

Psicoterapia,  
memoria,  
epigenetica

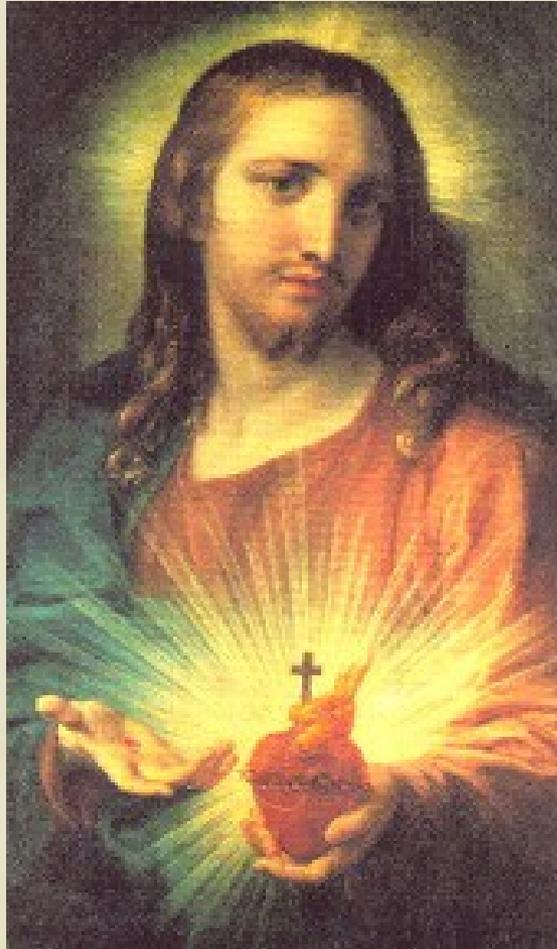
# La psiche nella Pnei

Dott. Luciano Camerra  
UNITRE Cesano  
AA 2014-15

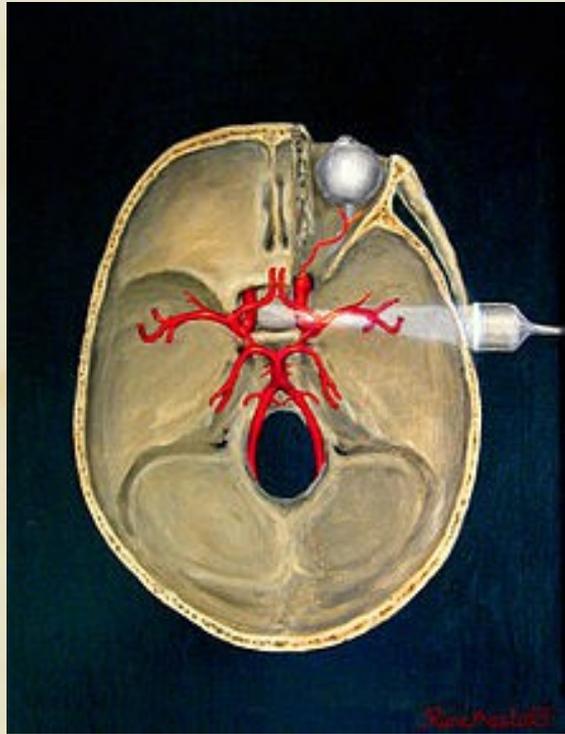
# Dove sta l'ANIMA?



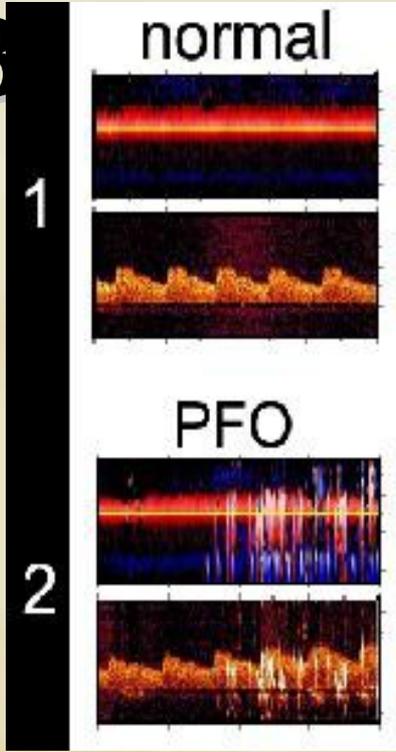
# Il sacro cuore di Gesù



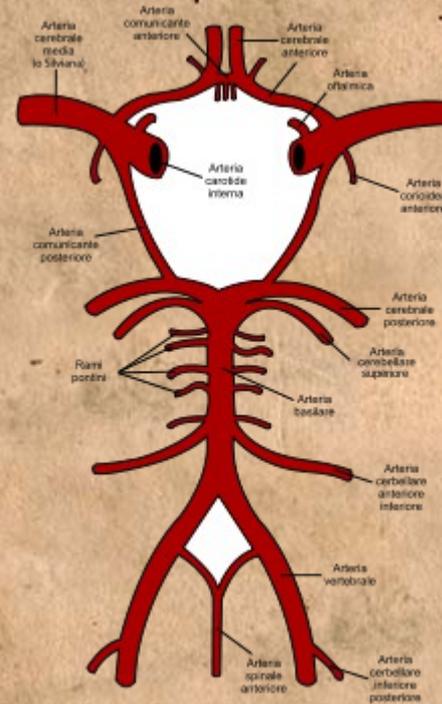
# Il Doppler transcranico



(B...est)



# Il XVII secolo e Thomas Willis



# Il XVII secolo e Thomas Willis



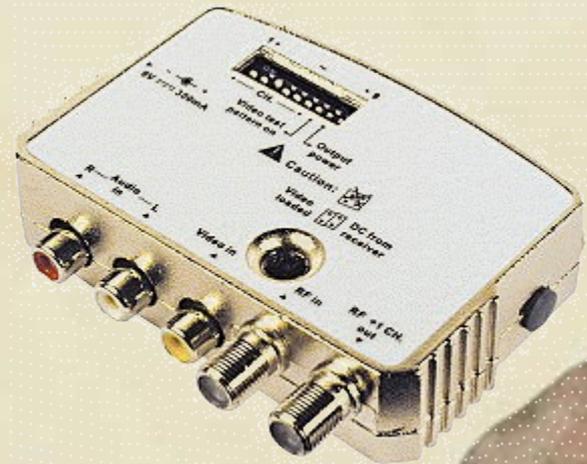
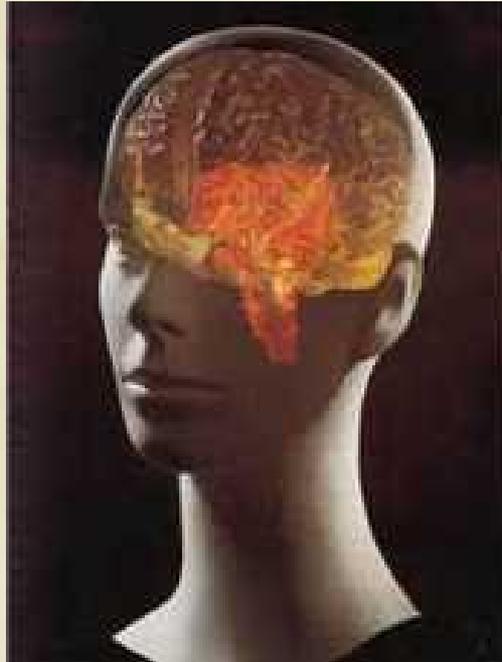
# Il XVII secolo e Thomas Willis



