Psicoterapia,
memoria,
epigenetica
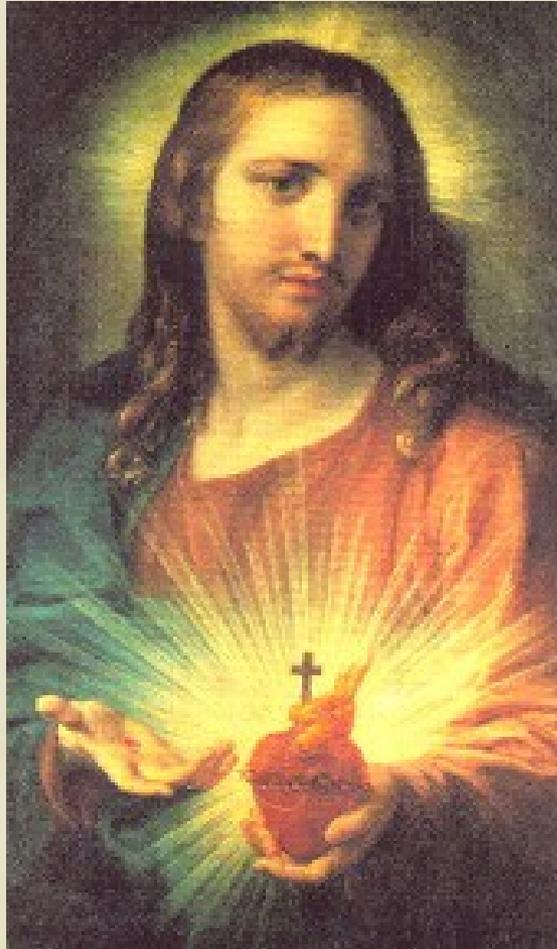
La psiche nella Pnei

Dott. Luciano Camerra
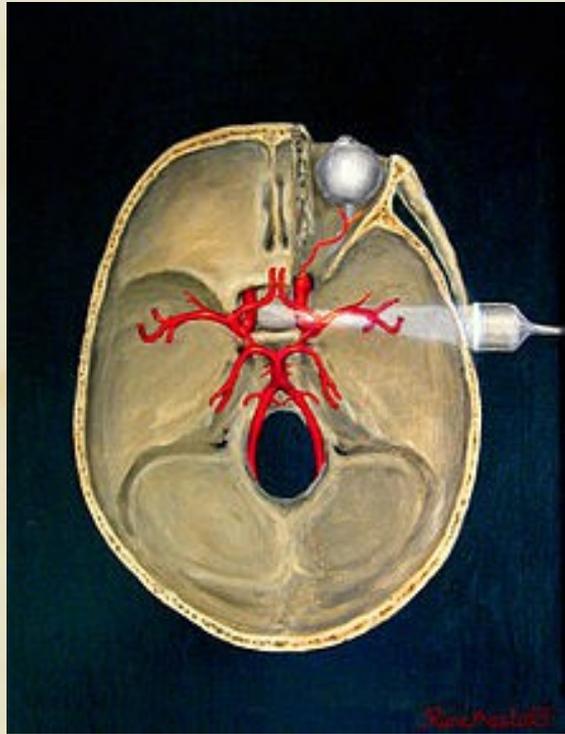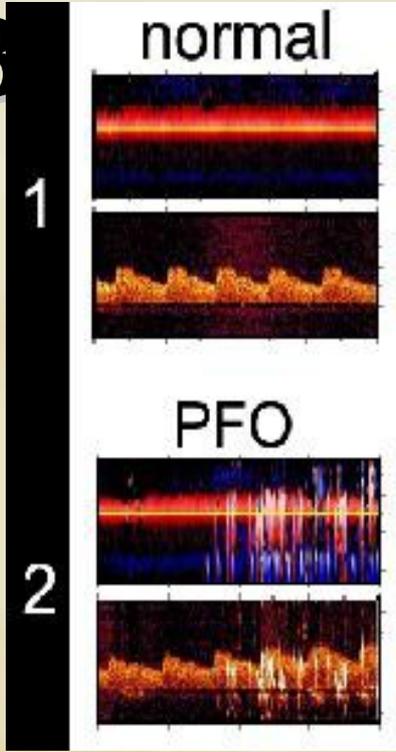**UNITRE Cesano**
AA 2014-15

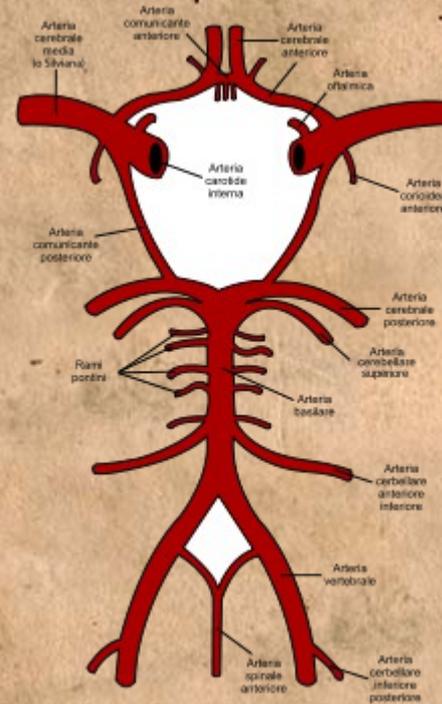# Dove sta l'ANIMA?

Il sacro cuore di Gesù

Il Doppler transcranico (Bubble test)

