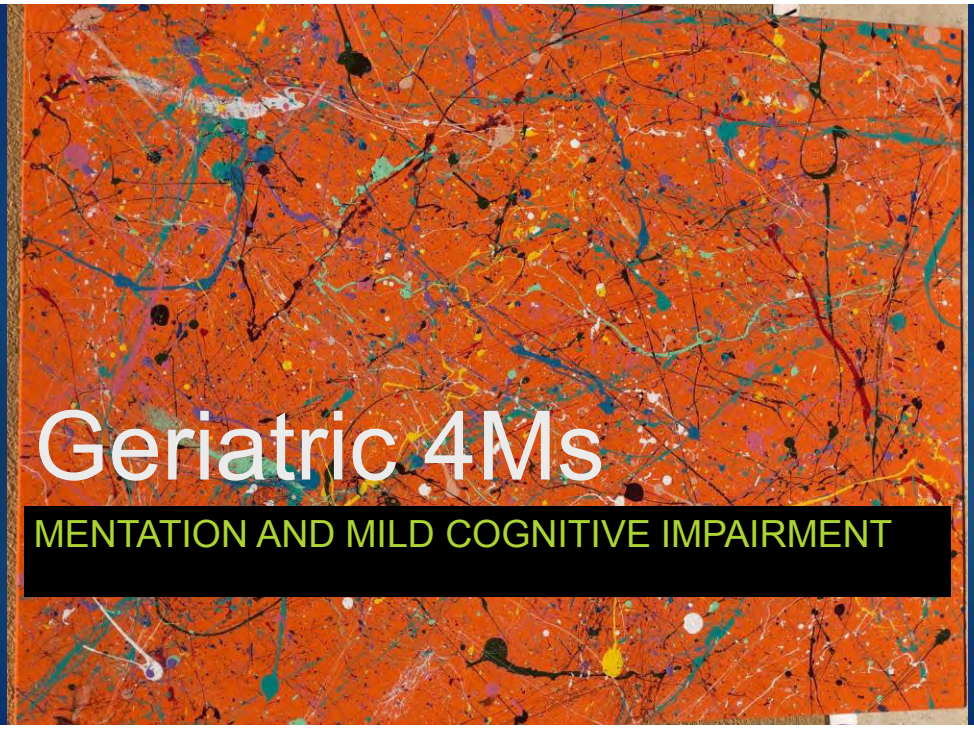


Geriatric 4Ms

MENTATION AND MILD COGNITIVE IMPAIRMENT

Goals

- Define mild cognitive impairment
- Report epidemiology of MCI
- Identify MCI risk
- Diagnose MCI
- Treat MCI

MCI definition: a syndrome

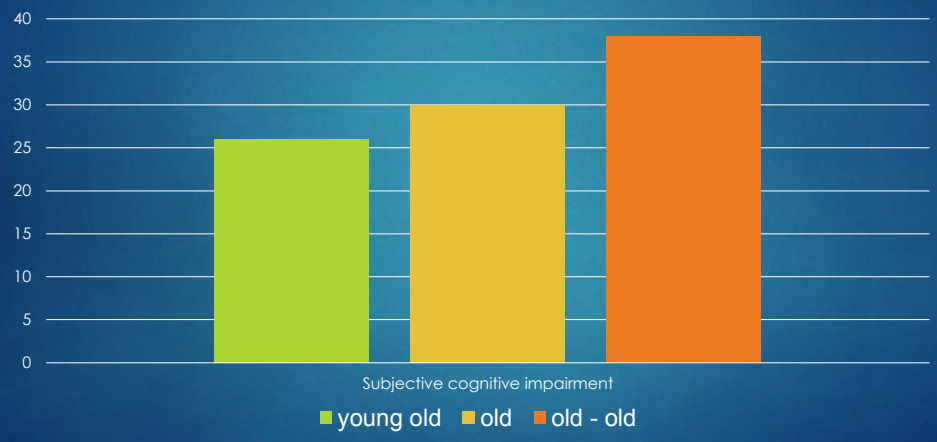
Subjective cognitive problems (amnestic MCI if memory)

