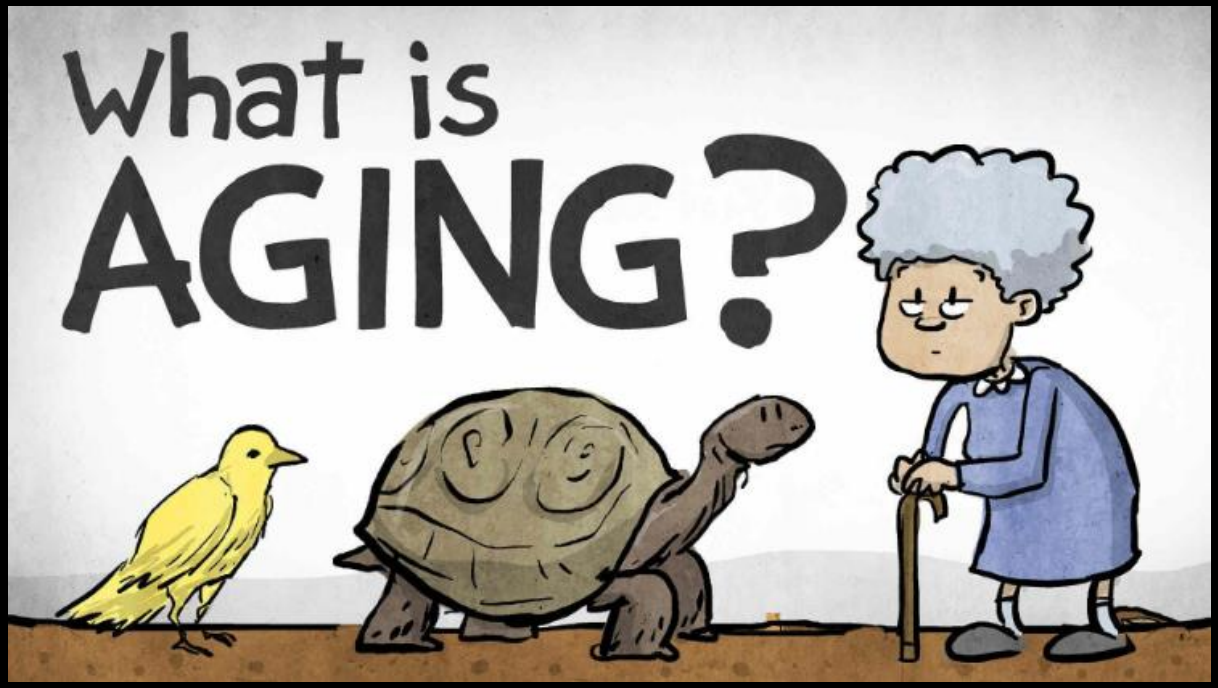
La Depressione nell'Anziano

16/03/2019

Dott.ssa Alessandra Mosca



TRECCANI

invecchiamento Insieme di vari cambiamenti che avvengono nelle cellule e nei tessuti con l'avanzare dell'età, responsabili di un aumento del rischio di malattia e morte. La maggioranza degli animali che vive in un ambiente naturale raramente invecchia (perché muore prima per fattori ambientali o patologie): questo suggerisce che l'invecchiamento sia un fenomeno che interessa unicamente la specie umana. In altre parole, il miglioramento delle condizioni di vita, in partic. delle condizioni igieniche e dell'alimentazione, accompagnato dai progressi scientifici della biomedicina, ha permesso alla specie umana di scoprire il processo dell'invecchiamento, un processo per il quale teleologicamente non è programmata.

The Hallmarks of Aging

Carlos López-Otín,[1] Maria A. Blasco,[2] Linda Partridge,[3,4] Manuel Serrano,[5,*] and Guido Kroemer[6,7,8,9,10]
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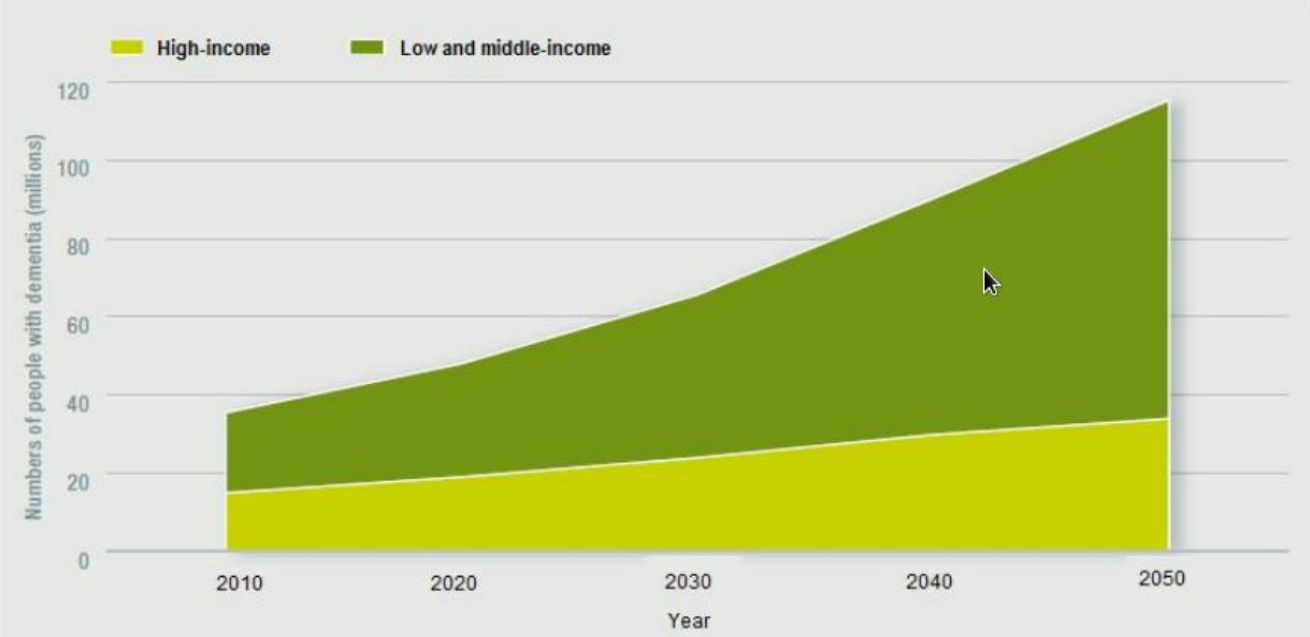
http://dx.doi.org/10.1016/j.cell.2013.05.039