Il XVII secolo e Thomas Willis
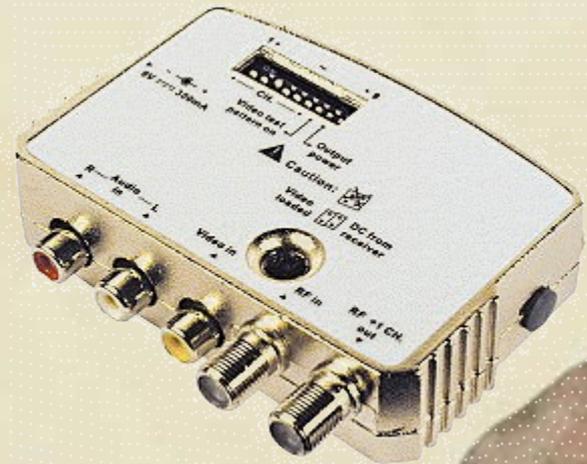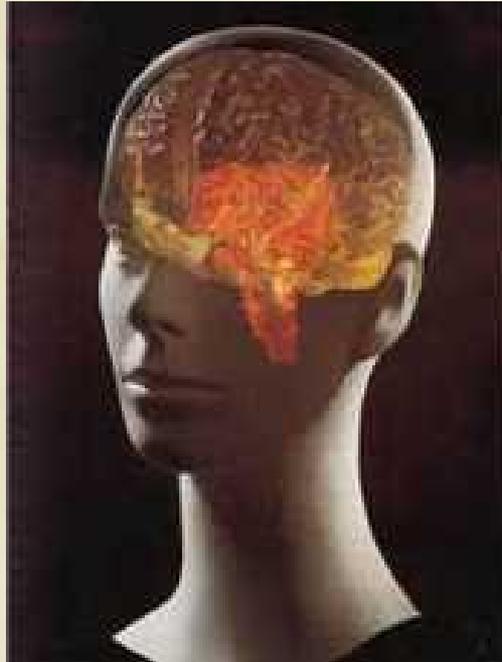
Il XVII secolo e Thomas Willis
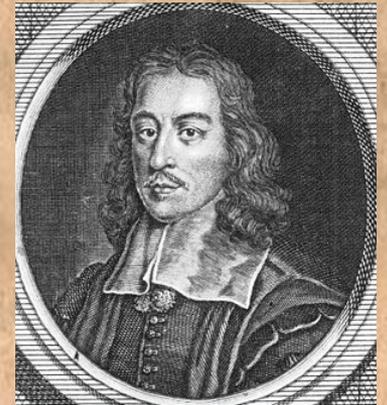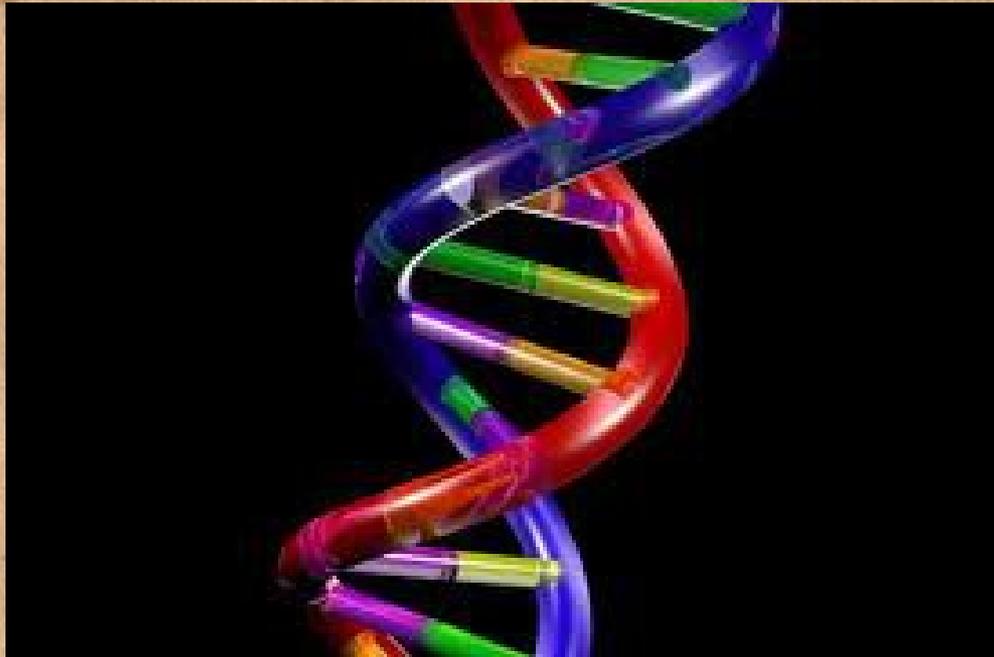
Il XVII secolo e Thomas Willis

Gli errori della Scienza

Il ruolo delle psicoterapie per la PNEI

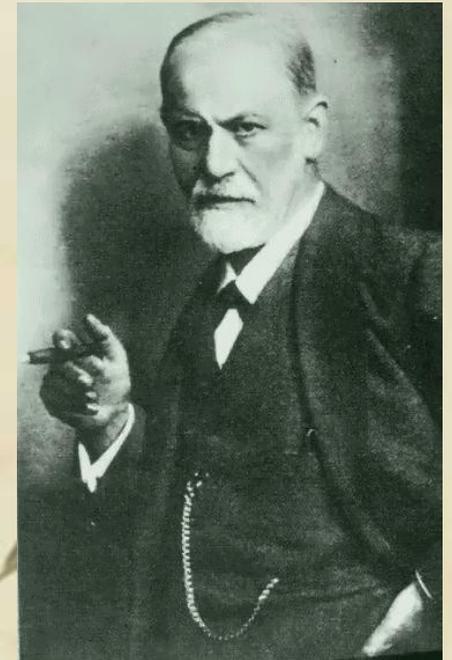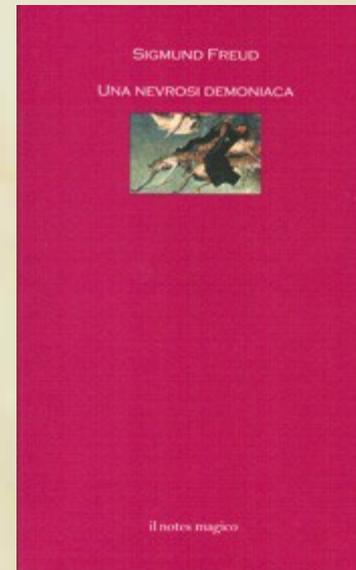# Eric Kandel

" [...] nella misura in cui la psicoterapia funziona, funziona allo stesso livello dei farmaci - quello dei circuiti neurali e delle sinapsi - [...]"

(Kandel, 2007, p. XXVI dell'introduzione

Nevrosi e difese inconsce

SIGMUND FREUD

UNA NEVROSI DEMONIACA

il notes magico

C'è dialogo tra neuroscienze e psicoterapia?
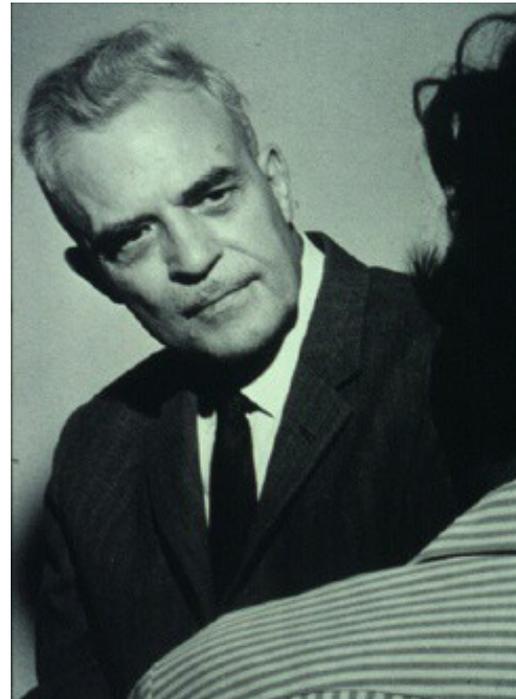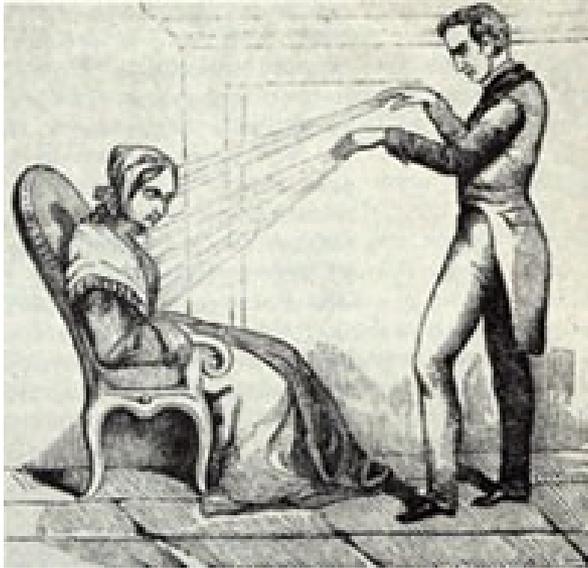
Neuroimaging