Objective cognitive decline in one or more domains

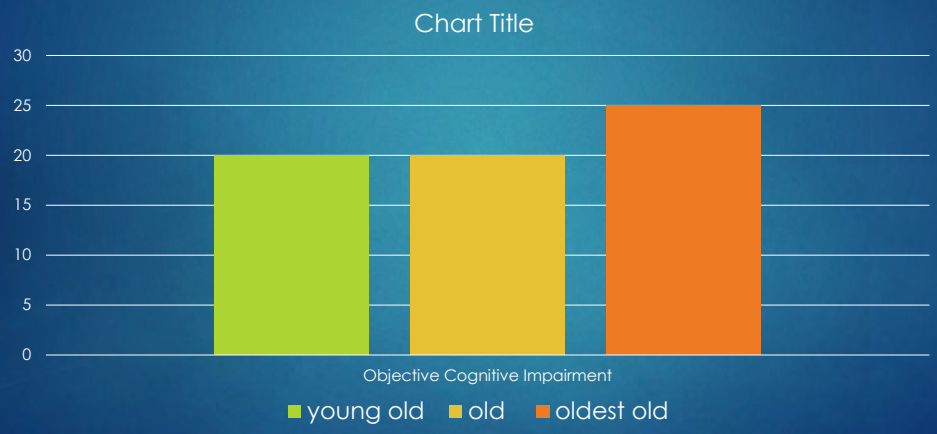
Preserved ADLs / IADLS

No dementia

Prevalence of subjective cognitive impairment

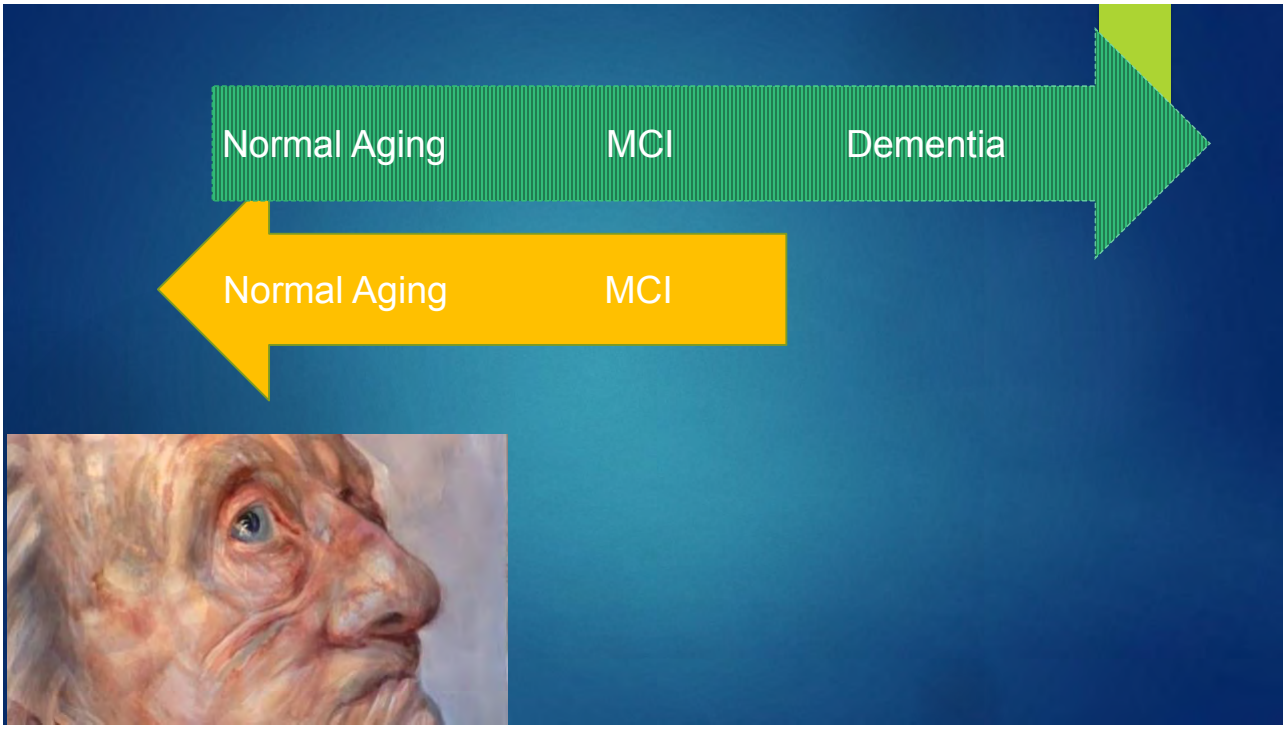