Altered intercellular communication
Genomic instability
Telomere attrition
Epigenetic alterations
Loss of proteostasis
Deregulated nutrient sensing
Mitochondrial dysfunction
Cellular senescence
Stem cell exhaustion



Growth in numbers of people with dementia in high-income and low- and middle-income countries

The NEW ENGLAND JOURNAL of MEDICINE

SPECIAL ARTICLE

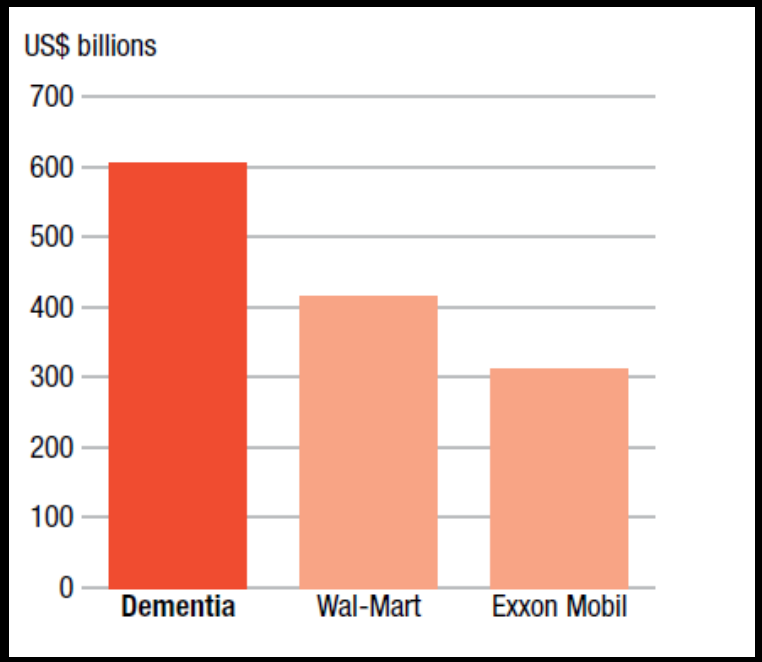
Monetary Costs of Dementia in the United States

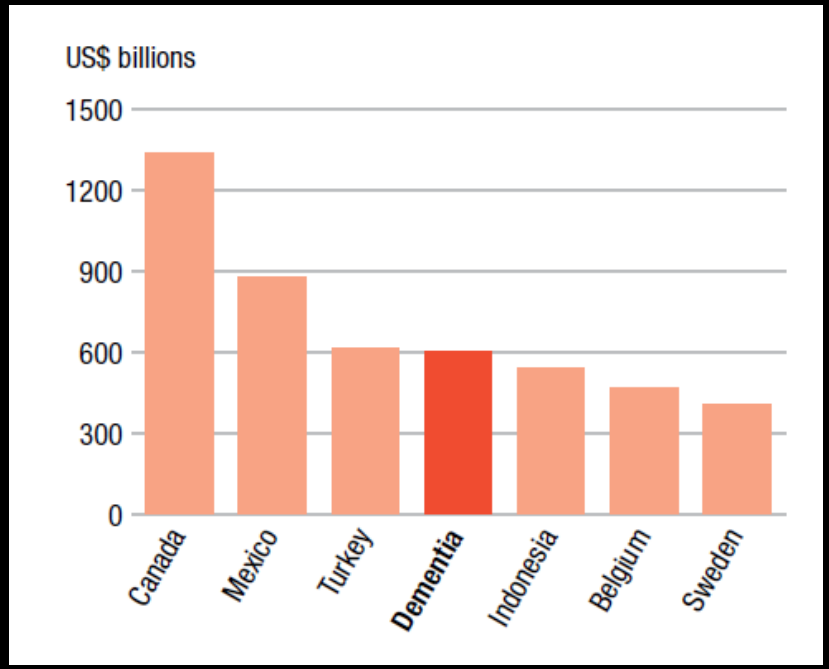
Michael D. Hurd, Ph.D., Paco Martorell, Ph.D., Adeline Delavande, Ph.D., Kathleen J. Mullen, Ph.D., and Kenneth M. Langa, M.D., Ph.D.

Alzheimer's Disease International

World Alzheimer Report 2010

THE GLOBAL ECONOMIC IMPACT OF DEMENTIA





Invecchiamento Patologico

Alzheimer's disease (AD) is a complex syndrome characterized by a pleiotropic array of cognitive and behavioural symptoms .