Da Penfield a Lecter

Wilder Penfield

Gli studi sulla neurobiologia degli effetti delle psicoterapie hanno creato i presupposti per la validazione della loro efficacia

L'esposizione a varie espressioni facciali emotive fa aumentare l'attività dell'amigdala di destra
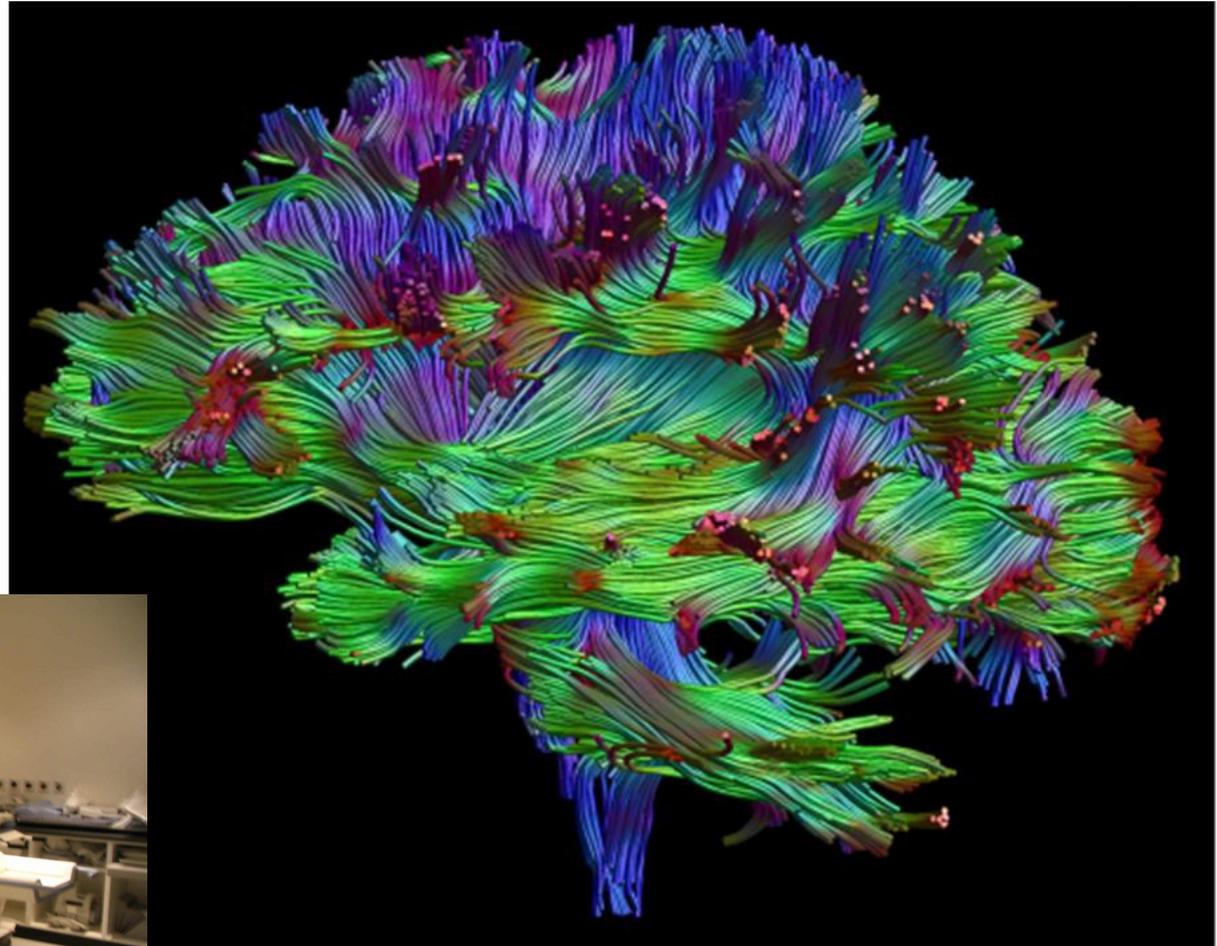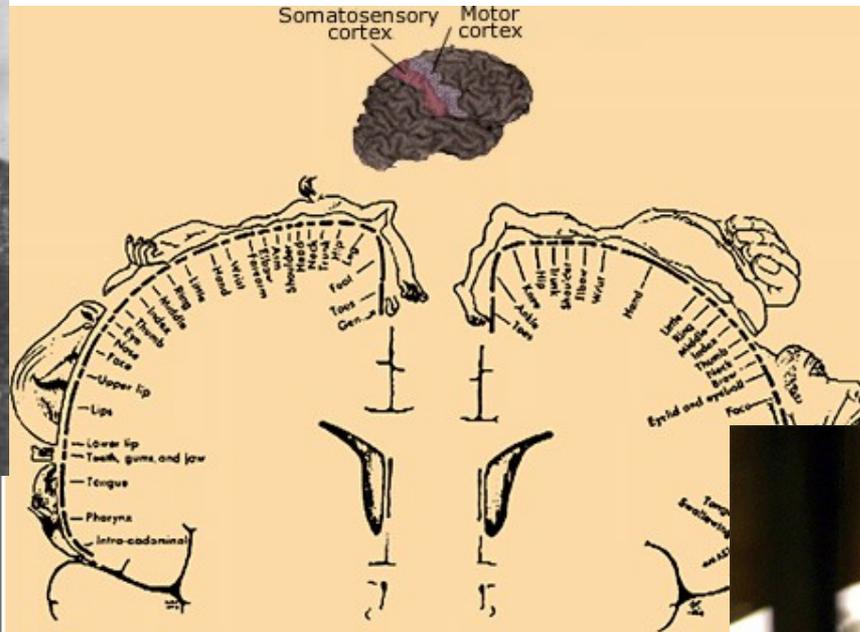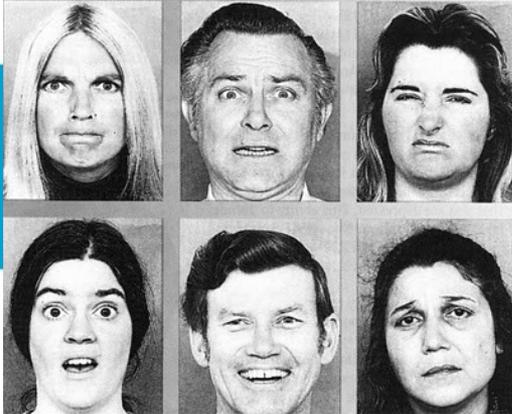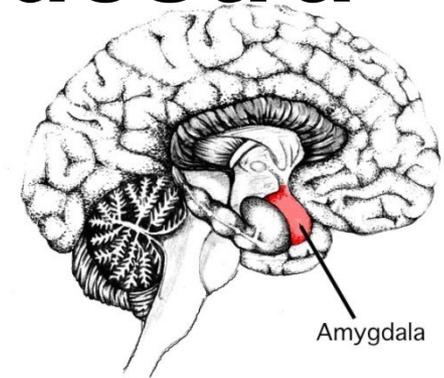
The impact of processing load on emotion