# Gli errori della Scienza



# Il ruolo delle psicoterapie per la PNEI



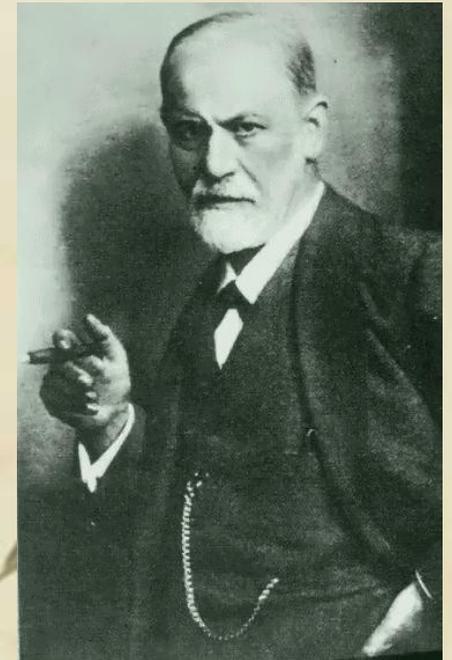
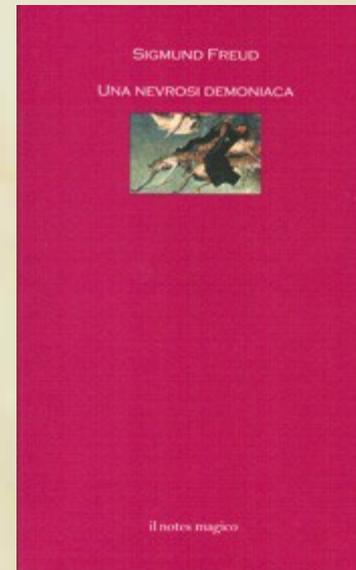


# Eric Kandel

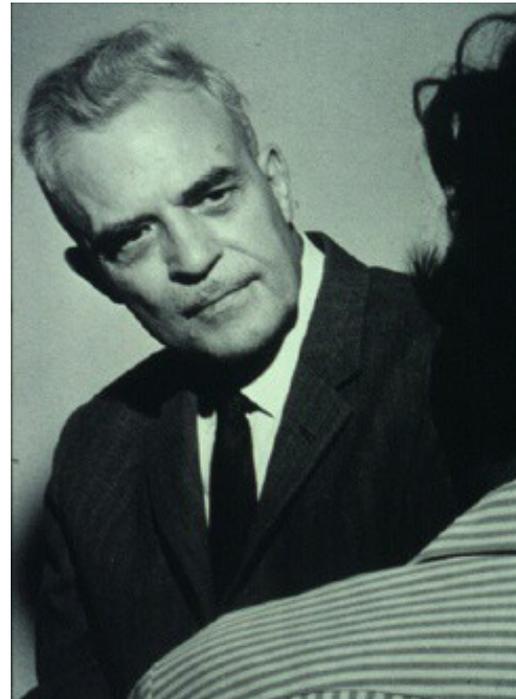
" [...] nella misura in cui la psicoterapia funziona, funziona allo stesso livello dei farmaci - quello dei circuiti neurali e delle sinapsi - [...]"

(Kandel, 2007, p. XXVI dell'introduzione)