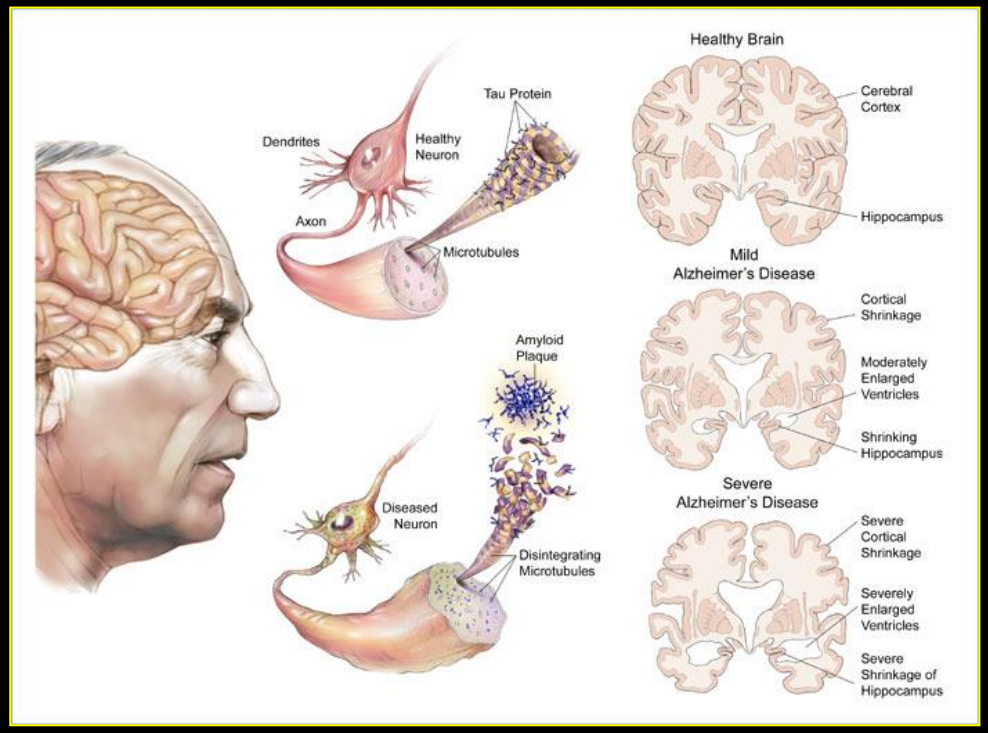
The transitional period expanding from aging-related cognitive decline and early signs of AD is known as **Mild Cognitive Impairment (MCI)**

PRE-CLINICAL AD (MCI)