DGV Mitchell[1,2,*], **M Nakic**[1], **D Fridberg**[3], **N Kamel**[1], **DS Pine**[1], and **RJR Blair**[1]

1*Mood and Anxiety Disorders Program, National Institute of Mental Health, National Institutes of Health, Department of Health and Human Services, Bethesda, Maryland, USA*

2*Department of Psychiatry, University of Western Ontario, London, Ontario, Canada*

3*Department of Psychological and Brain Sciences Bloomington, Indiana University, Indiana, USA*

Abstract

La corteccia pre-frontale, invece, può rispondere con un aumento o una diminuzione dell'attività di alcune sue parti, sia all'esposizione alle diverse espressioni facciali (neutre, ansiogene ecc.) sia agli stimoli verbali, spesso anche in sinergia con l'amigdala

Neurophysiological mechanisms underlying the understanding and imitation of action

Giacomo Rizzolatti, Leonardo Fogassi and Vittorio Gallese
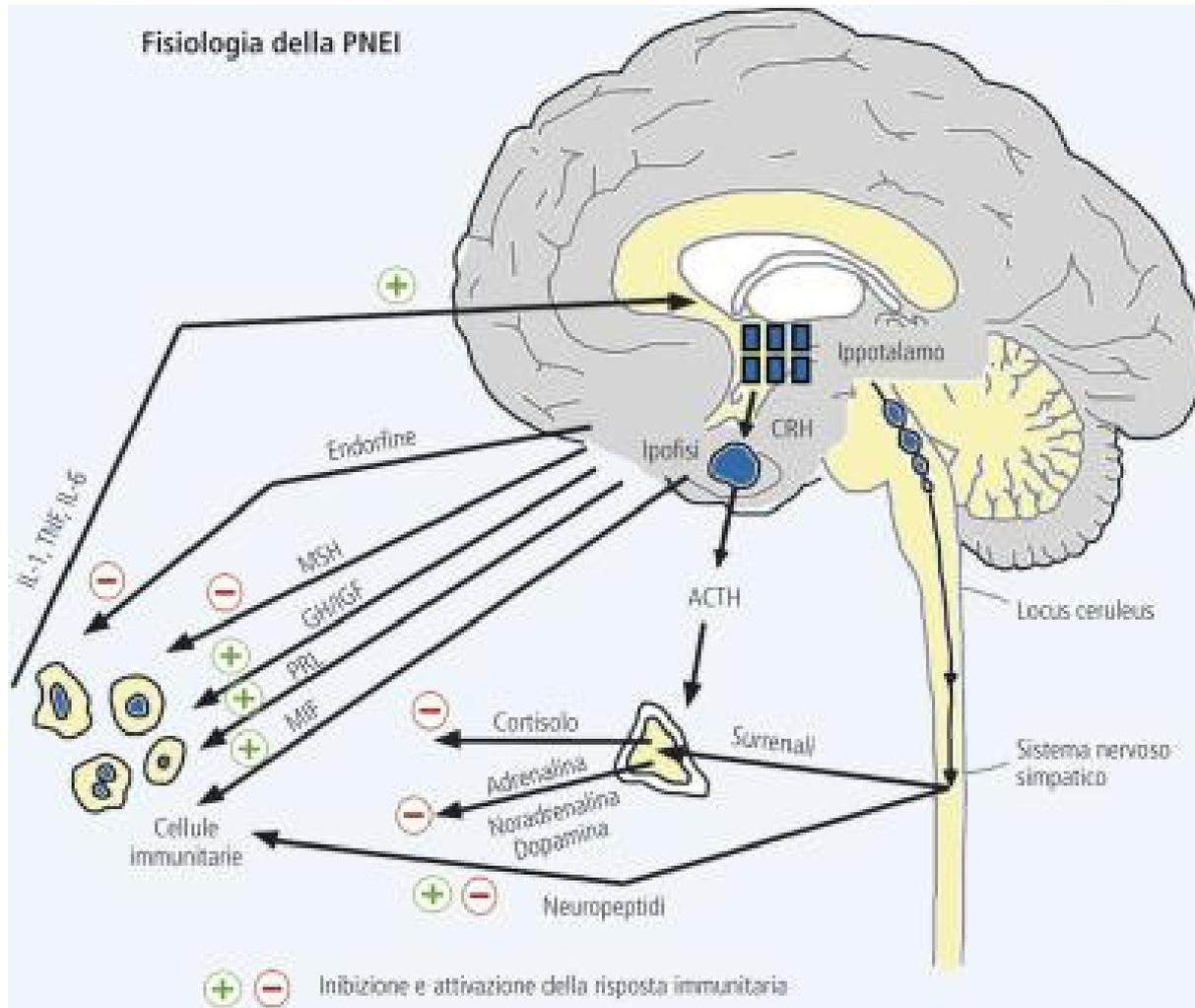
Neuroni specchio

La Psiche

La psiche emerge dalla complessa attività del cervello, che realizza un funzionamento interdipendente di emozioni, sentimenti e coscienza, influenzando il comportamento degli esseri umani

La PsicoNeuroEndocrinoImmunologia

Fisiologia della PNEI

- Ippotalamo
- CRH
- Ipofisi
- Endorfine
- IL-1, TNF, IL-6
- MSH
- GH/IGF
- PRL
- MIF
- ACTH
- Cortisolo
- Adrenalina
- Noradrenalina
- Dopamina
- Surrenali
- Locus ceruleus
- Sistema nervoso simpatico
- Cellule immunitarie
- Neuropeptidi