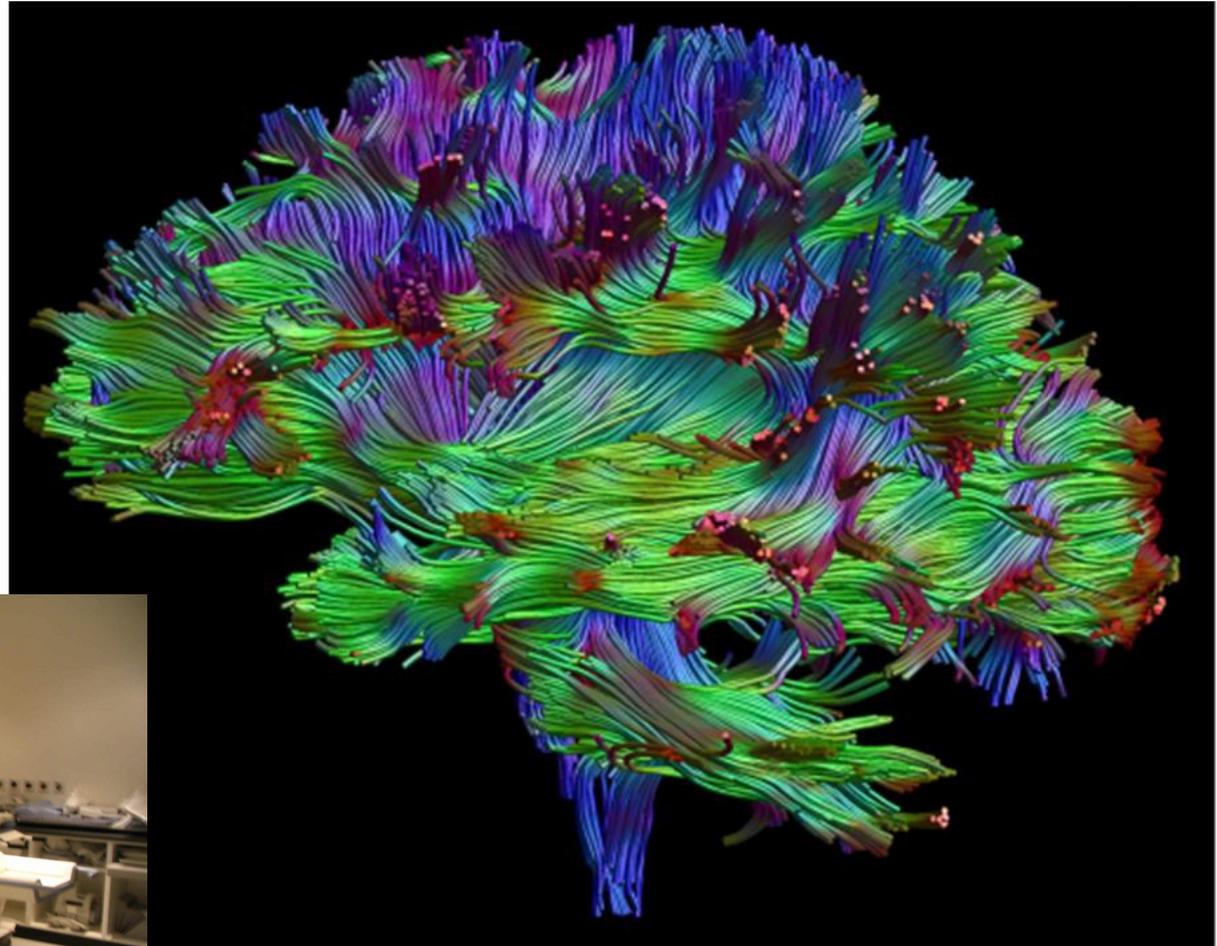
# Nevrosi e difese inconsce



# C'è dialogo tra neuroscienze e psicoterapia?



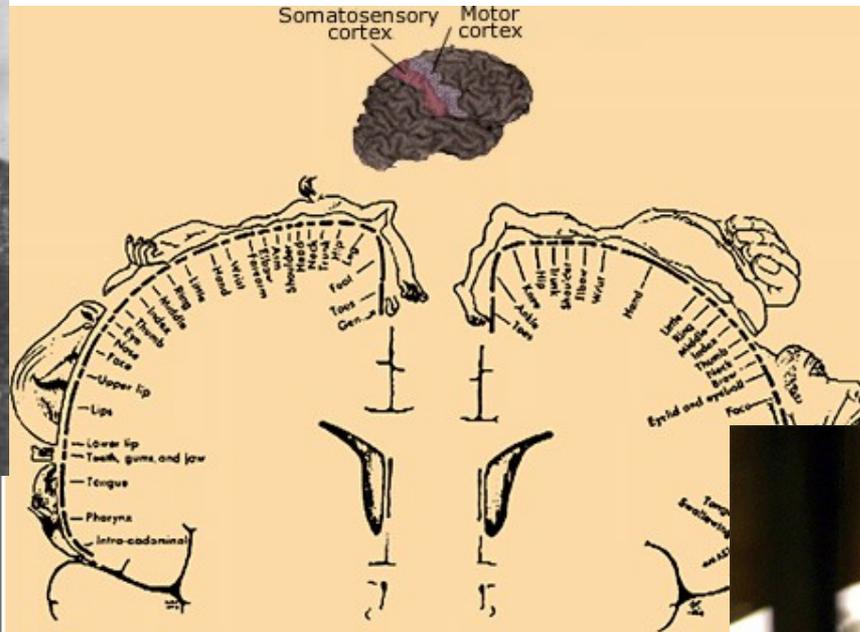
# Neuroimaging



# Da Penfield a Lecter

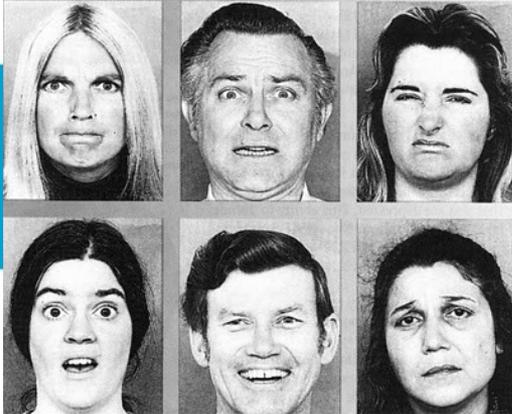


**Wilder Penfield**





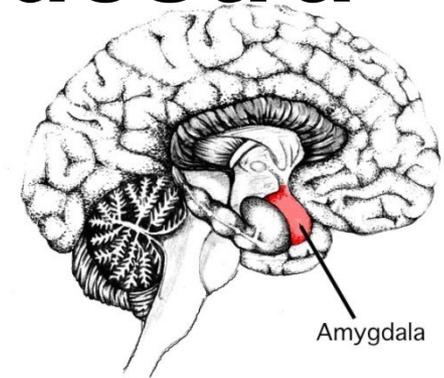
**Gli studi sulla neurobiologia degli effetti delle psicoterapie hanno creato i presupposti per la validazione della loro efficacia**



# Paul Ekman



**L'esposizione a varie  
espressioni facciali emotive fa  
aumentare l'attività  
dell'amigdala di destra**





Published in final edited form as:

*Neuroimage*. 2007 February 1; 34(3): 1299–1309.

## The impact of processing load on emotion

DGV Mitchell<sup>1,2,\*</sup>, M Nakic<sup>1</sup>, D Fridberg<sup>3</sup>, N Kamel<sup>1</sup>, DS Pine<sup>1</sup>, and RJR Blair<sup>1</sup>