MILD AD

MODERATE AD

SEVERE AD



Sintomi cognitivi e comportamentali

COGNITIVI

Memoria
Attenzione
Problem-Solving
Abilità visuo-spaziali
Linguaggio

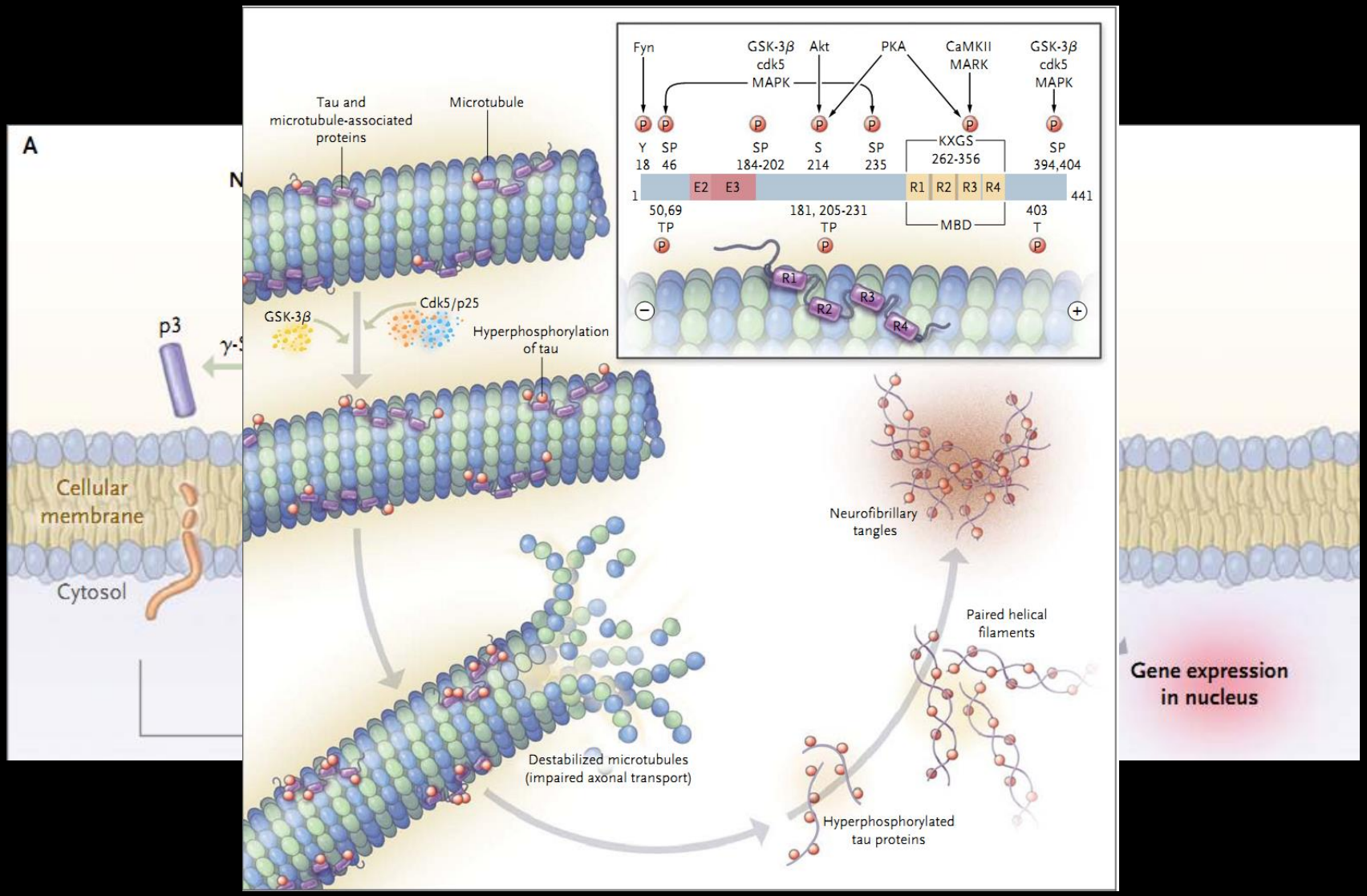
COMPORTAMENTALI

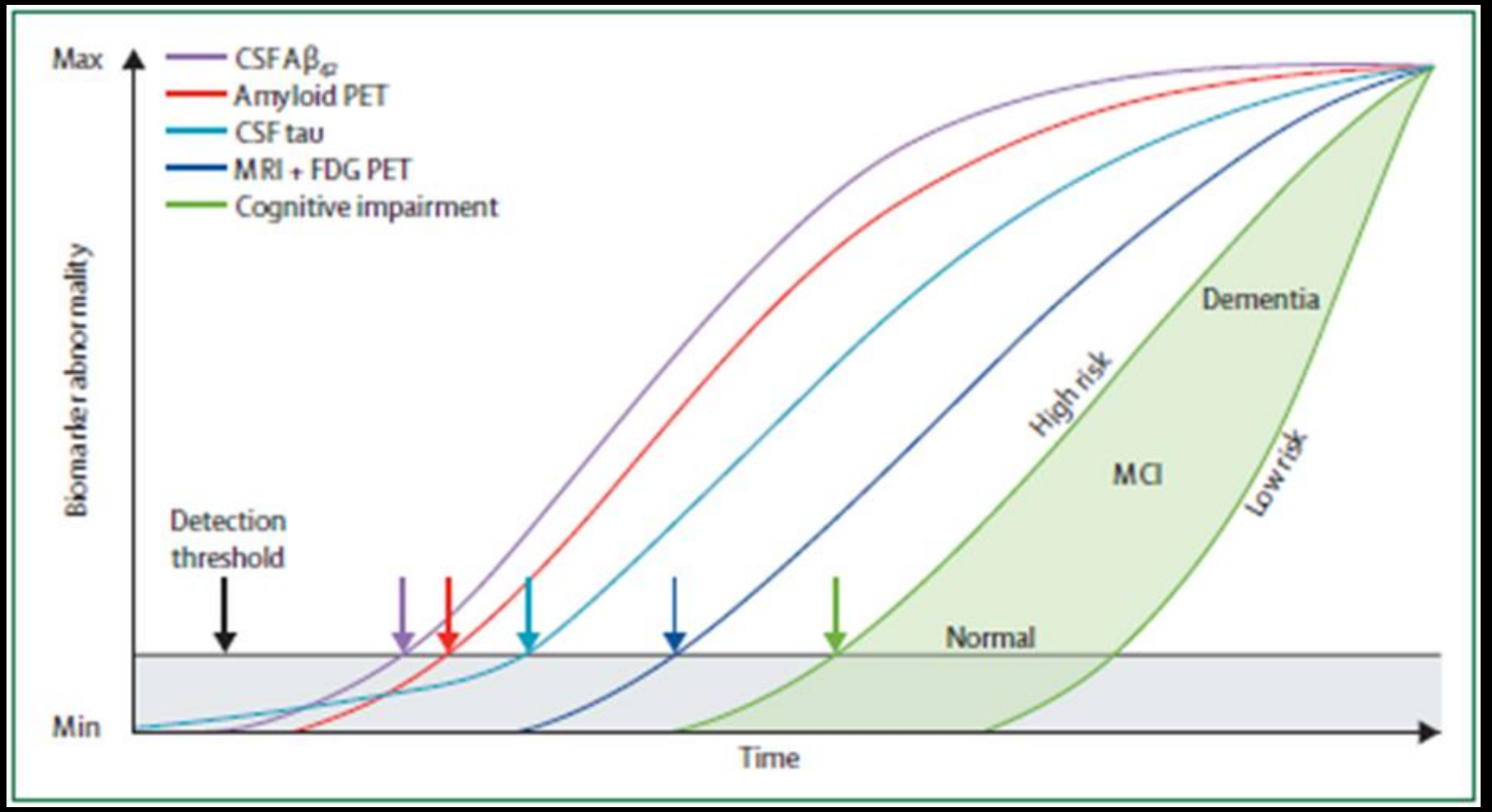
Deliri
Allucinazioni
Depressione
Ansia
Apatia
Comp. Motori aberranti
Irritabilità
Aggressività
Disinibizione
Disturbi del sonno
Disturbi del comportamento alimentale

