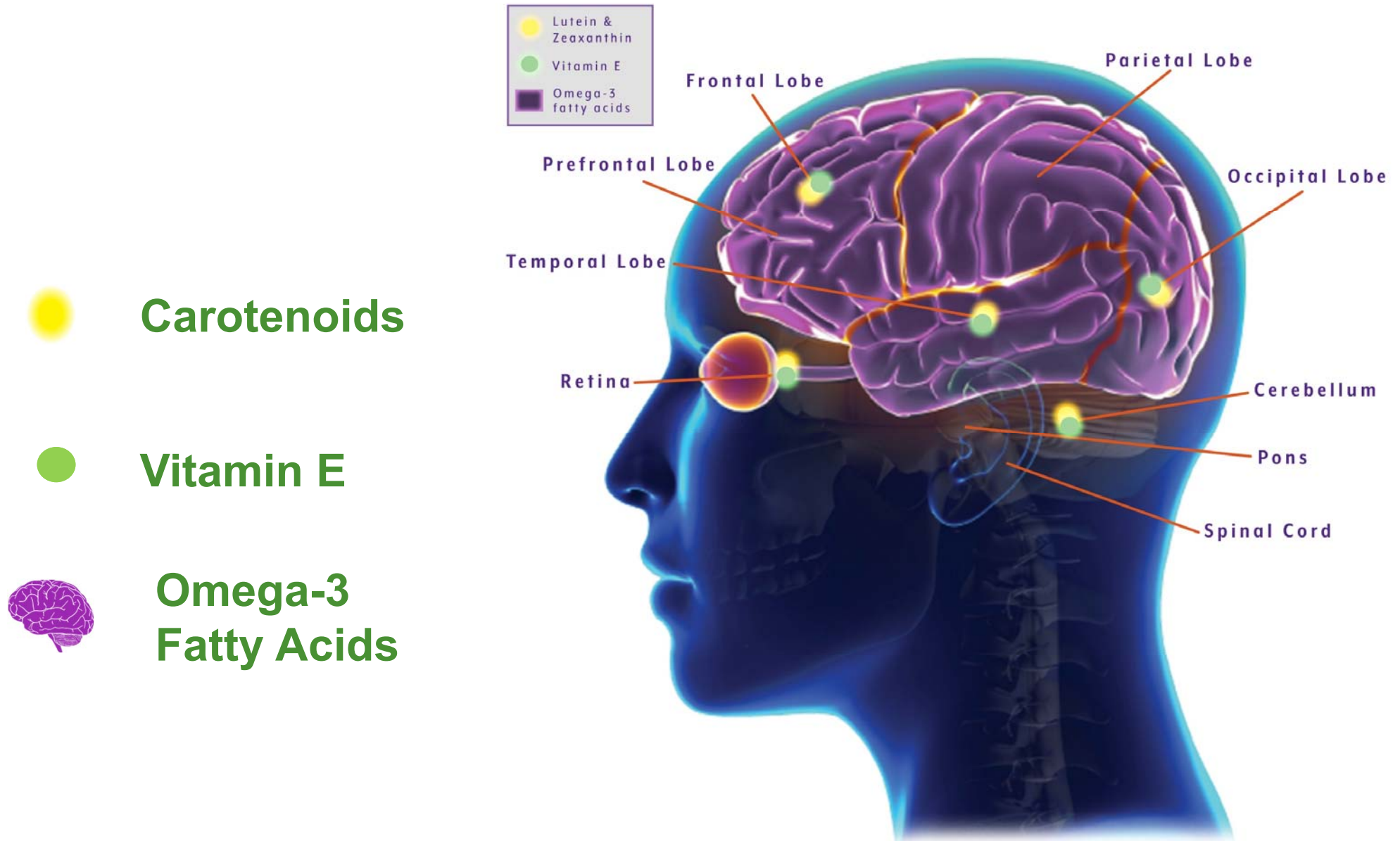
Education

Neurodegeneration

A cascade of degenerating events



Key nutrients in the human brain



 **Carotenoids**

 **Vitamin E**

 **Omega-3 Fatty Acids**

NRCI Clinical Trials: Targeted Nutrition & Cognition (Memory)