Prevalence of objective cognitive impairment (memory and / or other



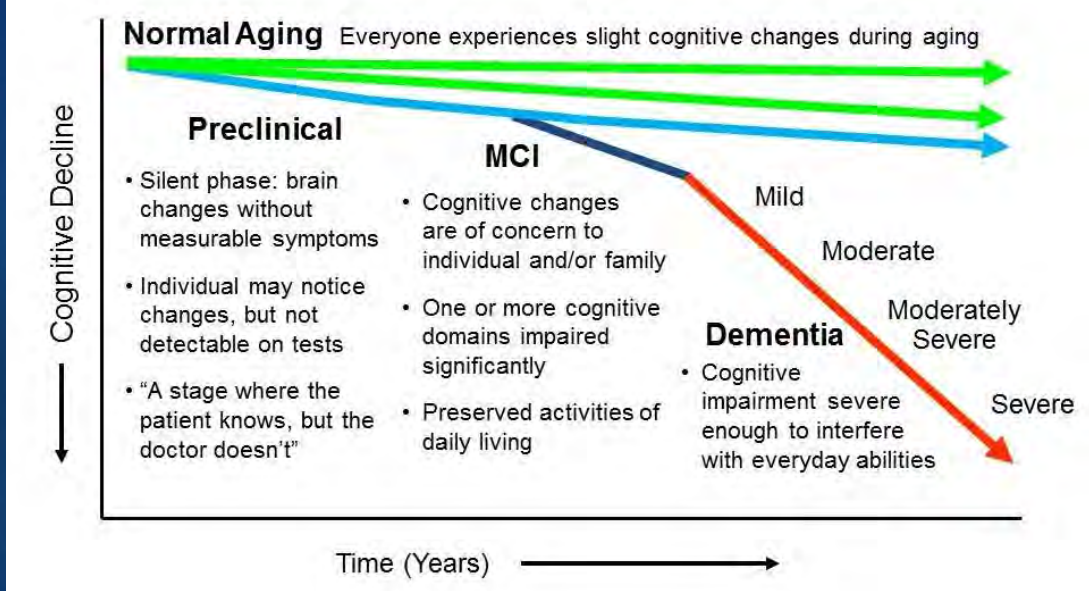
Prevalence

- 5 – 37 % when subjectively assessed
- 2 – 20 % when objectively evaluated
- No gender differences
- African Americans higher
- Diabetics higher