(+) (−) Inibizione e attivazione della risposta immunitaria
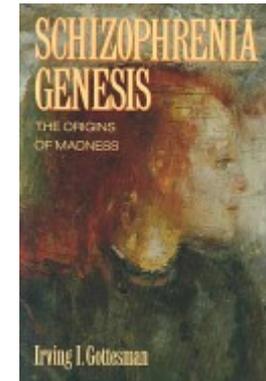
Behavior Genetics, Vol. 23, No. 6, 1993

Book Review

Schizophrenia Genesis: The Origins of Madness. By Irving I. Gottesman, with the assistance of Dorothea L. Wolfgram. W. H. Freeman, New York, 1991, xiii + 296 pp., $14.95, ISBN 0-7167-2147-3 (paperback).

with an erudite historical overview, it first describes the definition, and its vicissitudes, of the phenotype of schizophrenia itself. This is followed by perhaps the clearest description of the epidemiology of schizophrenia available. After a genetic primer, the evidence for ge-
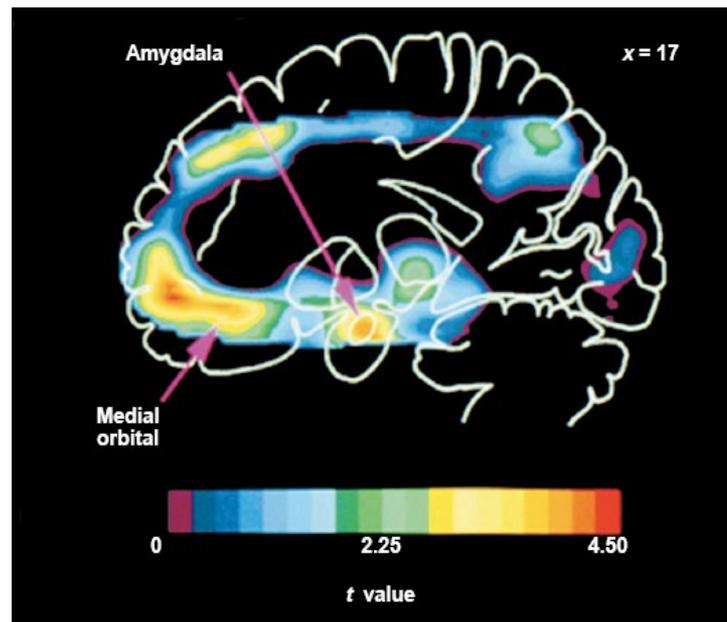
NEUROIMAGING

Linking Mind and Brain in the Study of Mental Illnesses: A Project for a Scientific Psychopathology

Nancy C. Andreasen

1586

Pattern di attivazione di aree cerebrali

P.E.T.

L'amigdala

Amygdala Response: s Group > I Group

First Cohort (N = 14)

Second Cohort (N = 14)

T value

Il caso Depressione

Il caso Depressione

Il caso Depressione

Perché epidemia…?

Prevalenza a 12 mesi: 3,5%
(qualsiasi Disturbo mentale 7.5%)

Fattori rischio:

✓ Età giovanile (2.0 OR)
✓ Genere (donne 2.0 OR)
✓ Disoccupazione (2.0 OR)
✓ Malattia cronica (2.4 OR)

Incidenza in aumento..?

Il caso Depressione

Ordinamento delle principali cause di disabilità nel 1990 e nelle proiezioni del 2020

Condizione	1990	2020
Infezioni basse vie respiratorie	1	1
Malattie dissenteriche	2	2
Malattie perinatali	3	3
Depressione maggiore	4	4
Cardiopatia ischemica	5	5
Malattie cerebrovascolari	6	6
Tubercolosi	7	7
Incidenti stradali	9	8
Malattie congenite	10	9
Broncopneumopatia cronica ostruttiva	12	10
		11
		13

Modificata da Michaud CM, et al. JAMA 2001
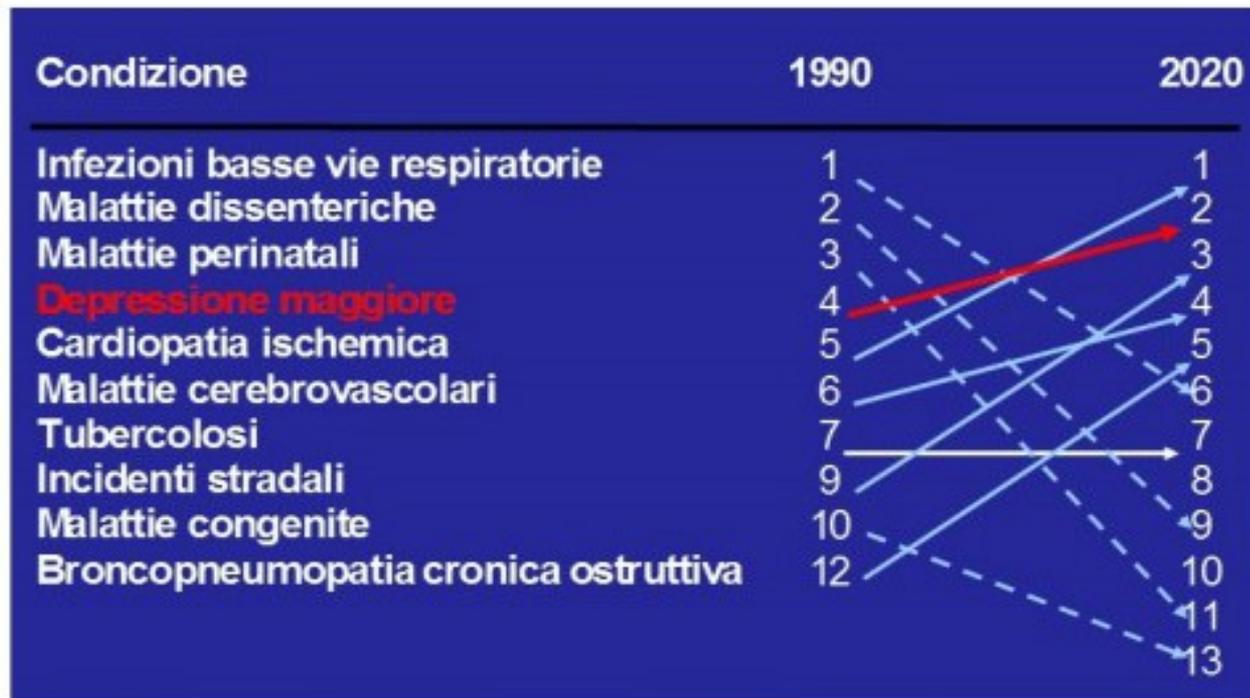
Il caso Depressione