CARES
COGNITIVE IMPAIRMENT STUDY

Carotenoid And Retinal Dementia Studies

CARDS 1

When compared to healthy adults AD patients had:

- Significantly lower MP
- Higher instance of AMD
- Poorer visual function

CARDS 2

Carotenoid Supplementation in AD patients:

- Significantly increased MP volume
- **Improved visual function**

CARDS 3

Carotenoid & Omega-3 Supplementation in AD patients:

- Significantly increased carotenoids
- **Carers reported improvements in sight, mood & memory**

CARES 1

Adults with Mild Cognitive Impairment

24-mth supplementation with carotenoids, omega-3 fatty acids and vitamin E.

- Increased MP
- Increased DHA plasma concentrations
- **Trends in improvements in global cognition (Memory) and episodic memory**

CARES 2

Healthy Adults

24-month supplementation with carotenoids, omega-3 fatty acids and vitamin E.

- Increased MP
- Increased DHA plasma concentrations
- **Statistically significant improvements in working memory**

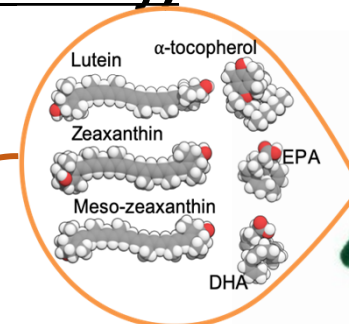
Collectively, these findings point to the important role of nutrition for enabling older adults & the ageing population to age healthier, live independently for longer and enjoy an enhanced quality of life

Targeted Nutritional Supplementation for Patients with Alzheimer's Disease



Can supplementation with carotenoids, fish oil and vitamin E affect the natural progression of Alzheimer's disease (AD) in adults with mild to moderate cognitive impairment?