Several pathogenetic mechanisms have been postulated

Hyper-phosphorylated tau hypothesis

Beta Amyloid Hypothesis

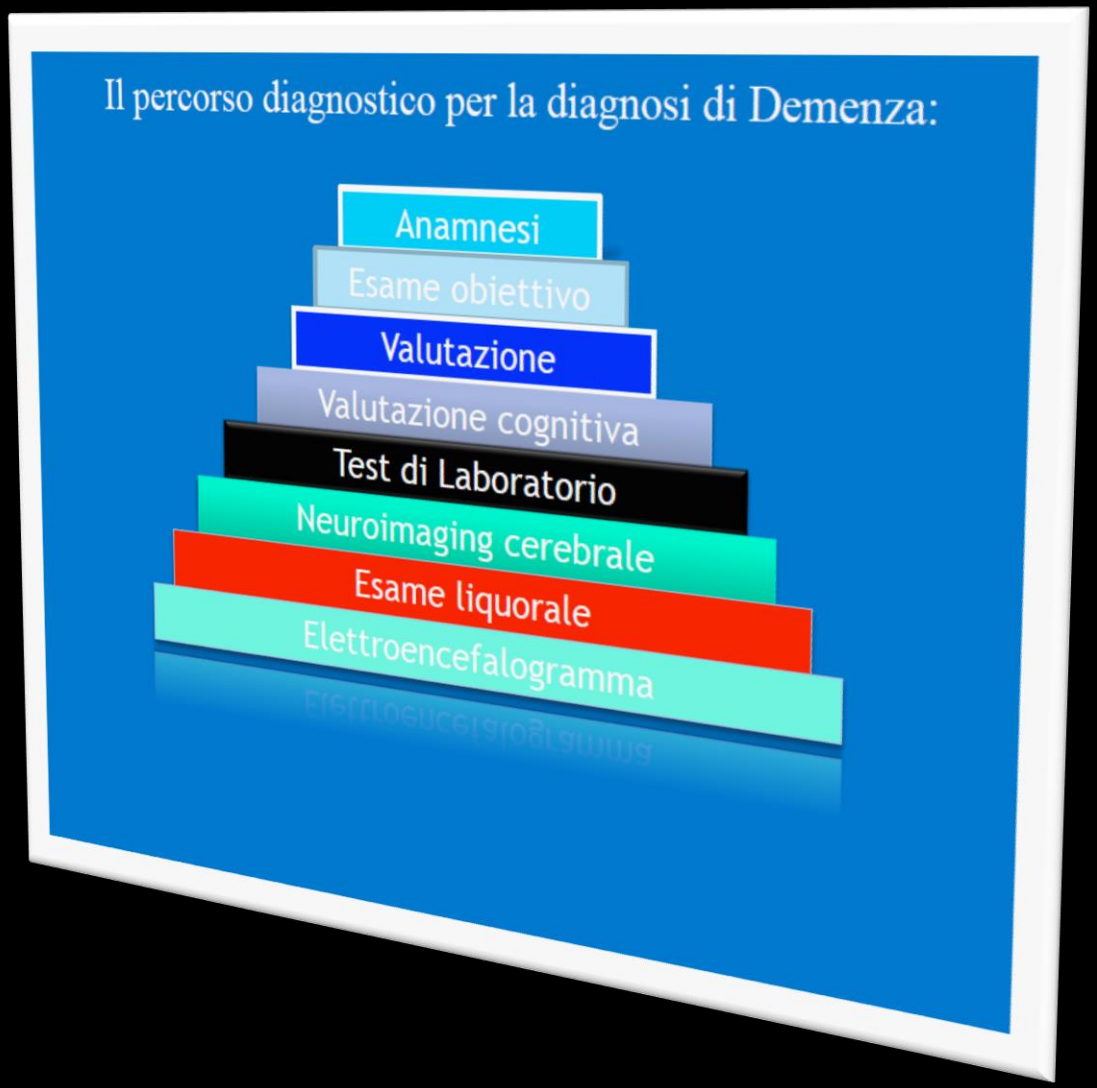




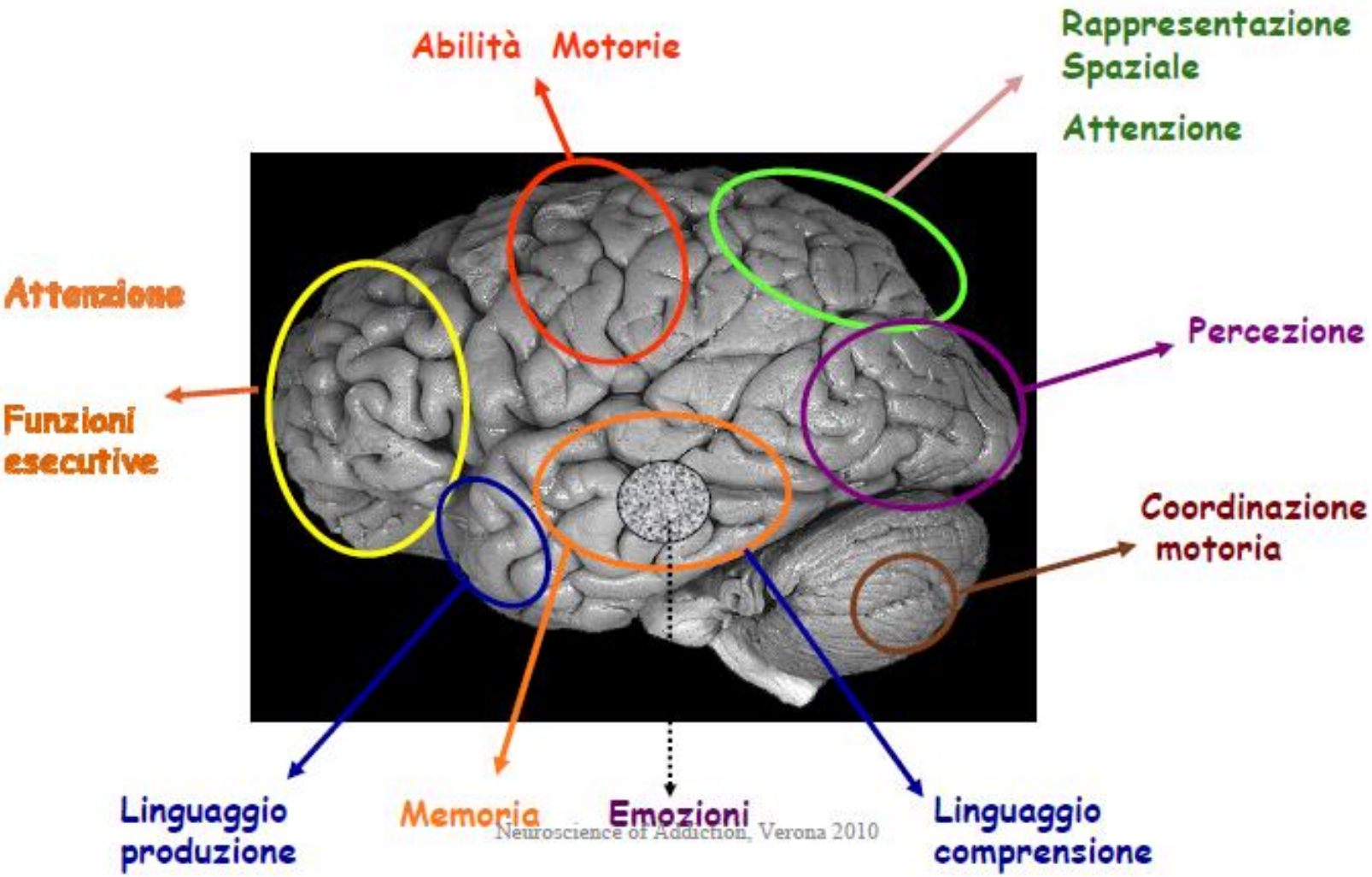
Jack et al., Lancet Neurology, 2013

LA VALUTAZIONE NEUROPSICOLOGICA

La Valutazione NPS è un processo diagnostico che comprende una serie di passi mirati alla comprensione e misurazione del funzionamento cognitivo di un individuo. Consente di definire la presenza e la gravità dei deficit cognitivi dei pazienti con danni/disfunzioni cerebrali di varia eziologia (es., ictus, demenze).