- TRA I CASI DI MANIA O IPOMANIA:
  - 33,9% DI USO DI ANTIPSICOTICI
  - 36,6% DI USO DI ANTIDEPRESSIVI
  - 27,7% DI USO DI STABILIZZATORI
    - 11,7% VALPROATO 8,6% LITIO
- TRA I CASI DI DISTURBO BIPOLARE:
  - 42,7% DI USO DI ANTIPSICOTICI
  - 43,6% DI USO DI ANTIDEPRESSIVI
  - 58,8% DI USO DI STABILIZZATORI
    - 24,5% VALPROATO 17,8% LITIO

Il caso Depressione

Use of Antidepressants without Mood Stabilizers or Antipsychotics
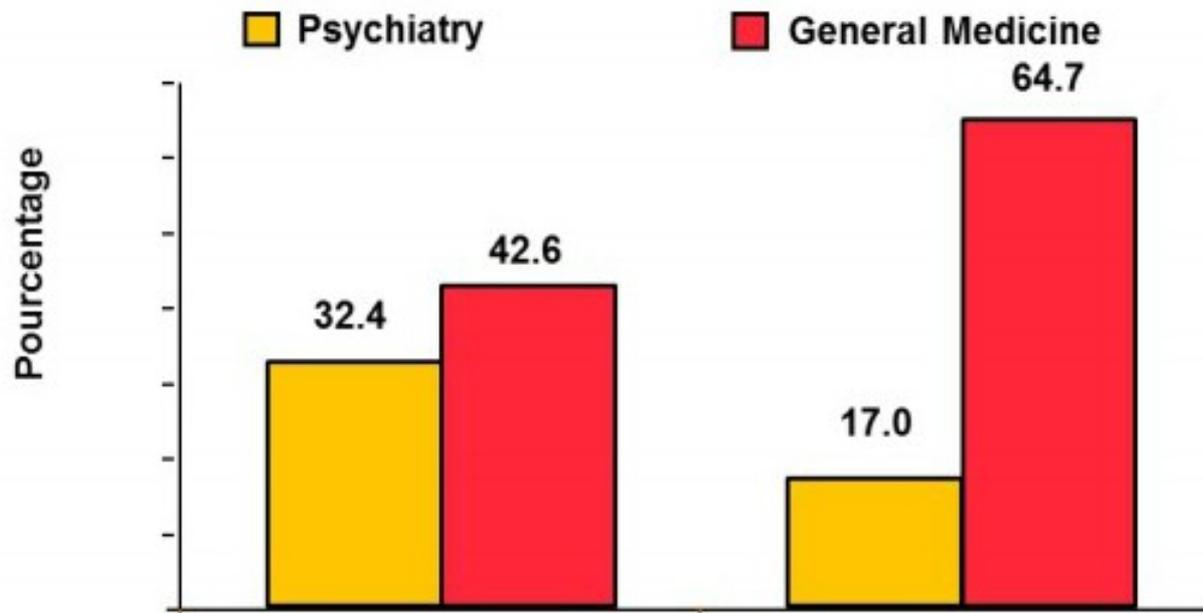
Calabrese JR, Hirschfeld RM J Clin Psychiatry 2003 Apr;64(4):425-432

Il caso Depressione

NON SOLO FARMACI
E
NON SOLO PSICOTERAPIE

- Negli episodi depressivi:

    - Light therapy

    - Privazione di sonno

    -

- Negli episodi maniacali:

    - Dark therapy
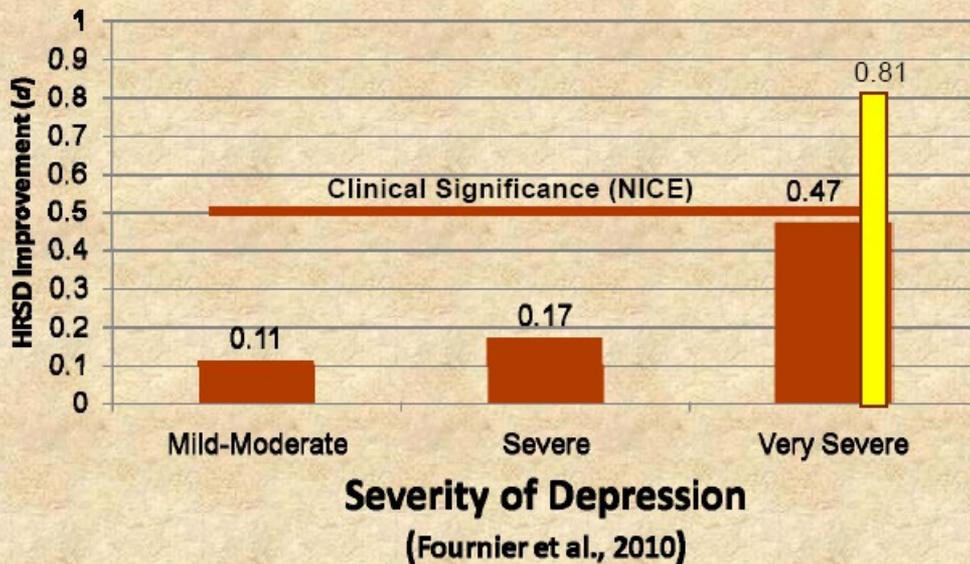
Superman?
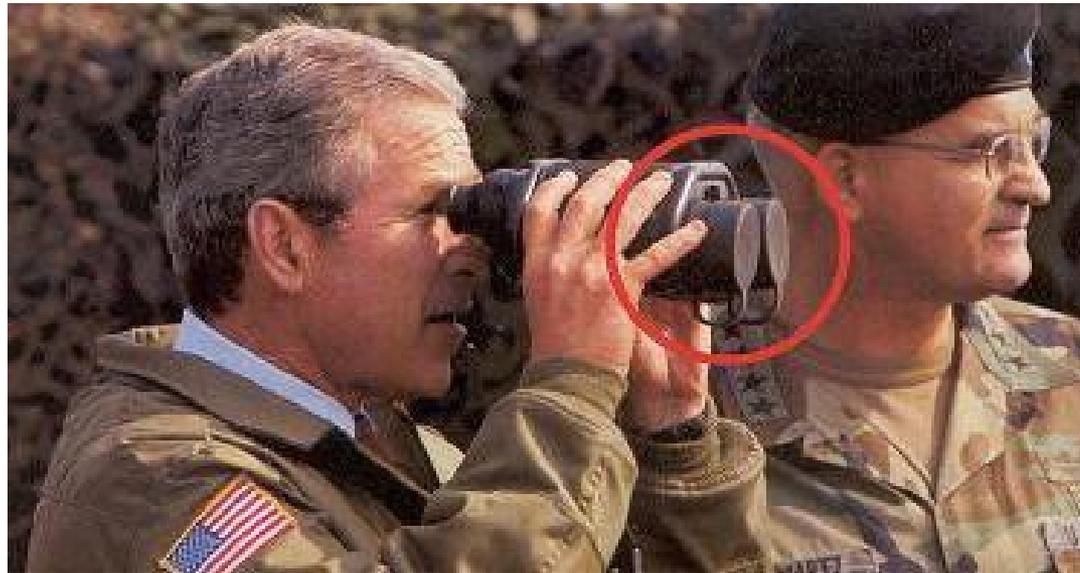
Evidenze epidemiologiche

Association of the Mediterranean Dietary Pattern With the Incidence of Depression

Almudena Sánchez-Villegas, BPharm, PhD; Miguel Delgado-Rodríguez, MD, PhD, MPH; Alvaro Alonso, MD, PhD; Javier Schlatter, MD, PhD; Francisca Lahortiga, BA, PhD; Lluis Serra Majem, MD, PhD; Miguel Angel Martínez-González, MD, PhD, MPH

Context: Adherence to the Mediterranean dietary pattern (MDP) is thought to reduce inflammatory, vascular, and metabolic processes that may be involved in the risk of clinical depression.

