

Psicoterapia,
memoria,
epigenetica

La psiche nella Pnei

Dott. Luciano Camerra
AMISI
A.A. 2016-17

L'importanza del paradigma

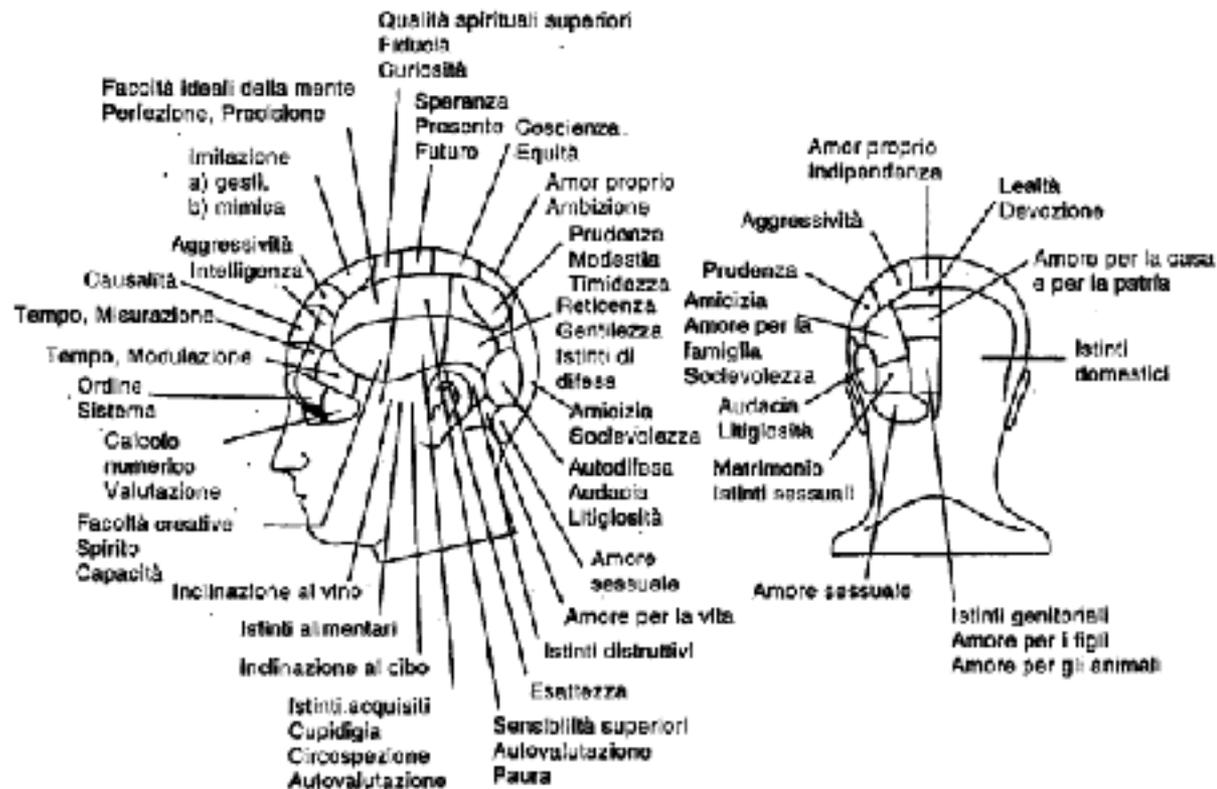


Fig. 4 Mappa ispirata alla frenologia di Gall (tratto da A.R. Lucija, 1979. © 1979 by Consultants Bureau Enterprises, Inc. and Basic Books, Inc. Per gentile concessione di Basic Books, a member of Perseus Books, L.L.C.).