Aree cerebrali e funzioni cognitive



DOMINI COGNITIVI

Percezione

Riconoscimento

Attenzione
Spaziale
Selettiva
Divisa
Sostenuta
Vigilanza

Linguaggio

Abilità prassiche

Abilità matematiche

Memoria
Breve termine
Verbale /spaziale

Lungo termine
Verbale / spaziale

Memoria di lavoro

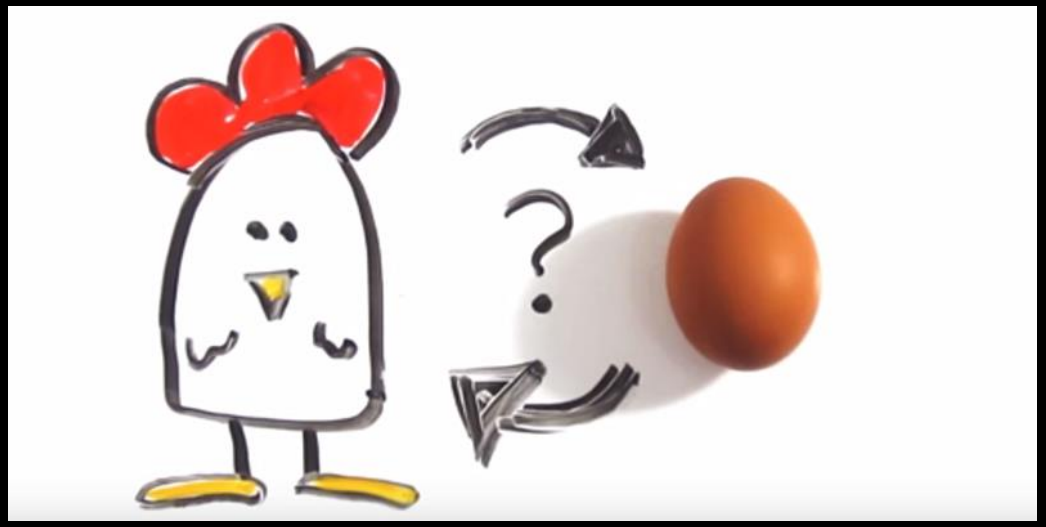
Episodica
Semantica
Autobiografica
Prospettica
Dichiarativa vs. procedurale
Anterograda vs. retrograda

Funzioni esecutive
Pianificazione
Programmazione di strategie
Risoluzione di problemi
Giudizio
Stima
Astrazione
Controllo degli impulsi
Inibizione
Comportamento sociale
Comportamento sessuale

DEPRESSION-I

- **Disturbo da disregolazione dell'umore dirompente**
- **Depressione Maggiore**
- **Disturbo Depressivo Persistente**
- **Disturbo disforico**
- **Disturbo Bipolare**

DEPRESSIONE o DEMENZA

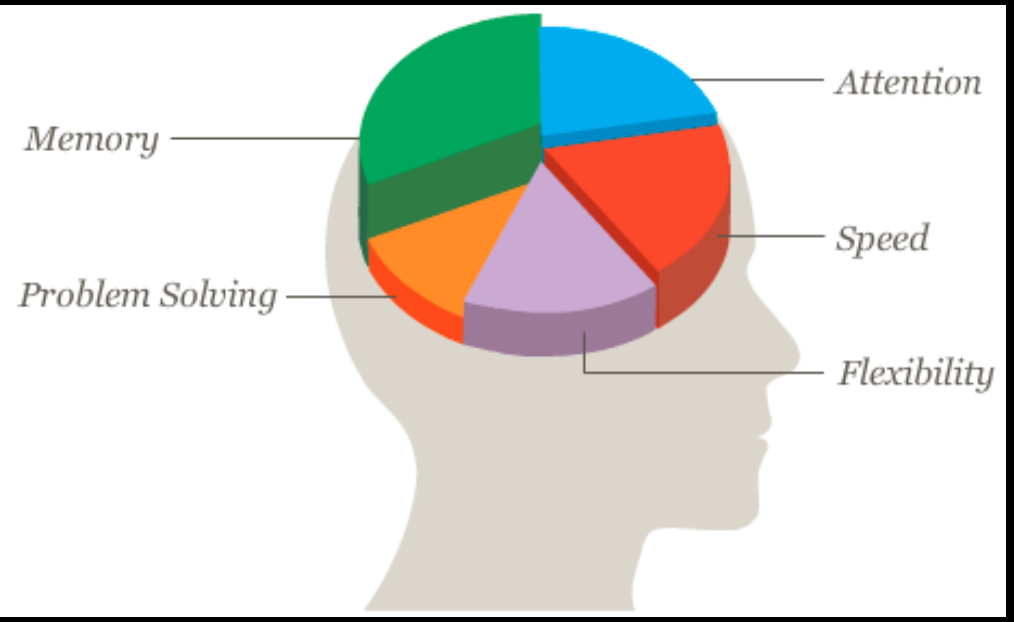


Pseudodemenza depressiva

Cosa fare?