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

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

*3Department 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

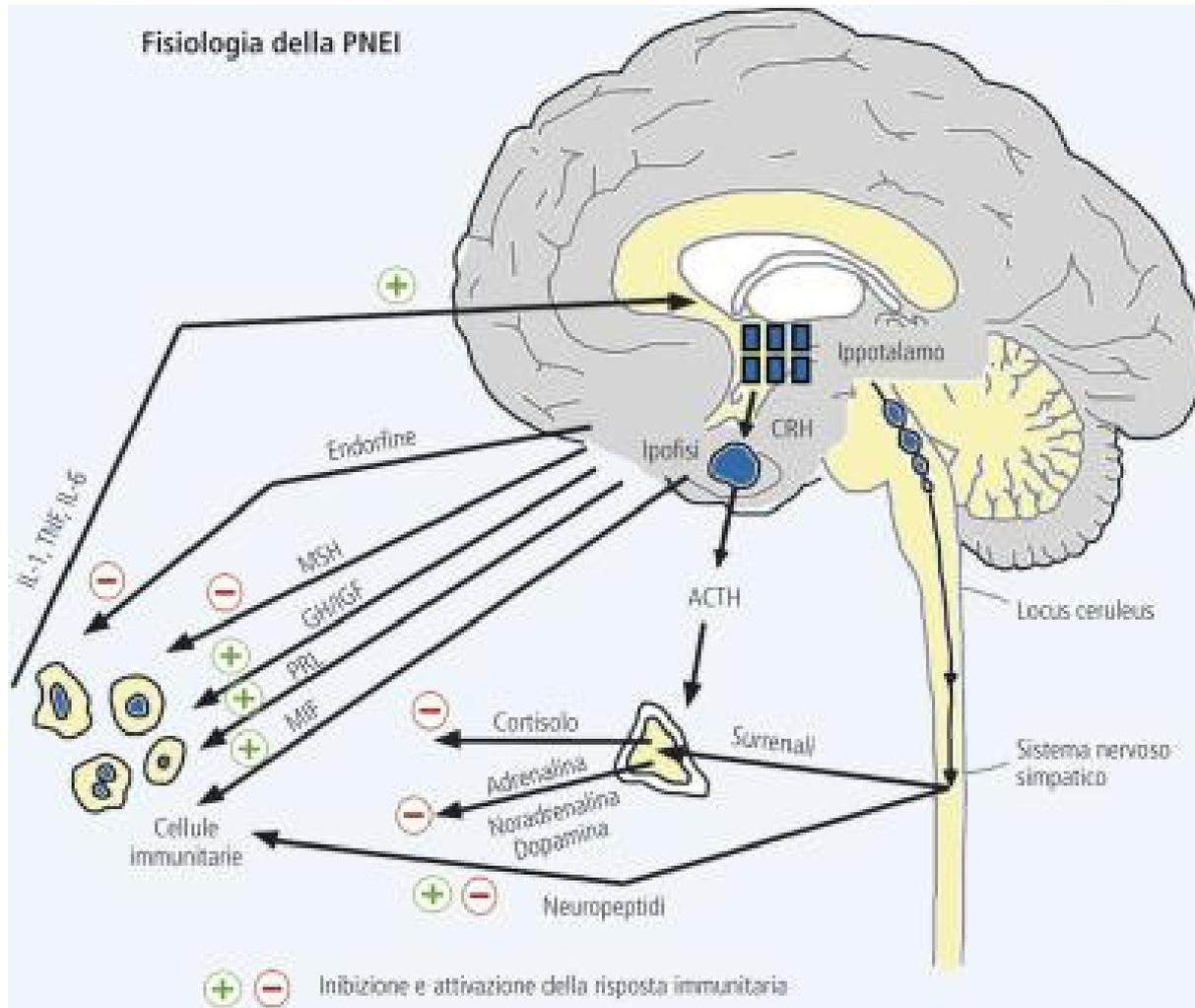


# La Psiche



**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

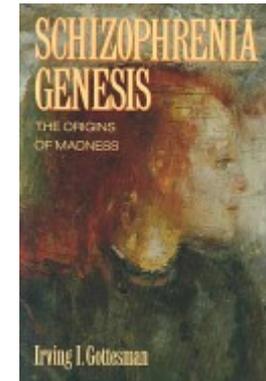


# Studi su gemelli omozigoti



*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

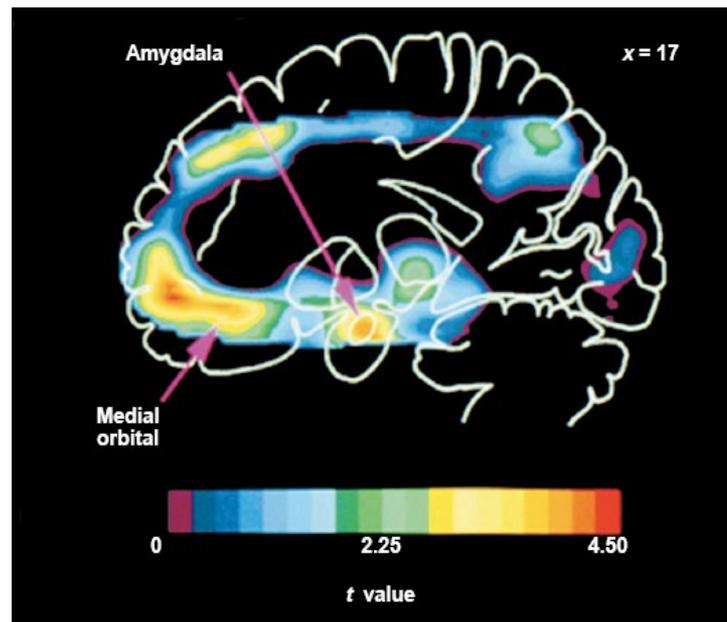


## Linking Mind and Brain in the Study of Mental Illnesses: A Project for a Scientific Psychopathology

Nancy C. Andreasen

1586

SCIENCE • VOL. 275 • 14 MARCH 1997 • <http://www.sciencemag.org>



Pattern di attivazione di aree cerebrali

# P.E.T.



# L'amigdala



Science

AAAS

## Serotonin Transporter Genetic Variation and the Response of the Human Amygdala

Ahmad R. Hariri, *et al.*

*Science* **297**, 400 (2002);

DOI: 10.1126/science.1071829

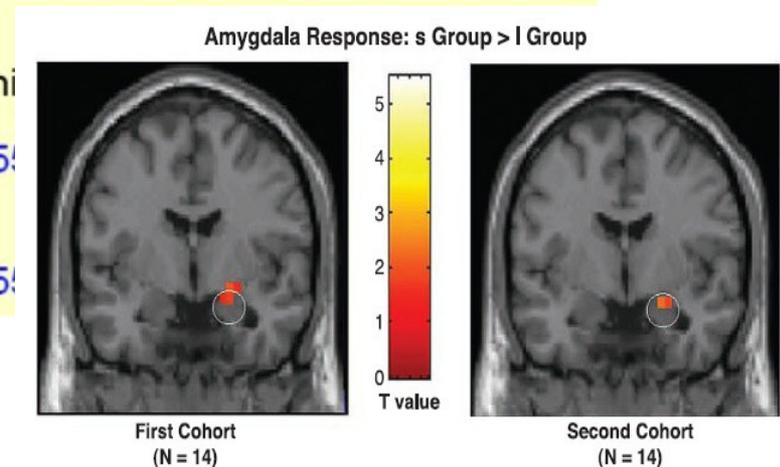
*The following resources related to this article are available online at [www.sciencemag.org](http://www.sciencemag.org) (this information is current as of April 7, 2007):*

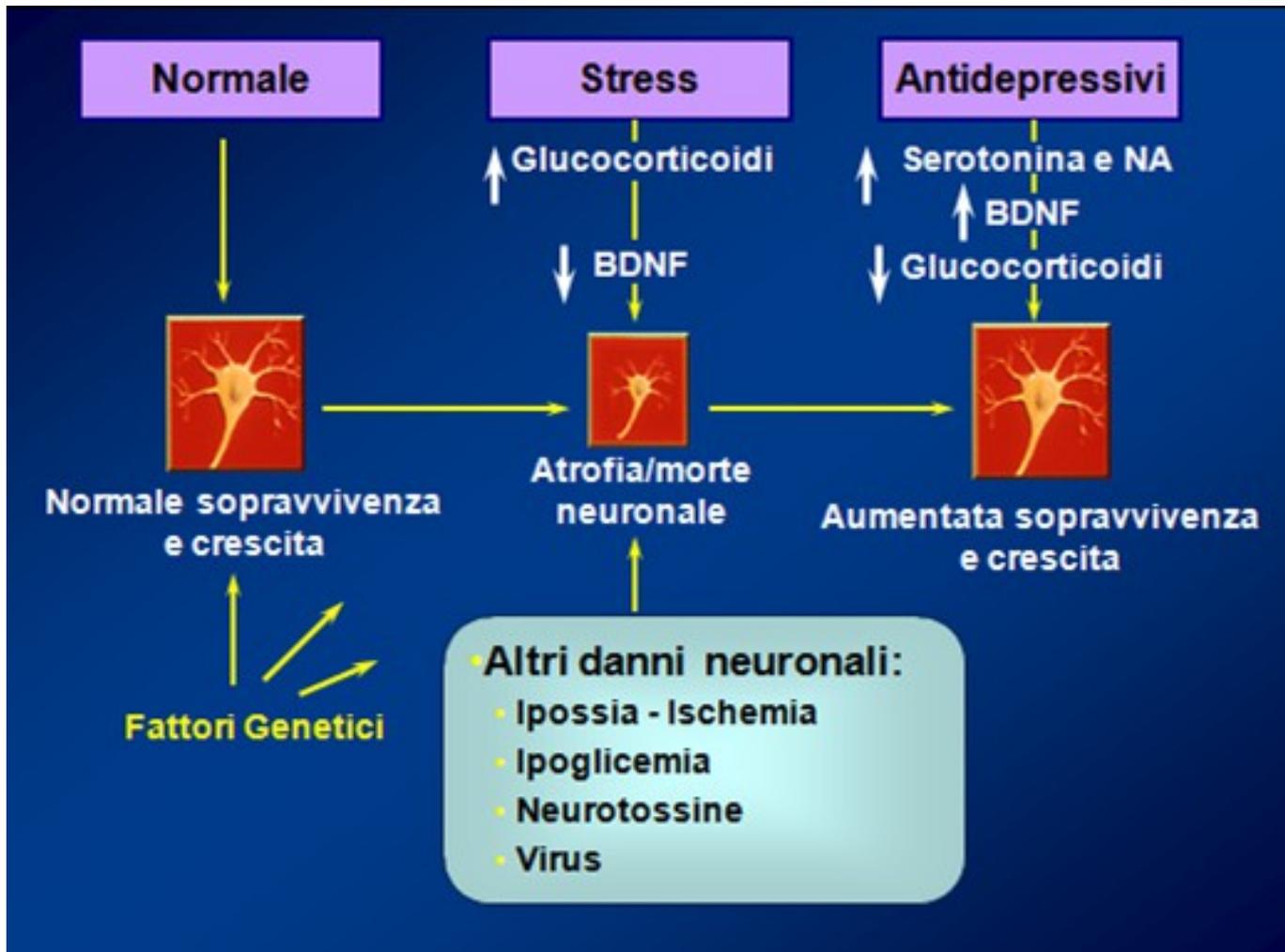
Updated information and services, including high-resolution figures and a full-text version of this article at:

<http://www.sciencemag.org/cgi/content/full/297/5400/400>

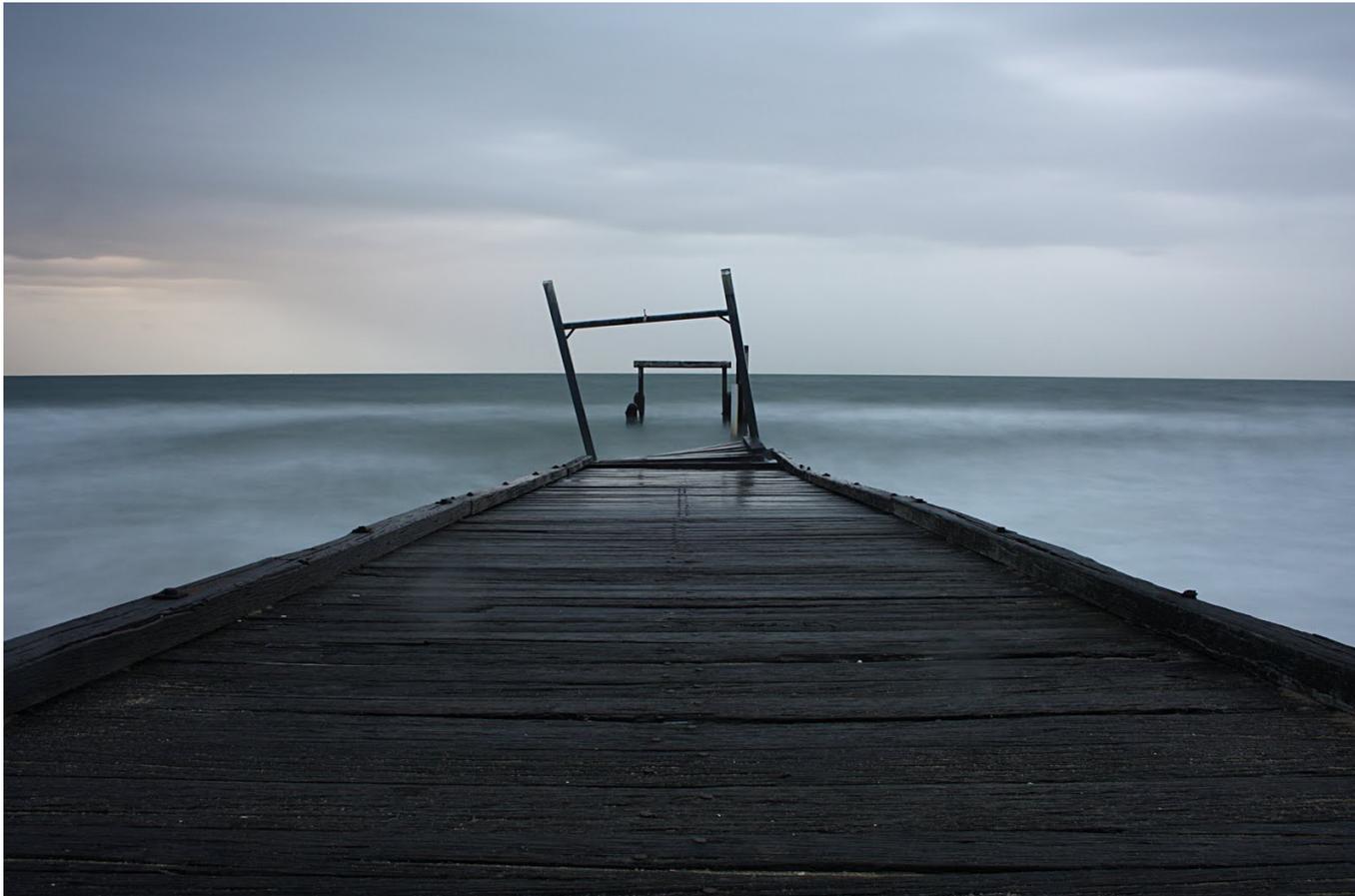
Supporting Online Material can be found at:

<http://www.sciencemag.org/cgi/content/full/297/5400/400>





# Il caso Depressione



# Il caso Depressione



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**Mental health**

WHQ > Programmes and projects > Mental health > Disorders management

printable version

## Depression

### What is depression?

Depression is a common mental disorder that presents with depressed mood, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, low energy, and poor concentration. These problems can become chronic or recurrent and lead to substantial impairments in an individual's ability to take care of his or her everyday responsibilities. At its worst, depression can lead to suicide, a tragic fatality associated with the loss of about 850 000 lives every year.

Depression is the global burden place of the rank cause of DALYs in

Depression occurs

### Facts

- Depression
- Deoression

Home > Health

## WHO: Depression to become silent epidemic

Wed, 22 Sep 2009 16:50:48 GMT

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WHO officials have predicted that the number of individuals affected with depressive syndromes will be higher than any other health problem within 20 years.

According to a report released by WHO in first Global Mental Health Summit in Athens, Greece, some 450 million individuals already suffer from mental disorders or disabilities, most of whom live in developing countries.

WHO figures revealed that the condition is more prevalent than other diseases such as HIV-Aids and cancer, raising global concerns.

The condition is reported to be more common in poor and developing countries. In rich countries, similarly, the silent epidemic affects poor individuals more frequently compared to affluent people in the same countries.