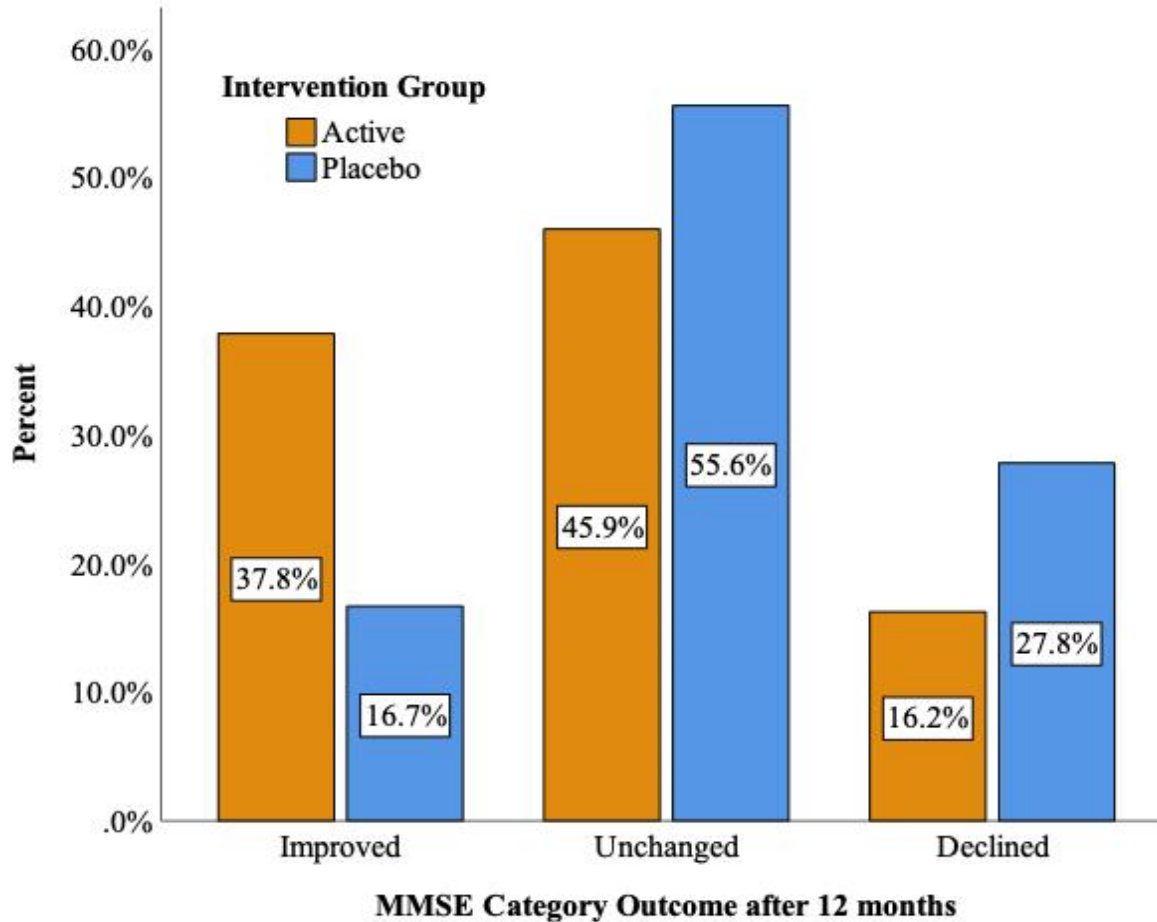
- 24-month double blind, placebo-controlled study
- Confirmed CARDS3 findings - **Improvements in memory and quality of life for participants on the active intervention**
- Solution for treating the pre-symptomatic stage of oxidative stress & inflammation with **improvements in cognition (Memory)**