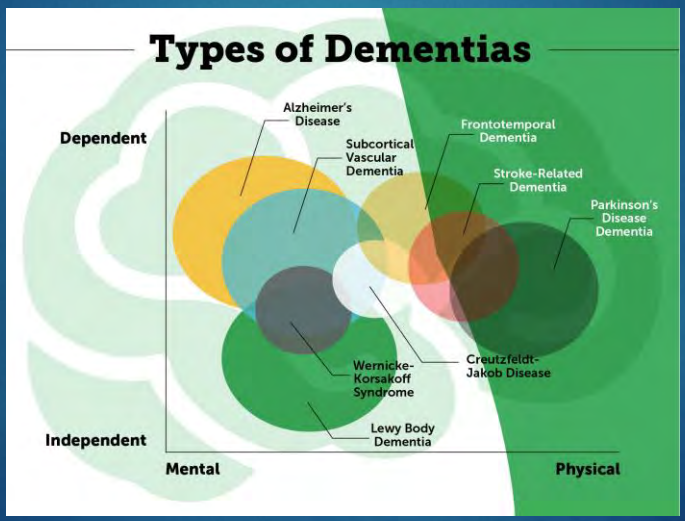


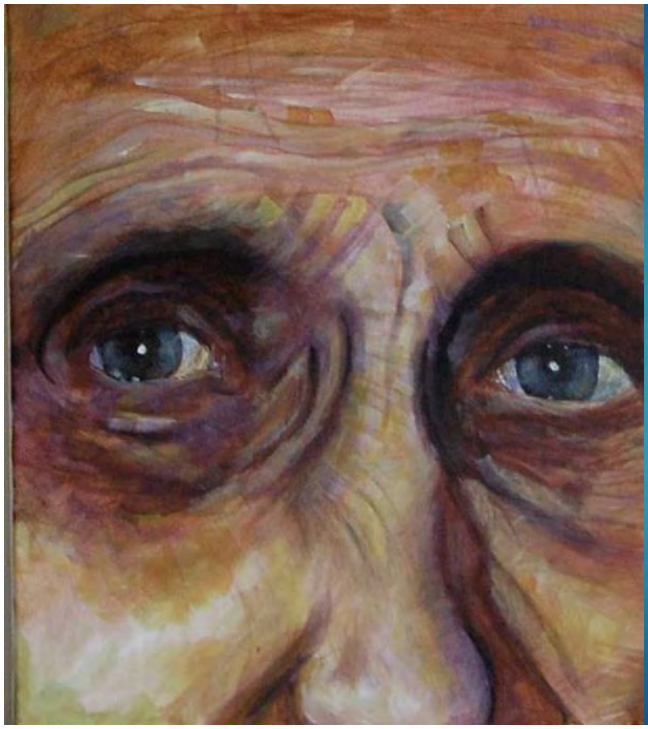
Rate of MCI progression to dementia

- 10 % per year (5 – 16 %)
- Conversion occurs mostly in years 2 - 3 rather than 4 - 5



MCI is Heterogenous





What predicts MCI conversion to dementia ?

- Age
- Abnormal neuropsych tests
  - Delayed verbal recall
  - Visual recognition memory
  - IADL deficits

Psychological predictors

- Depression
- Apathy
- Anxiety
- Dysphoria

Physical performance predictors

SLOW GAIT (2X RISK)

MOTORIC COGNITIVE RISK SYNDROME

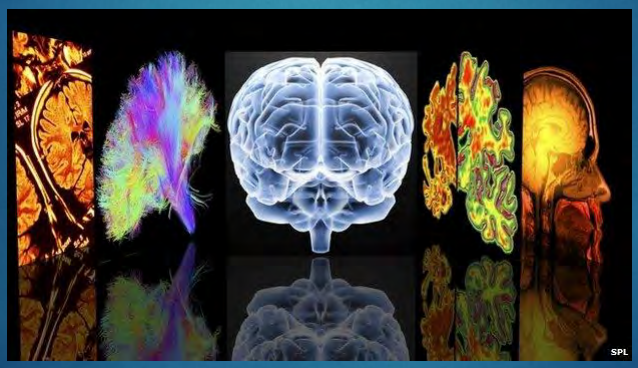
10 % OLDER ADULT POPULATION

Olfactory dysfunction

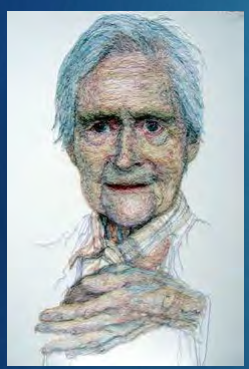
Brief Smell Identification Test Lower quartile performers:

- aMCI patients → dementia risk 5X
- Normal patients → MCI 2X

Do biomarkers identify risk of MCI conversion to dementia ?



Apo E4



Linked to dementia and MCI but not MCI → Dementia

Disease linkages ?