# Il caso Depressione



Sci Psychiatry Psychiatr Epidemiol (2006) 41:1-8  
DOI 10.1007/s00127-006-0001-4

**ORIGINAL PAPER**

Giuseppe de Girolamo · Gabriella Polidori · Pierluigi Morosini · Vilma Scarpino · Valeria Rada · Giulio Serro · Fausto Mazzi · Jordi Alonso · Gennaro Vignati · Giovanni Vignati · Francesca Falaschina · Alberto Rossi · Richard Warner

**Prevalence of common mental disorders in Italy**  
Results from the European Study of the Epidemiology of Mental Disorders (ESEMeD)

Accepted: 27 April 2006 / Published online: 14 August 2006

**Abstract** Objective To present 1-month, 12-month and lifetime prevalence estimates of mood, anxiety and alcohol disorders in Italy and the socio-demographic correlates and comorbidity patterns of these estimated disorders. Method A representative random sample of non-institutionalized citizens of Italy aged 18 or older ( $N = 4,712$ ) was interviewed between January 2004 and July 2005, with a weighted response rate of 71.3%. DSM-IV disorders were assessed by lay interviewers using Version 3.0 of the Composite International Diagnostic Interview (CIDI). Results A total of 21% of respondents reported a lifetime history of any mood disorder, 10.3% any anxiety disorder and 1.3% any alcohol disorder. About 10% reported having an anxiety disorder in the past 12 months compared to 3.3% for any mood disorder and 0.2% for any alcohol disorder. Major depression and specific phobia were the most common mental disorders. Women were twice as likely as men to report a mood disorder and four times as likely as men to report an anxiety disorder, while men were twice as likely as women to report an alcohol disorder. High comorbidity of mood and anxiety disorders was observed. Prevalence estimates were generally lower than in parallel surveys carried out in other Western European countries. Conclusion A high proportion of adults in Italy have a history of mood, anxiety or alcohol disorders. The lower than expected prevalence estimate of alcohol use disorder may be due to under-reporting or to low social harm from alcohol consumption.

**Key words** community survey · prevalence · epidemiology

**Dr. G. de Girolamo (✉)**  
Dept. of Mental Health,  
Sanata OSA di Bologna,  
Viale Populo, 1  
40132 Bologna, Italy  
Tel.: +39-051/2644304  
Fax: +39-051/2644296  
E-Mail: gdegirolamo@unibo.it

**C. Polidori**  
Dept. of Environment and Primary Prevention,  
National Institute of Health,  
Rome, Italy

**P. Morosini**  
National Center of Epidemiology,  
Surveillance and Health Protection,  
National Institute of Health,  
Rome, Italy

**V. Scarpino · V. Rada**  
Bios Institute,  
Milan, Italy

**G. Serro**  
Medical School,  
University of Bari,  
Taranto, Italy

**F. Mazzi**  
Psychiatric Clinic,  
University of Studies and Reggio Emilia,  
Modena, Italy

**J. Alonso · G. Vignati**  
Health Services Research Unit,  
Institut Municipal d'Investigació Mèdica (IMIM),  
Barcelona, Spain

**G. Vignati · S. Falaschina**  
Medical Director,  
Clericali/Chiar,  
Verona, Italy

**A. Rossi**  
Dept. of Medicine and Public Health,  
Institute of Psychiatry and Clinical Psychology,  
University of Vienna,  
Vienna, Italy

**R. Warner**  
University of Colorado  
Health Sciences Center,  
Denver CO20, USA

**G. Vignati**  
Galileo Research,  
Boulder CO20, USA

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Perché epidemia...?

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

Fattori rischio:

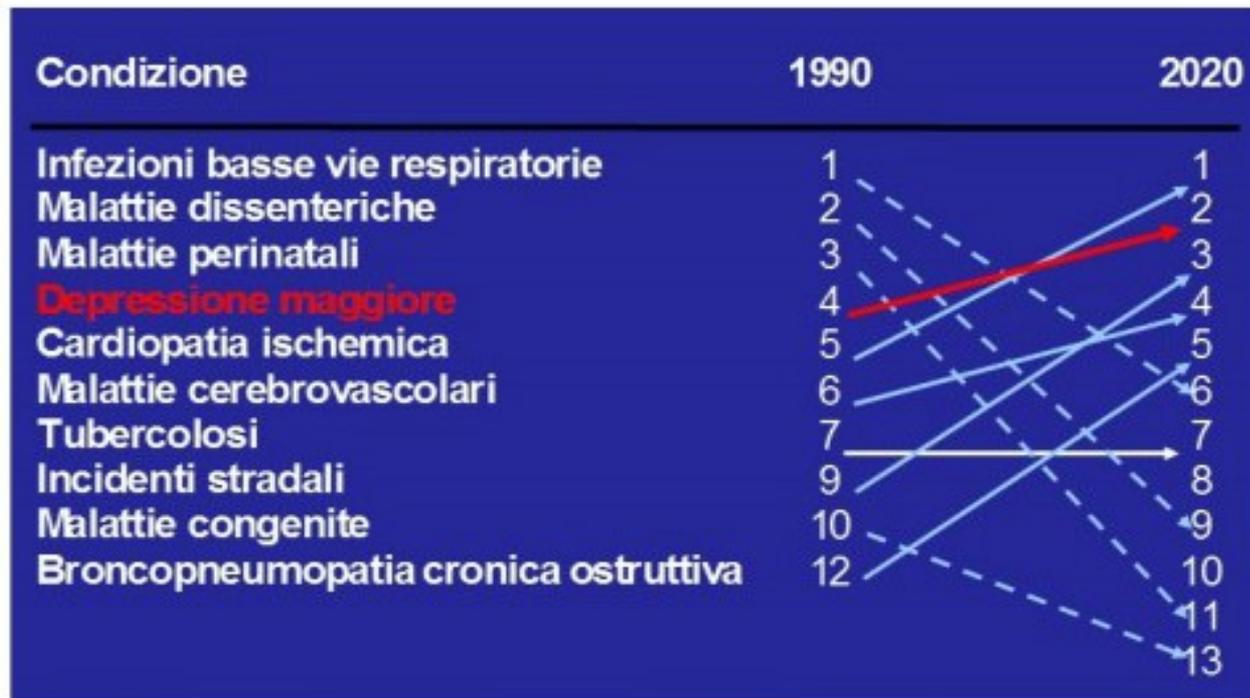
- ✓ Età giovanile (2.0 OR)
- ✓ Genere (donne 2.0 OR)
- ✓ Disoccupazione (2.0 OR)
- ✓ Malattia cronica (2.4 OR)

Incidenza in aumento..?