Observed change over time in disease severity



MMSE category

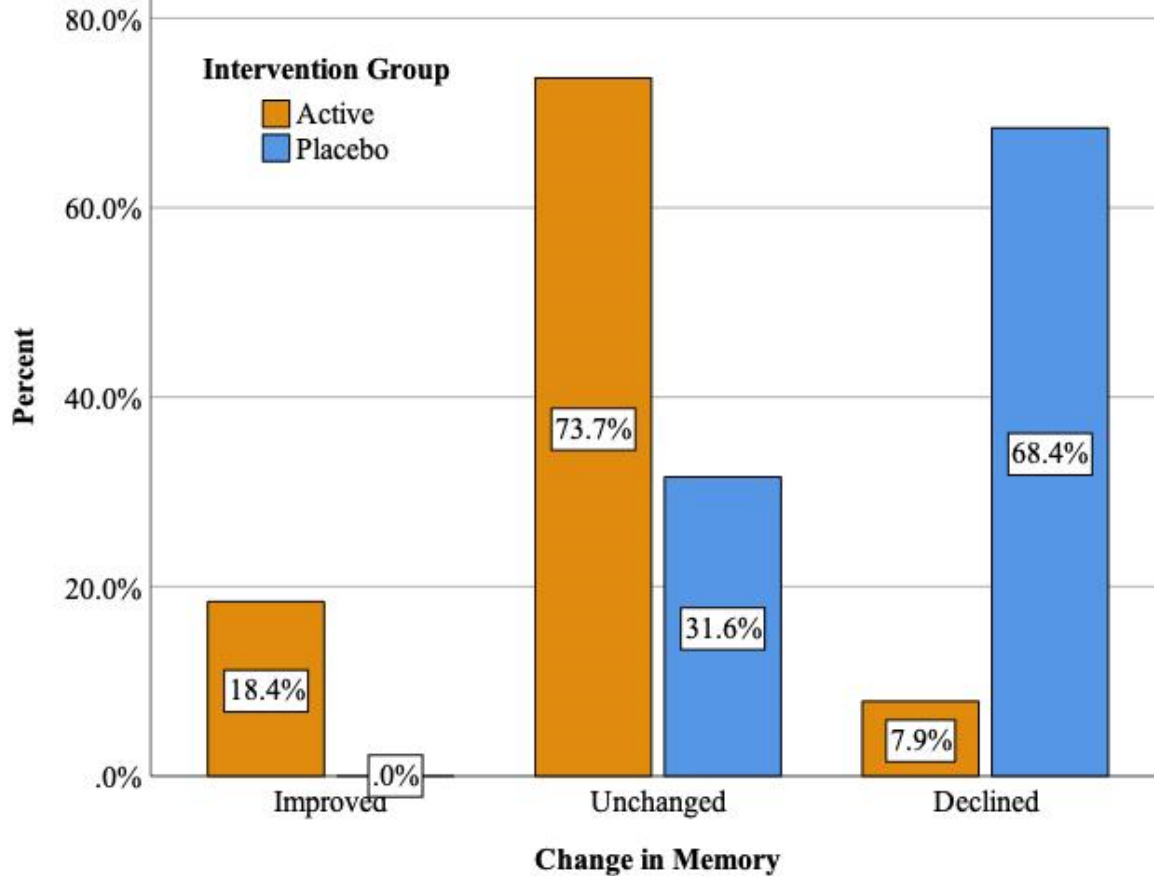


- A trend towards a sig. improvement in MMSE category was observed among individuals receiving the active intervention ($p = 0.074$).
- Of the 14 individuals that exhibited an improvement in MMSE category after 12 months, 9 moved from a mild to normal MMSE category and 5 moved from a moderate to mild MMSE category.