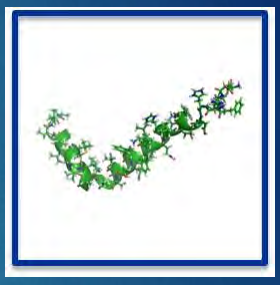
Metabolic syndrome HR 4.25

Diabetes HR 2.5

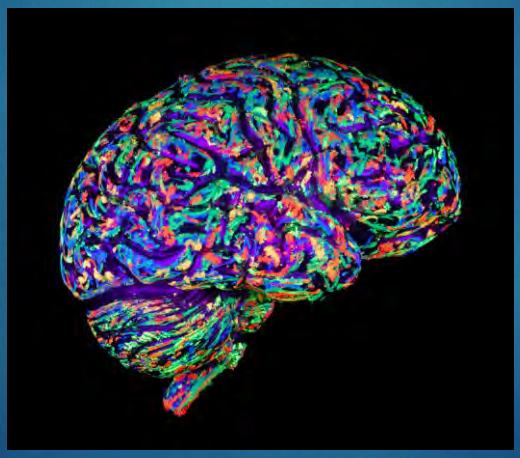
CSF Biomarkers

Tau or Phospho Tau (Thr 181)

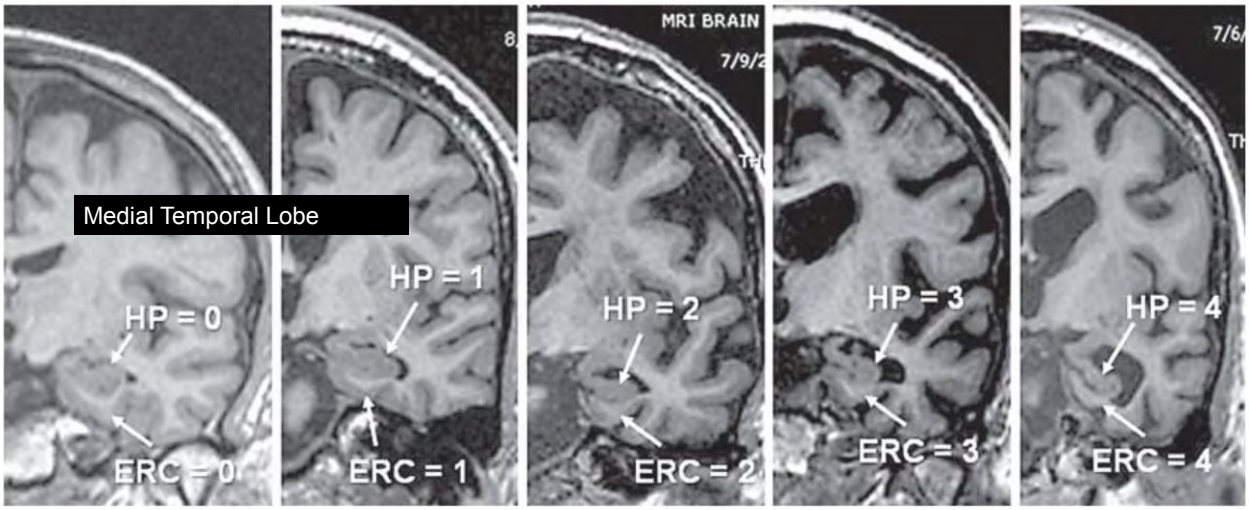
Low amyloid beta 42



Neuroimaging in MCI



MRI : Temporal lobe atrophy



FDG – PET and Functional MRI for regional brain hypometabolism

PET + impaired episodic memory → 11.7X conversion rate

Amyloid PET: tracer retention predicts conversion to AD

Tau PET: experimental

Diagnostic work up

Look for reversible causes of cognitive dysfunction

- Medication side effects
- Obstructive sleep apnea
- Depression
- Vitamin B12 deficiency
- Hypothyroidism