L'importanza del

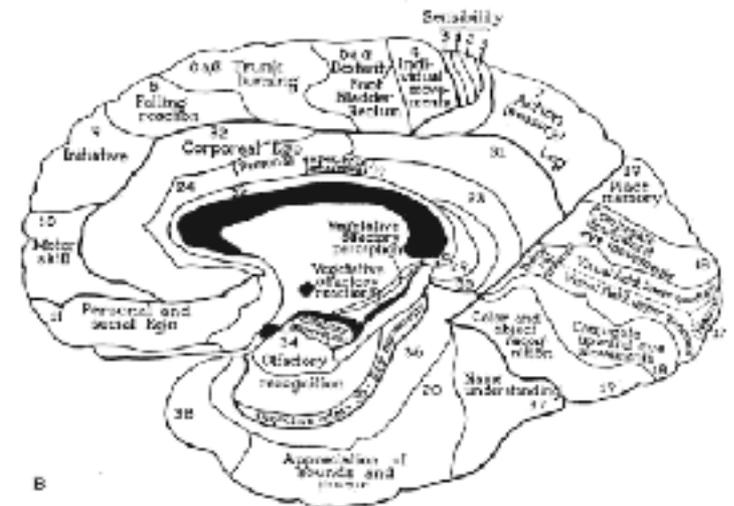
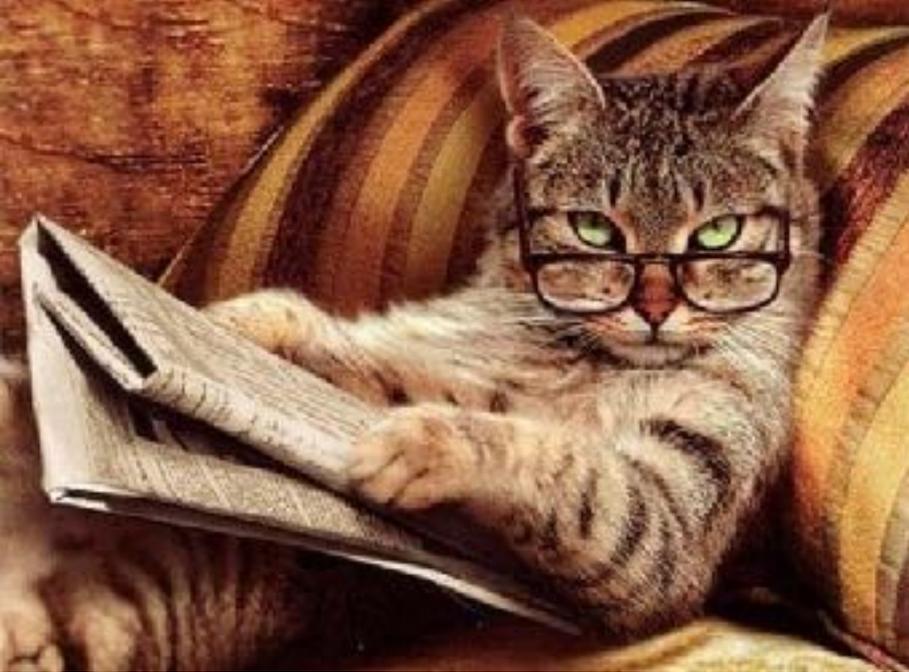


Fig. 15.17 A,B. Localizzazione delle funzioni nella corteccia cerebrale. secondo Kleist (1977). I numeri indicano le aree di Brodmann, e la lettera A. Resolman

paradigma



Quale relazione
esiste tra i gatti
ed i trifogli?



La crisi del sistema medico tradizionale

Costi insostenibili

Risultati scarsi

Frequenti errori medici

Scarsa soddisfazione di medici e pazienti

Peggioramento delle disparità di salute

The New England Medical Journal 2012
Sep, Fani Marvasti, Stafford

Perché? Cause storiche

Modello obsoleto perché basato sulla cura delle malattie acute, costruito agli inizi del 20° secolo sulle malattie acute infettive in popolazioni giovani