# Il caso Depressione



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



# Il caso Depressione

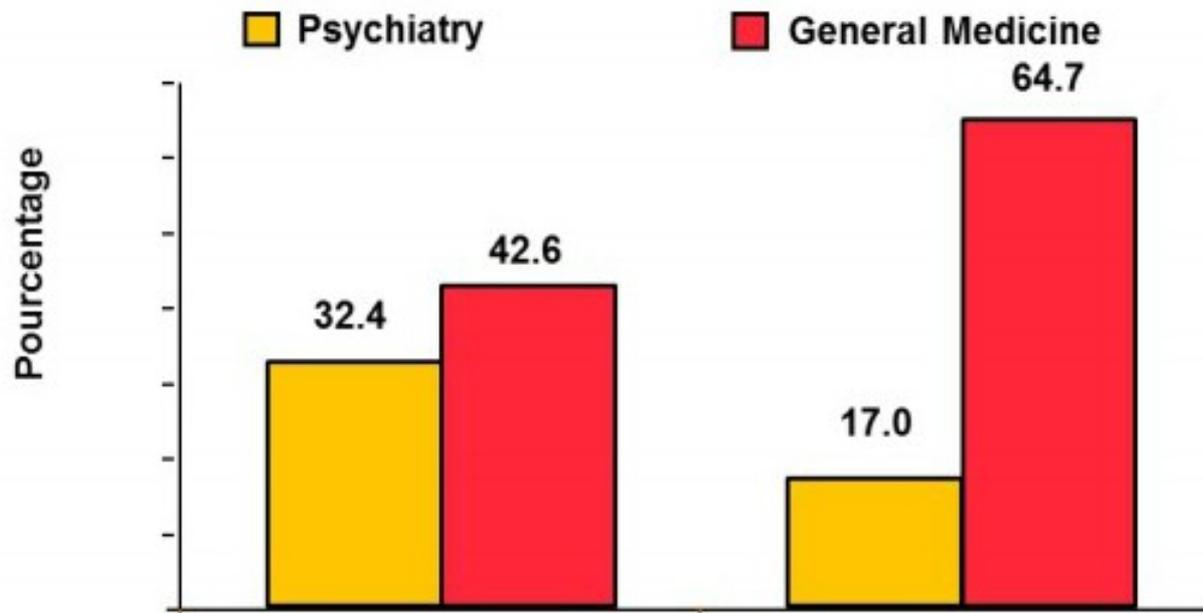


- TRA I CASI DI MANIA O IPOMANIA:
  - 33,9% DI USO DI ANTIPSICOTICI
  - 36,6% DI USO DI ANTIDEPRESSIVI
  - 27,7% DI USO DI STABILIZZATORI
    - 11,7% VALPROATO 8,6% LITIO
- TRA I CASI DI DISTURBO BIPOLARE:
  - 42,7% DI USO DI ANTIPSICOTICI
  - 43,6% DI USO DI ANTIDEPRESSIVI
  - 58,8% DI USO DI STABILIZZATORI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



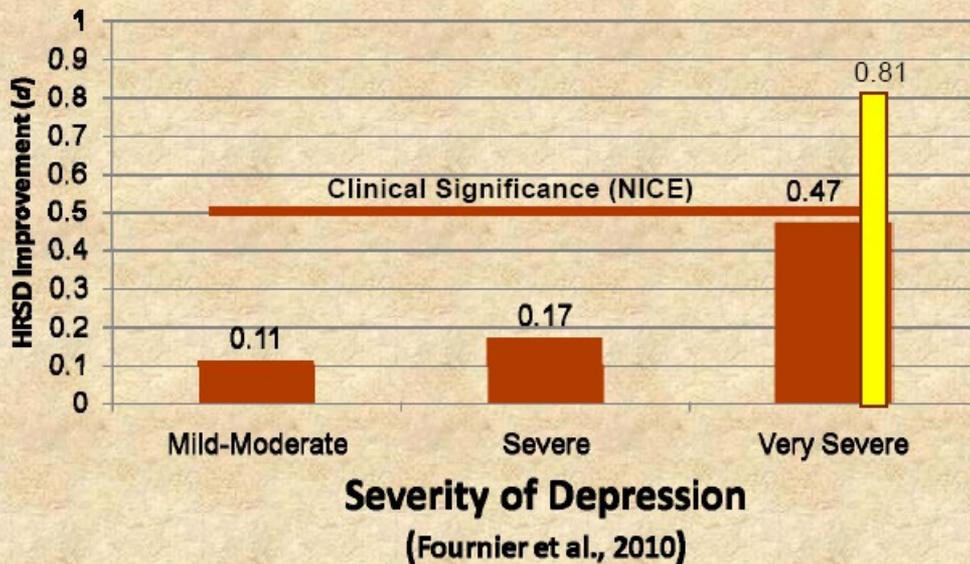
## *NON SOLO FARMACI E NON SOLO PSICOTERAPIE*

- Negli episodi depressivi:
  - Light therapy
  - Privazione di sonno
  -
- Negli episodi maniacali:
  - Dark therapy

# Il caso Depressione



## Drug-Placebo Differences



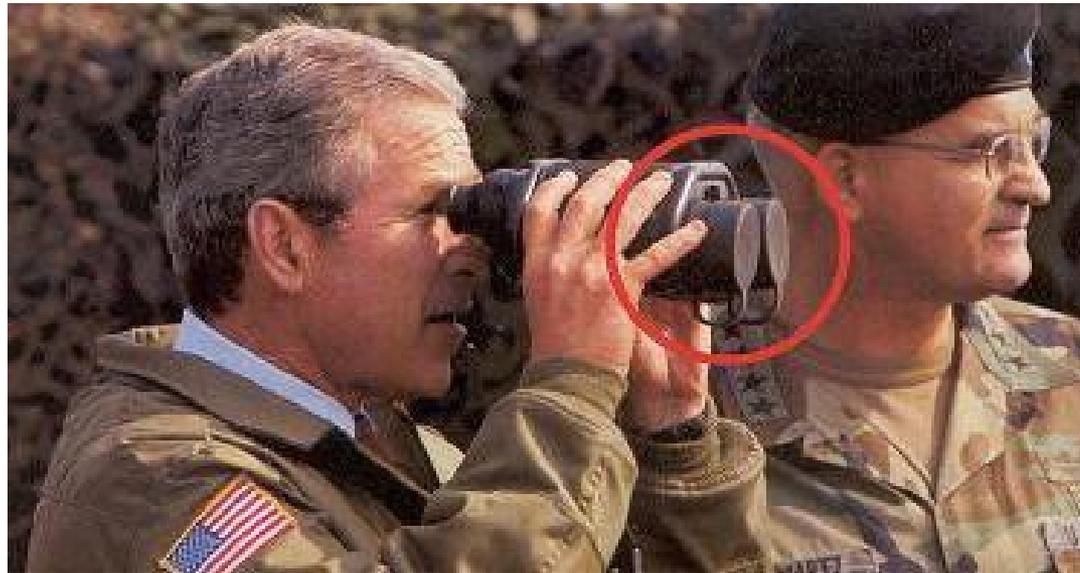
## THE EMPEROR'S NEW DRUGS

Exploding the  
Antidepressant  
Myth



IRVING KIRSCH, Ph.D.