Objective: To assess the association between adherence to the MDP and the incidence of clinical depression.

Design: Prospective study that uses a validated 136-item food frequency questionnaire to assess adherence to the MDP. The MDP score positively weighted the consumption of vegetables, fruit and nuts, cereal, legumes, and fish; the monounsaturated- to saturated-fatty-acids ratio; and moderate alcohol consumption, whereas meat or meat products and whole-fat dairy were negatively weighted.

Setting: A dynamic cohort of university graduates (Seguimiento Universidad de Navarra/University of Navarra Follow-up [SUN] Project).

Participants: A total of 10 094 initially healthy Spanish participants from the SUN Project participated in the study. Recruitment began on December 21, 1999, and is ongoing.

Main Outcome Measure: Participants were classified as having incident depression if they were free of depression and antidepressant medication at baseline and reported a physician-made diagnosis of clinical depression and/or antidepressant medication use during follow-up.

Results: After a median follow-up of 4.4 years, 480 new cases of depression were identified. The multiple adjusted hazard ratios (95% confidence intervals) of depression for the 4 upper successive categories of adherence to the MDP (taking the category of lowest adherence as reference) were 0.74 (0.57-0.98), 0.66 (0.50-0.86), 0.49 (0.36-0.67), and 0.58 (0.44-0.77) (P for trend <.001). Inverse dose-response relationships were found for fruit and nuts, the monounsaturated- to saturated-fatty-acids ratio, and legumes.

Conclusions: Our results suggest a potential protective role of the MDP with regard to the prevention of depressive disorders; additional longitudinal studies and trials are needed to confirm these findings.

A Prospective Study of Diet Quality and Mental Health in Adolescents

Felice N. Jacka[1,2*], Peter J. Kremer[3], Michael Berk[1,2,4,5], Andrea M. de Silva-Sanigorski[6], Marjorie Moodie[7], Eva R. Leslie[3], Julie A. Pasco[8], Boyd A. Swinburn[9]

1 Barwon Psychiatric Research Unit, Deakin University, Geelong, Australia, 2 Department of Psychiatry, University of Melbourne, Melbourne, Australia, 3 School of Psychology, Deakin University, Geelong, Australia, 4 Orygen Youth Health, University of Melbourne, Melbourne, Australia, 5 Mental Health Research Institute, Melbourne, Australia, 6 Jack Brockhoff Child Health and Wellbeing Program, Melbourne School of Population Health, University of Melbourne, Melbourne, Australia, 7 Deakin Health Economics, Deakin University, Melbourne, Australia, 8 Barwon Epidemiology and Biostatistics Unit, Deakin University, Geelong, Australia, 9 WHO Collaborating Centre for Obesity Prevention, Deakin University, Geelong, Australia

Abstract

Objectives: A number of cross-sectional and prospective studies have now been published demonstrating inverse relationships between diet quality and the common mental disorders in adults. However, there are no existing prospective studies of this association in adolescents, the onset period of most disorders, limiting inferences regarding possible causal relationships.

Methods: In this study, 3040 Australian adolescents, aged 11–18 years at baseline, were measured in 2005–6 and 2007–8. Information on diet and mental health was collected by self-report and anthropometric data by trained researchers.

Results: There were cross-sectional, dose response relationships identified between measures of both healthy (positive) and unhealthy (inverse) diets and scores on the emotional subscale of the Pediatric Quality of Life Inventory (PedsQL), where higher scores mean better mental health, before and after adjustments for age, gender, socio-economic status, dieting behaviours, body mass index and physical activity. Higher healthy diet scores at baseline also predicted higher PedsQL scores at follow-up, while higher unhealthy diet scores at baseline predicted lower PedsQL scores at follow-up. Improvements in diet quality were mirrored by improvements in mental health over the follow-up period, while deteriorating diet quality was associated with poorer psychological functioning. Finally, results did not support the reverse causality hypothesis.

Conclusion: This study highlights the importance of diet in adolescence and its potential role in modifying mental health over the life course. Given that the majority of common mental health problems first manifest in adolescence, intervention studies are now required to test the effectiveness of preventing the common mental disorders through dietary modification.

Evidenze epidemiologiche

Dietary pattern and depressive symptoms in middle age

Tasnime N. Akbaraly, Eric J. Brunner, Jane E. Ferrie, Michael G. Marmot, Mika Kivimaki and Archana Singh-Manoux

Background
Studies of diet and depression have focused primarily on individual nutrients.

Aims
To examine the association between dietary patterns and depression using an overall diet approach.

Method
Analyses were carried on data from 3486 participants (26.2% women, mean age 55.6 years) from the Whitehall II prospective cohort, in which two dietary patterns were identified: 'whole food' (heavily loaded by vegetables, fruits and fish) and 'processed food' (heavily loaded by sweetened desserts, fried food, processed meat, refined grains and high-fat dairy products). Self-reported depression was assessed 5 years later using the Center for Epidemiologic Studies – Depression (CES–D) scale.

Results
After adjusting for potential confounders, participants in the highest tertile of the whole food pattern had lower odds of CES–D depression (OR = 0.74, 95% CI 0.56–0.99) than those in the lowest tertile. In contrast, high consumption of processed food was associated with an increased odds of CES–D depression (OR = 1.58, 95% CI 1.11–2.23).

Conclusions
In middle-aged participants, a processed food dietary pattern is a risk factor for CES–D depression 5 years later, whereas a whole food pattern is protective.