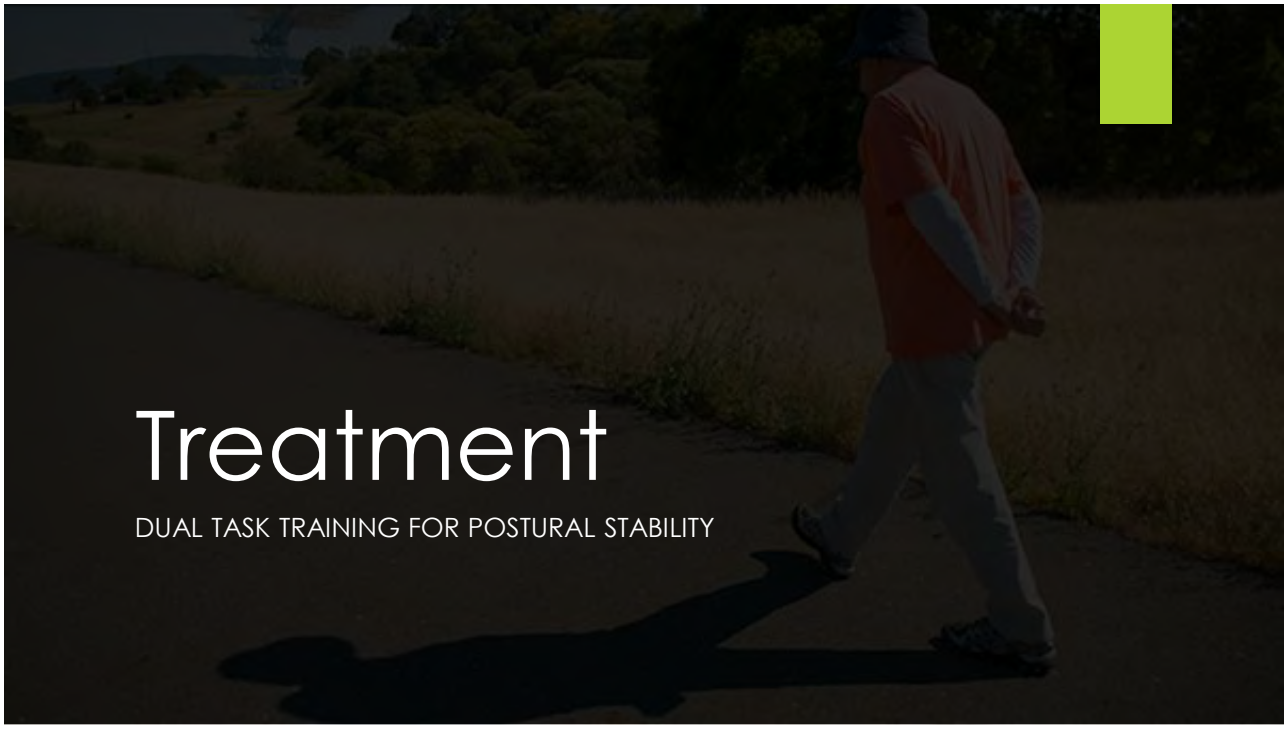
Treatment

Aggressive treatment of CV risk factors

- Hypertension (SPRINT TRIAL)
- Cholesterol management

Treatment

- Nutrition: Mediterranean or MIND diet
- Physical activity
  - MCI patients gain 1 point on cognitive exam post aerobic training
- Cognitive training programs



Treatment

DUAL TASK TRAINING FOR POSTURAL STABILITY

Not recommended

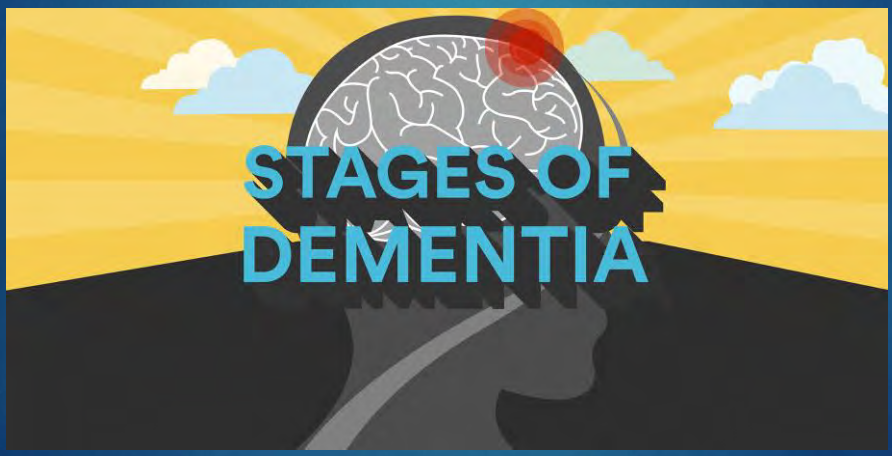
- Acetylcholinesterase inhibitors
  - No impact on conversion, high GI side effects
- NSAIDs
  - Despite lower risk of AD with chronic NSAID use, a rofecoxib study showed not effect in MCI patients.