Observed change over time in collateral memory



Clinical collateral memory after 12 months

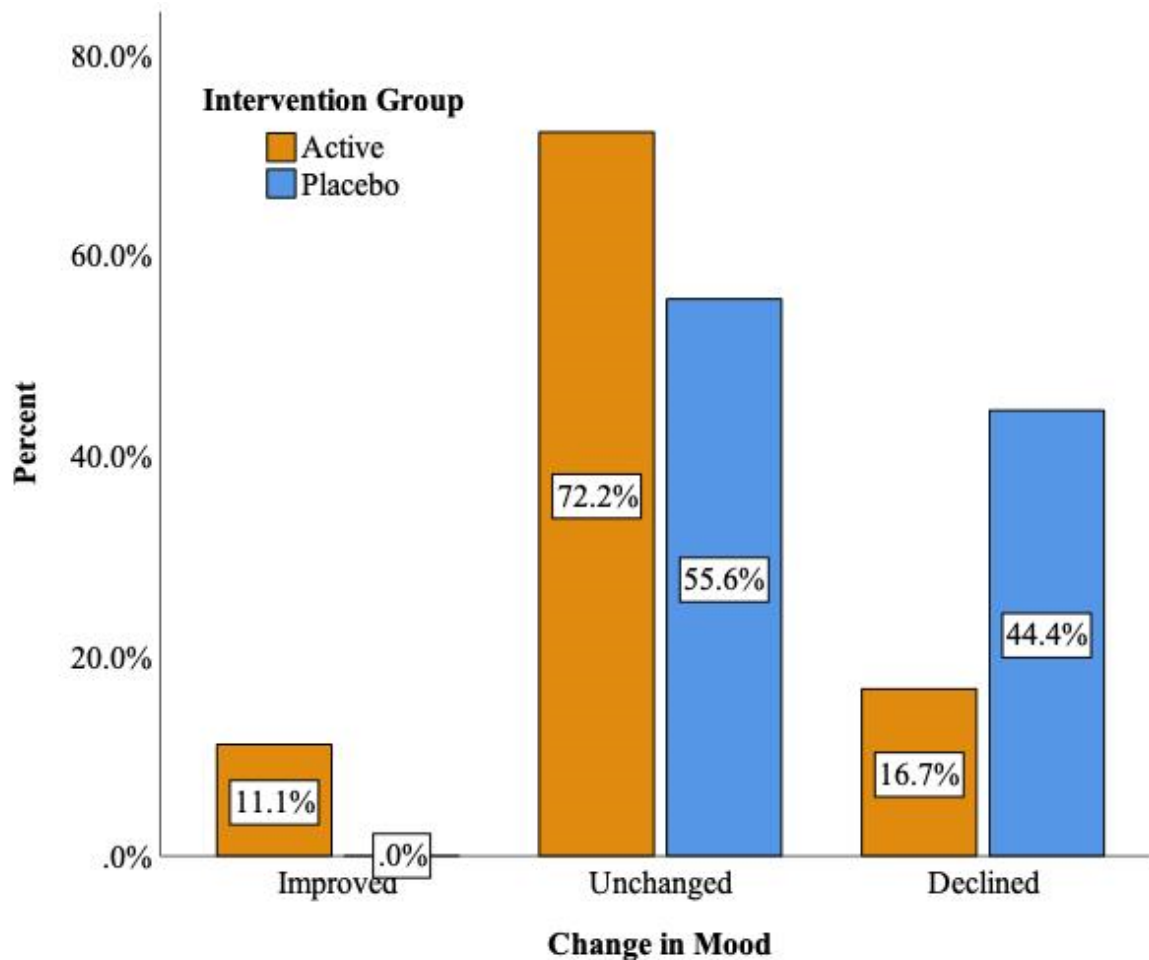


- A statistically sig change in clinical collateral memory score was observed after 12 months between groups ($p < 0.001$).

Observed change over time in collateral mood



Clinical collateral mood after 12 months



- A change in clinical collateral mood score was observed after 12 months, and this difference exhibited borderline statistical significance between the intervention groups ($p = 0.055$).

Case Examples

Unchanged



Question: *Have you noticed any change in Memory (i.e. Same; Worse; Better)?*

Answer: *Memory has not deteriorated over the last year. Family are happy that [REDACTED] able to manage household with [REDACTED] her husband.*

Question: *How are they managing every-day activities: specifically getting dressed, making a cup of tea, cooking, grocery shopping)?*

Answer: *Can attend to personal hygiene independently and attends to most household chores. Does all the cooking and goes shopping accompanied by daughter in law.*

Question: *Has there been a change in personality; specifically agitation, mood, sleep?*

Answer: *No change in personality. Mood generally good. No sleep pattern.*

Case Examples

Improvement



Question: *Have you noticed any change in Memory (i.e. Same; Worse; Better)?*

Answer: *Generally much improved since last year. All family agree, able to converse freely on phone with them. Improvement noticed.*

Question: *How are they managing every-day activities: specifically getting dressed, making a cup of tea, cooking, grocery shopping)?*

Answer: *Great, also [REDACTED] now does all cooking and shopping.*

Question: *Has there been a change in personality; specifically agitation, mood, sleep?*

Answer: *Mood good. No sleep problems now.*



Delivers a targeted daily dose of:

- 500mg Omega-3 DHA
- 150mg Omega-3 EPA
- 15mg Vitamin E
- 10mg Lutein
- 10mg Meso-Zeaxanthin
- 2mg Zeaxanthin

Supporting Brain Health at Every Age



- ✓ Developed in association with Prof John Nolan & SETU
- ✓ Supported by peer-reviewed published evidence
- ✓ The formulation used in the reMIND Alzheimer's Clinical Trials
- ✓ Patented for the prevention/treatment of neurodegenerative disease
- ✓ Supplement Certified – approved for label claim, quality, shelf-life stability
- ✓ 3 capsules a day with food