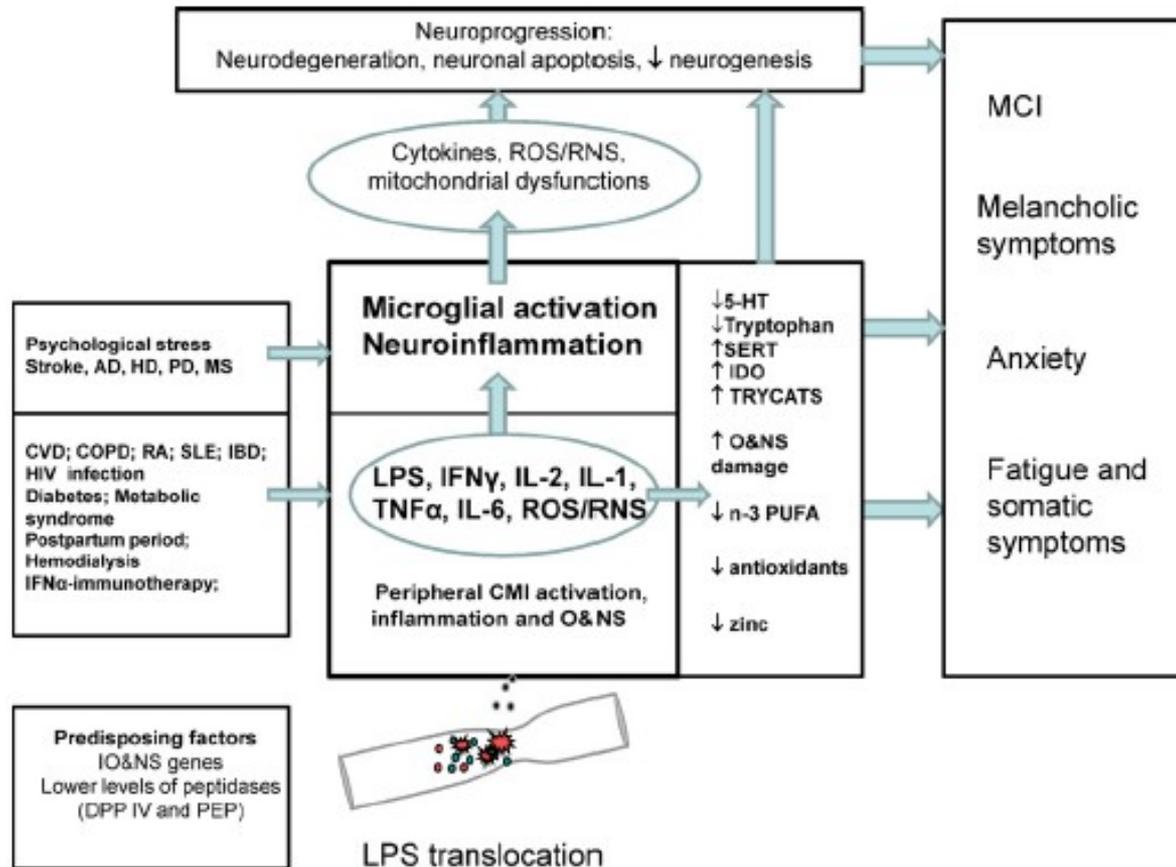**Declaration of interest**
None.

Evidenze epidemiologiche

➢ L'aderenza alla dieta mediterranea, intesa come il largo consumo di vegetali, semi oleosi, cereali interali, legumi e pesce a discapito di carni rosse, burro, insaccati e latticini, permette di ridurre il rischio di incorrere in depressione

➢ L'evidenza, dimostrata in popolazioni differenti e in studi longitudinali, attribuisce all'alimentazione il ruolo di marcatore predittivo di malattia

➢ L'effetto protettivo è attuabile in tutte le fasce d'età (dall'adolescenza alla vita adulta e oltre) e in entrambi i sessi
(Jacka FN et. al., Psychosom Med 2011)

➢ Sono stati inoltre riscontrati effetti positivi, in termini di prevenzione, sia sul disturbo d'ansia che sul disturbo bipolare
(Jacka FN et. al., Am J Psychiatry 2010 and J Affect Disord 2011)
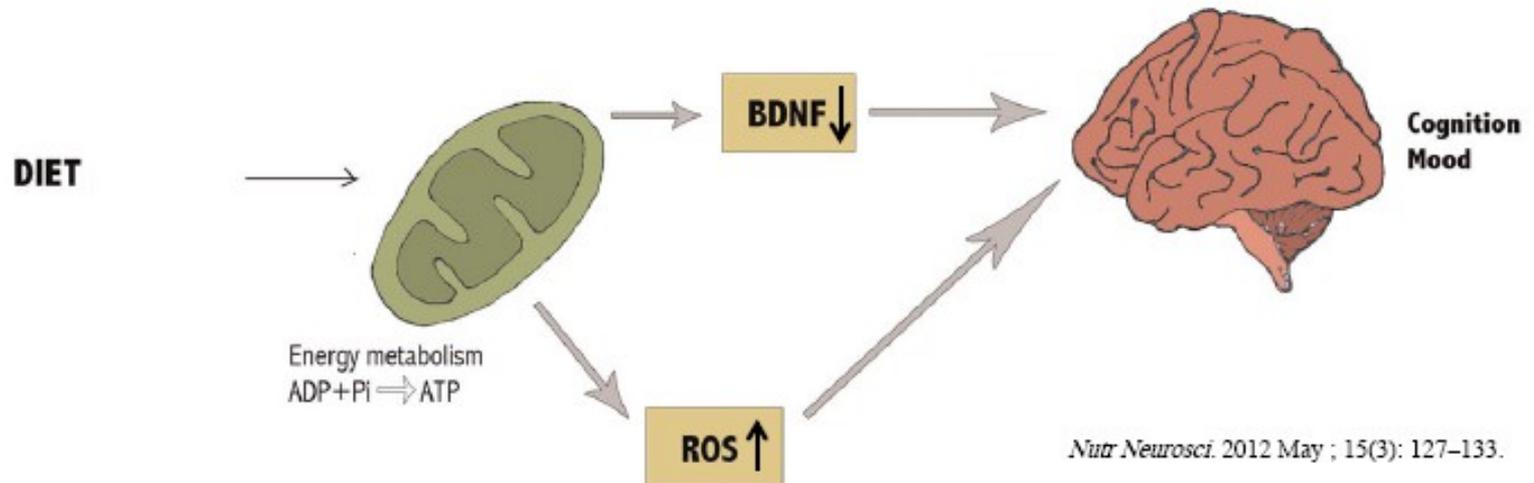
Modello biologico di riferimento

> Ipotesi infiammatoria del disturbo depressivo

>> Effetto alimento specifico

> Segnali neuro-immuno-ormonali gastro-enterici

Ipotesi infiammatoria

Ipotesi infiammatoria

DIET → Energy metabolism ADP+Pi ⟹ ATP → BDNF↓ → Cognition Mood

ROS↑

Nutr Neurosci. 2012 May ; 15(3): 127–133.

➢ Promuove la sintesi di citochine ad azione pro infiammatoria tramite l'attivazione del fattore di trascrizione nucleare NF-KB

➢ Danneggia le attività metaboliche/energetiche cellulari