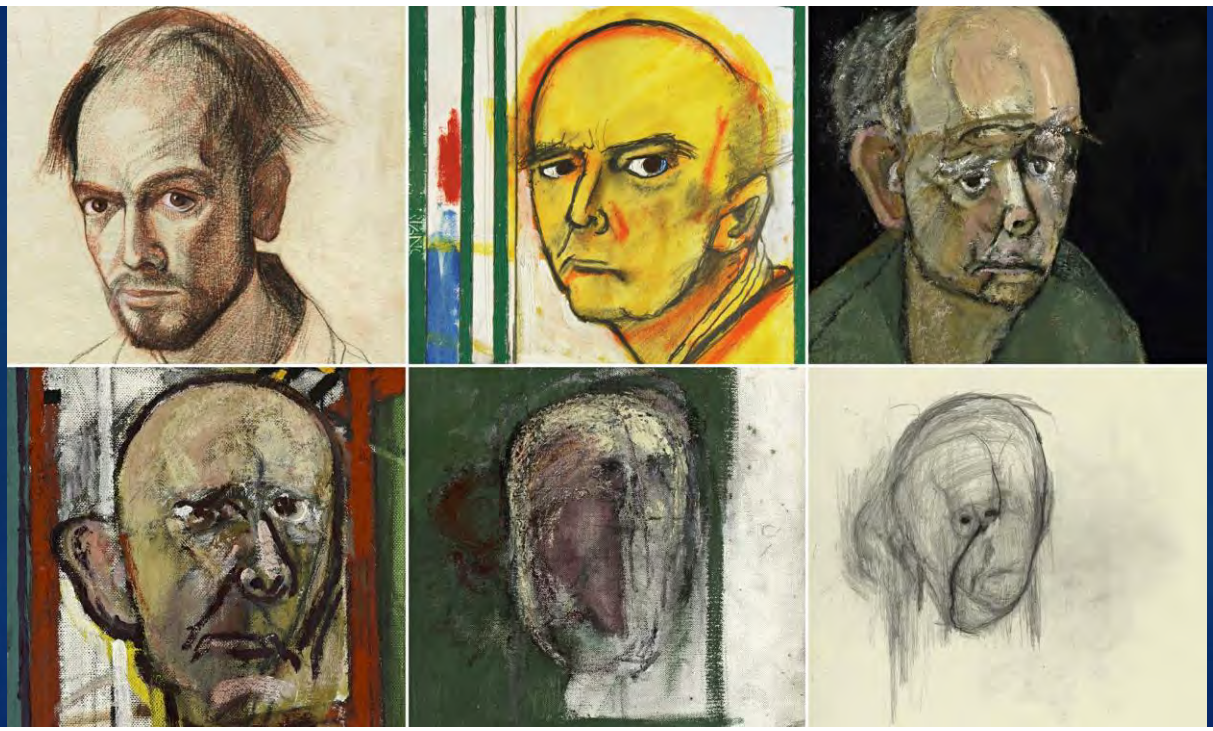
Not recommended

- Ginkgo Biloba: RCT showed no benefit
- Phospholipids: mixed results
- Fish (omega) oils: no effect
- High dose vitamin B complex: no effect

Promising

- Intranasal insulin for aMCI
- GHRH
- Curcumin in cognitively intact
  - Verbal memory
  - Visual memory
  - Attention (Trail A test)


STAGES OF
DEMENTIA




Working to become
Dementia
Friendly