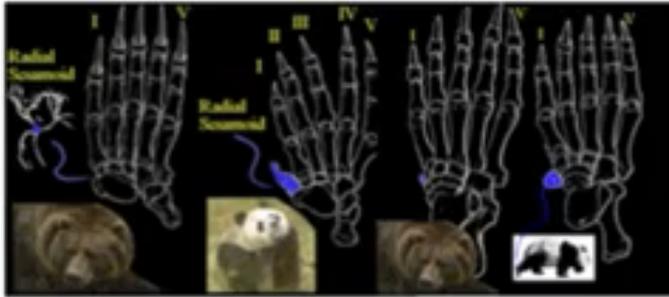
21° secolo: prevalenza di malattie croniche non definibili

70% di cause di morte riconducibili a malattie cardiovascolari, tumori e diabete

Dall'ameba...a Donald Trump



Brevissimo richiamo all'evoluzione



**Il ruolo della storia
(vincoli)**



Cervello ridondante

**“Formazione di una neocorteccia dominante, conservazione di un antico sistema nervoso e ormonale, in parte rimasto autonomo, in parte posto sotto la tutela della neocorteccia: questo processo evolutivo assomiglia molto al bricolage.”
(Francois Jacob, 1977)**

Imperfezione e plasticità



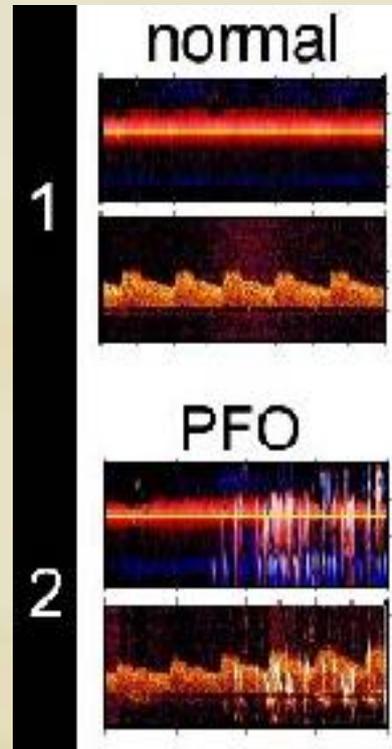
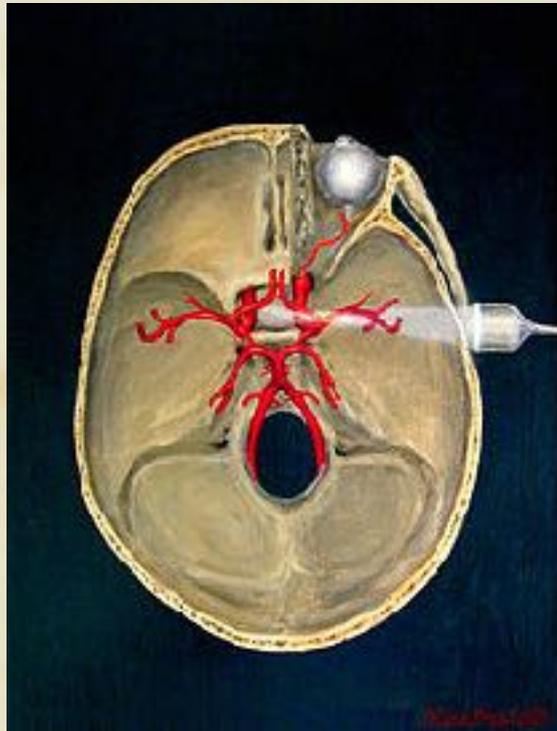
Dove sta l'ANIMA?