# Superman?



# Evidenze epidemiologiche

## Association of the Mediterranean Dietary Pattern With the Incidence of Depression

*The Seguimiento Universidad de Navarra/University of Navarra Follow-up (SUN) Cohort*

Almudena Sánchez-Villegas, BPharm, PhD; Miguel Delgado-Rodríguez, MD, PhD, MPH; Avaro Alonso, MD, PhD; Javier Schlatter, MD, PhD; Francisca Lahortiga, BA, PhD; Lluís 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.

*Arch Gen Psychiatry.* 2009;66(10):1090-1098

# Evidenze epidemiologiche

## A Prospective Study of Diet Quality and Mental Health in Adolescents

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

1 Bawon 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 Bawon 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 behaviour, 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.

BJPsych

The British Journal of Psychiatry (2009)  
195, 408–413. doi: 10.1192/bjp.bp.108.058925

# Evidenze epidemiologiche

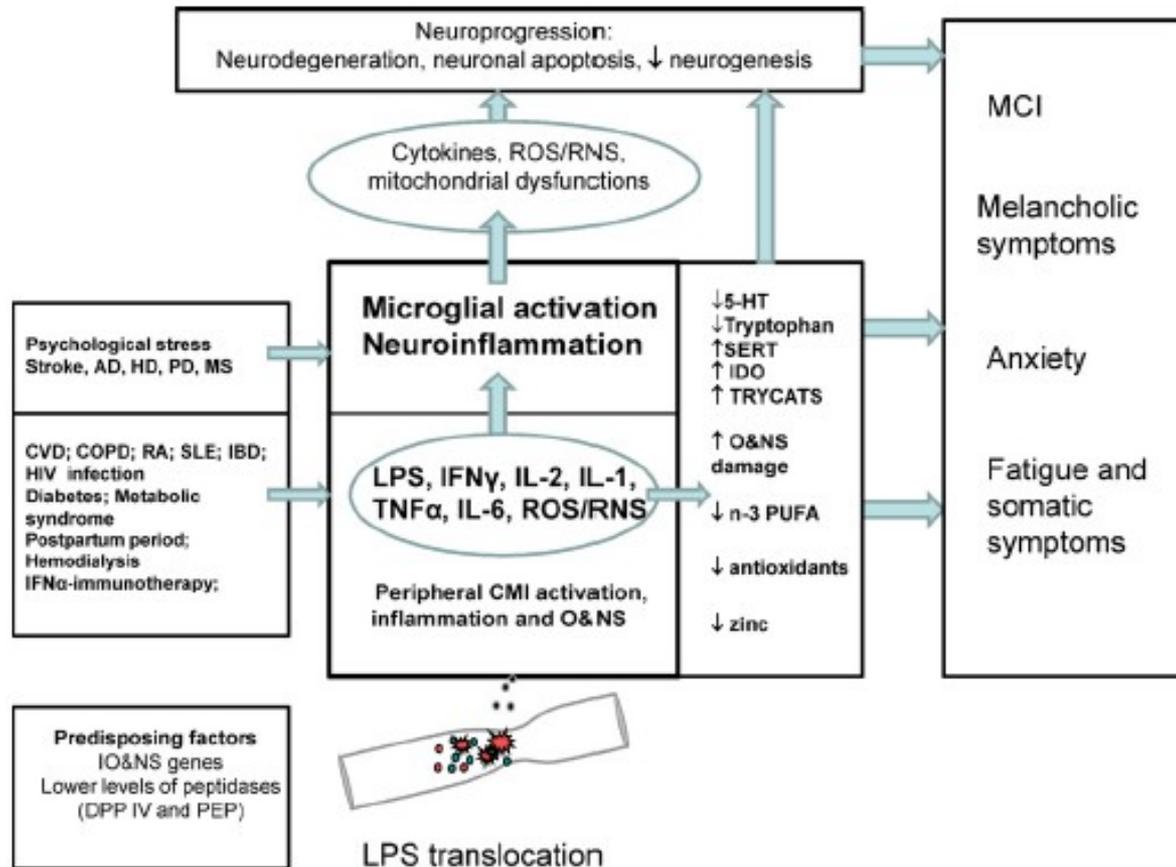
- L'aderenza alla dieta mediterranea, intesa come il largo consumo di vegetali, semi oleosi, cereali integrali, legumi e pesce a discapito di carni rosse, burro, insaccati e latticini, permette di ridurre il rischio di incorrere in depressione
- L'evidenza, dimostrata in popolazioni differenti e in studi 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

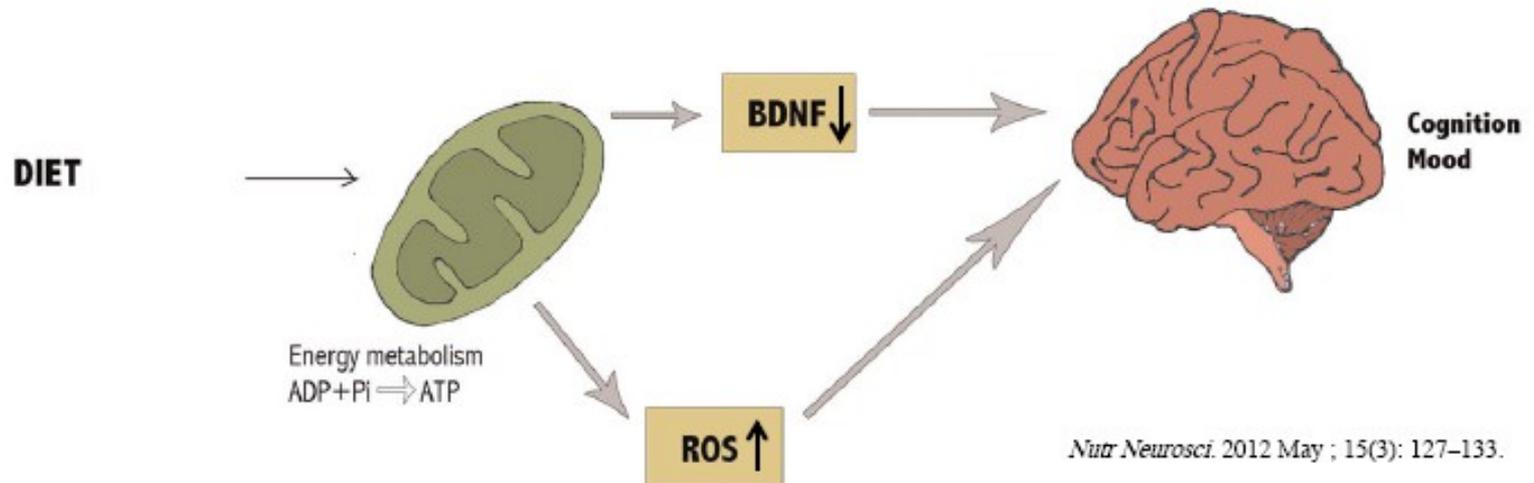
- Ipotesi infiammatoria del disturbo depressivo
  - Effetto alimento specifico
- Segnali neuro-immuno-ormonali gastro-enterici

# Ipotesi infiammatoria

B. Leonard, M. Maes / *Neuroscience and Biobehavioral Reviews* 36 (2012) 764–785



# Ipotesi infiammatoria



- 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