Vie di prevenzione: Stimolazione cognitiva

lumosity



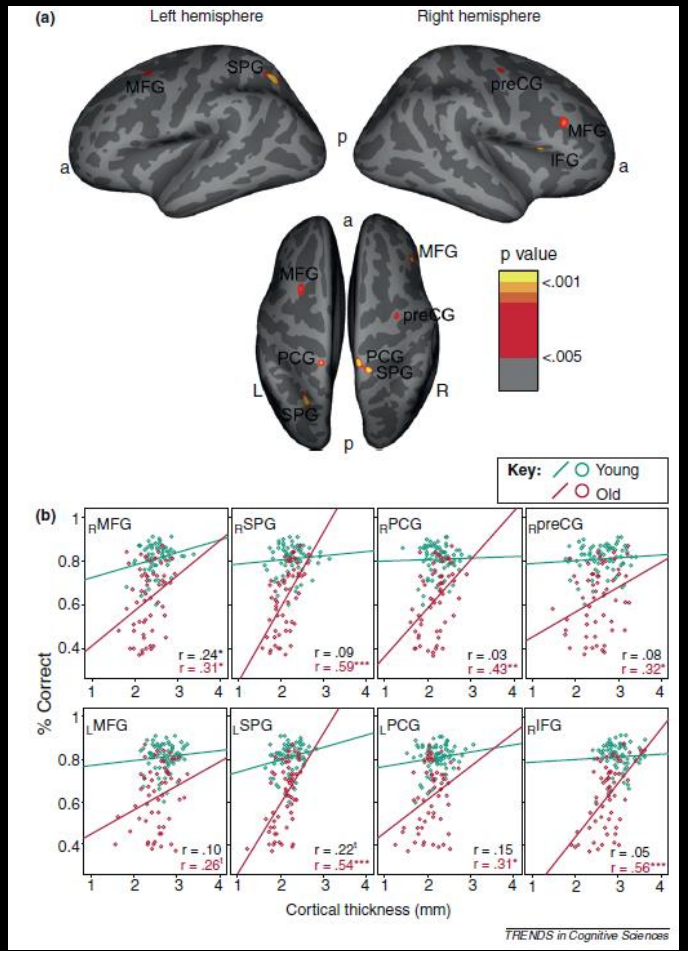


Figure 4. The relation between cortical thickness and executive control increases from early to late adulthood, suggesting that individuals who experience less cortical thinning are more likely to maintain high levels of executive control in old age. **(a)** Areas where a thicker cortical mantle is associated with better performance on the Wisconsin Card Sorting Test (WCST), a measure of executive control in the total sample, statistically controlling for age. **(b)** Mean cortical thickness regressed on WCST performance. x-axis: cortical thickness in mm; y-axis: WCST accuracy (% correct); *r*: Pearson's correlation coefficient, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$, ^{t} = trend ($.07 > p > .05$). MFG, middle frontal gyrus; IFG, inferior frontal gyrus; SPG, superior parietal gyrus; preCG, precentral gyrus; PCG, post-central gyrus; a, anterior; p, posterior; L, left; R, right. Adapted, with permission, from [47].

LETTER

doi:10.1038/nature12486

Video game training enhances cognitive control in older adults

J. A. Anguera[1,2,3], J. Boccanfuso[1,3], J. L. Rintoul[1,3], O. Al-Hashimi[1,2,3], F. Faraji[1,3], J. Janowich[1,3], E. Kong[1,3], Y. Larraburo[1,3], C. Rolle[1,3], E. Johnston[1] & A. Gazzaley[1,2,3,4]

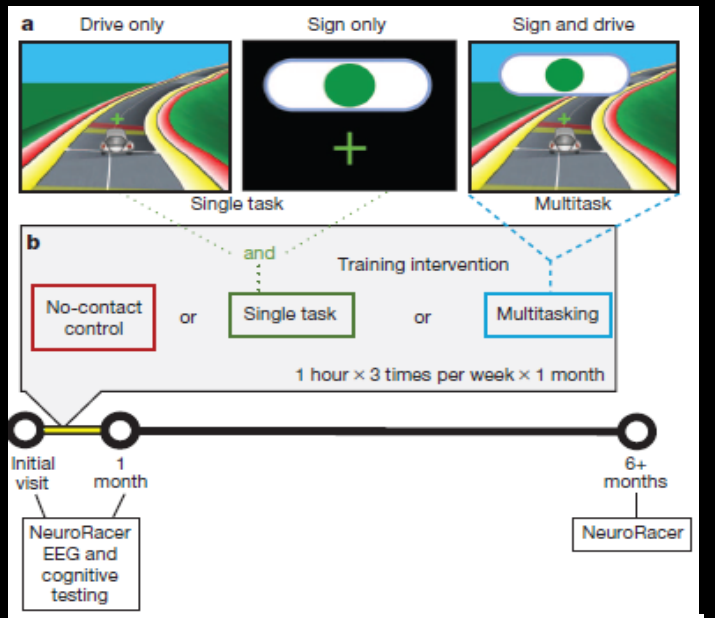
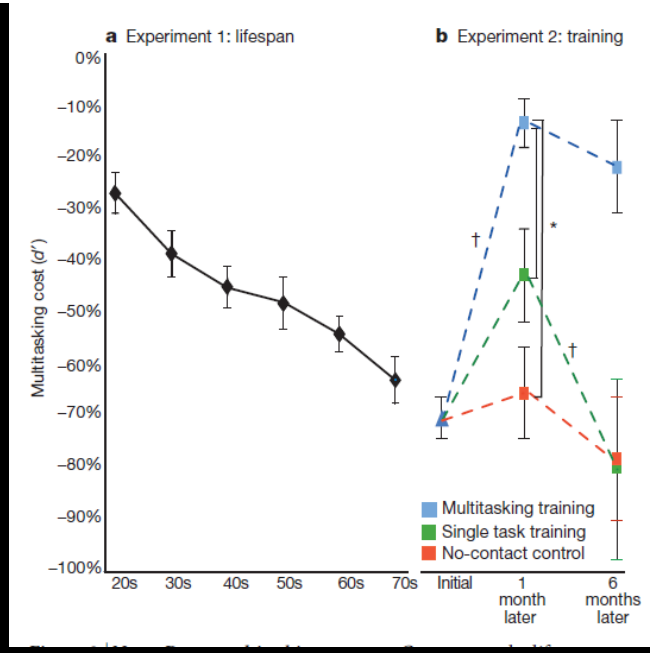


Figure 1 | NeuroRacer experimental conditions and training design. **a**, Screen shot captured during each experimental condition. **b**, Visualization of training design and measures collected at each time point.



Vie di prevenzione: Esercizio fisico

SCIENCE AND SOCIETY

Be smart, exercise your heart: exercise effects on brain and cognition

Charles H. Hillman, Kirk I. Erickson and Arthur F. Kramer

© 2008 Nature Publishing Group

Aerobic exercise effects on cognitive and neural plasticity in older adults

K I Erickson[1] and A F Kramer[2]
[1] University of Pittsburgh, Department of Psychology, Pittsburgh, Pennsylvania, USA
[2] Beckman Institute and Department of Psychology, University of Illinois at Urbana-Champaign, Illinois, USA

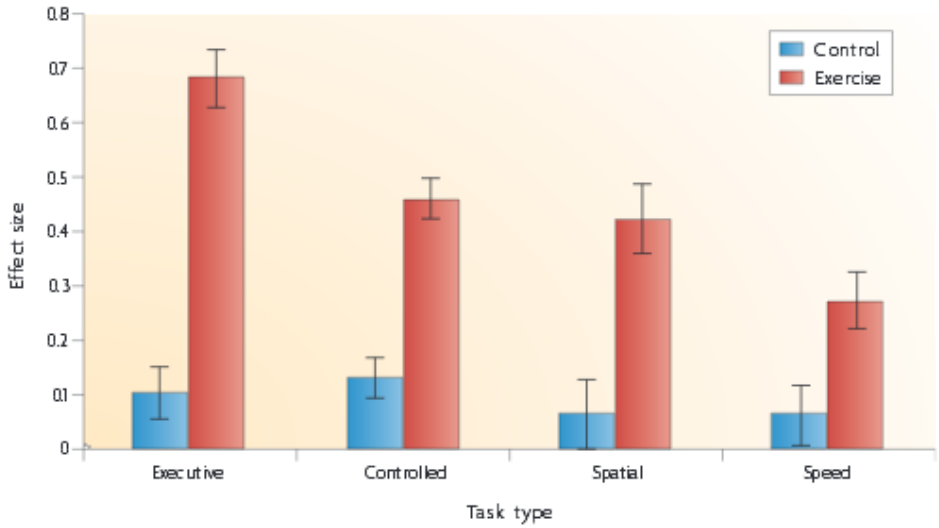
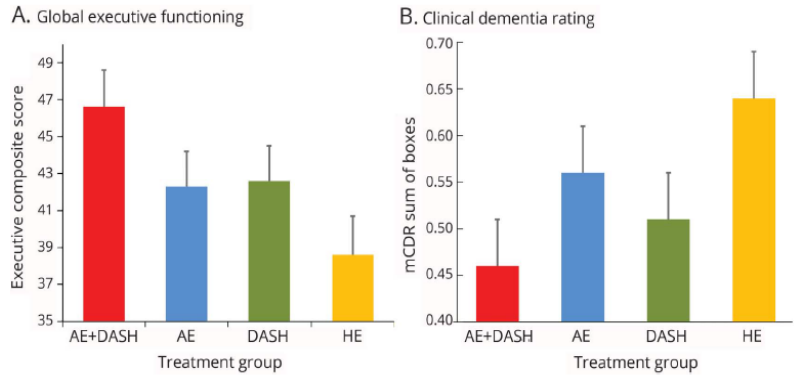


Figure 1 | **Meta-analytic findings of exercise-training effects on cognition in older adults.** The results of a meta-analysis of the effects of fitness training on cognition showed that the benefits of fitness training on four different cognitive tasks were significant. As illustrated in the figure, fitness training has both broad and specific effects. The effects are broad in the sense that individuals in aerobic fitness training groups (represented by the red bars) showed larger fitness training effects across the different categories of cognitive processes illustrated on the x-axis. They are specific in the sense that fitness training effects were larger for some cognitive processes, in particular executive control processes, than for other cognitive processes. Figure reproduced, with permission, from REF. 32 © (2003) Blackwell Publishers.

Figure 2 Intervention effects for (A) global executive function and (B) mCDR



Values for the global composite are presented as mean postintervention ranks adjusted for preintervention rank, age, education, sex, ethnicity, baseline Montreal Cognitive Assessment (MoCA) score, *APOE* genotype, Framingham Stroke Risk Profile (FSRP), and anti-inflammatory and cardiovascular disease (CVD) medications. Higher scores represent better performance. For the modified Clinical Dementia Rating (mCDR), values are presented as mean post-intervention mCDR Sum of Boxes scores adjusted for preintervention scores, age, education, sex, ethnicity, pretreatment MoCA score, *APOE* genotype, FSRP, anti-inflammatory, and CVD medications. Lower scores represent greater improvement. AE = aerobic exercise; DASH = Dietary Approaches to Stop Hypertension; HE = health education.

LIFE STYLE

Public Health England

Protecting and improving the nation's health

Healthmatters **Midlife approaches to reduce dementia risk**

5. Act now to reduce the risk of dementia

The NHS Health Check, for adults in England aged 40 to 74, is an ideal opportunity for GPs and other healthcare professionals to offer advice to promote a healthier lifestyle.

Local authorities should also promote a healthy lifestyle in line with the recommendations in the NICE guideline on mid-life approaches to delay or prevent the onset of dementia, disability and frailty in later life.

PHE's One You campaign aims to motivate people to take steps to improve their health through action on the main risk factors such as smoking, inactivity, obesity, and alcohol consumption.

Reduce the risk of dementia by:

developing, delivering and enforcing comprehensive local tobacco control strategies, in line with current policy

developing and implementing guidance and policies to reduce alcohol consumption across the population

improving environments where people live and work to encourage and enable everyone to build physical activity into their daily lives

supporting people to eat healthily

addressing loneliness and encouraging people to be socially active and mentally stimulated