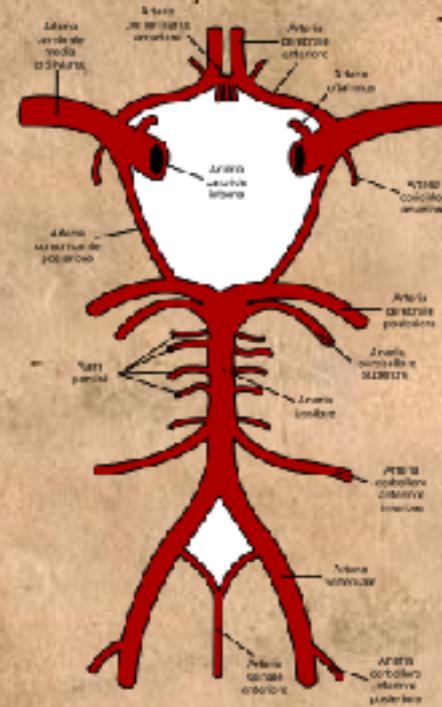
Il sacro cuore di Gesù



Il Doppler transcranico (Bubble test)



Il XVII secolo e Thomas Willis



Il XVII secolo e Thomas Willis



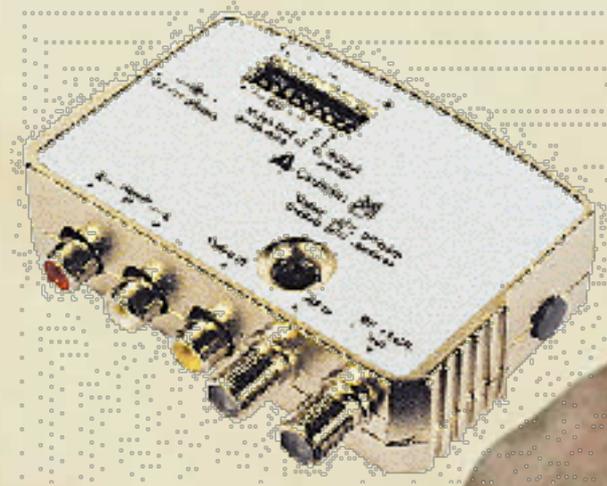
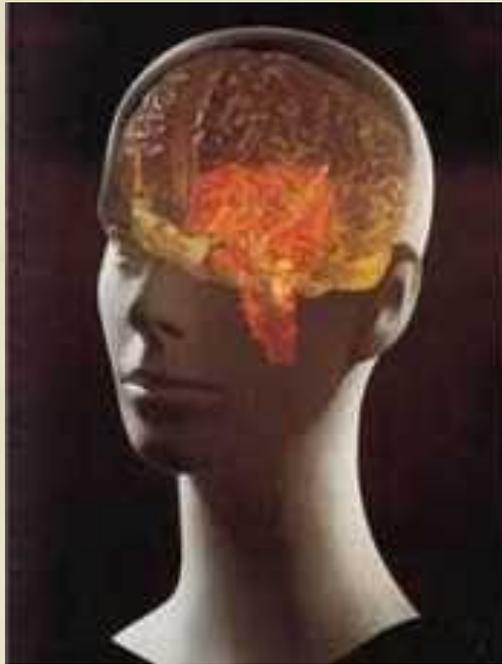
Il XVII secolo e Thomas Willis



Gli errori della Scienza



Il ruolo delle psicoterapie per la PNEI



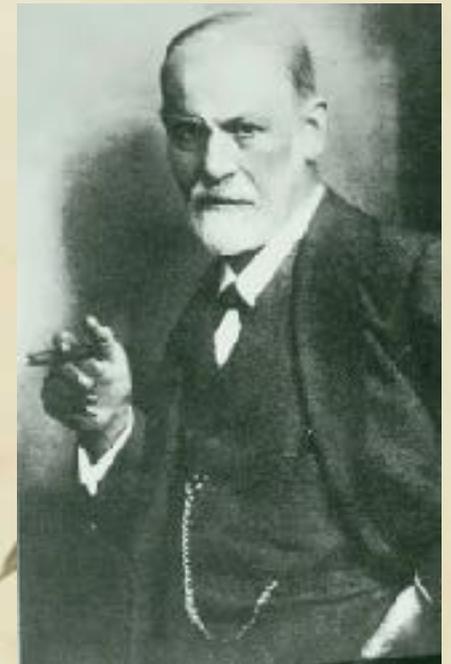


Eric Kandel

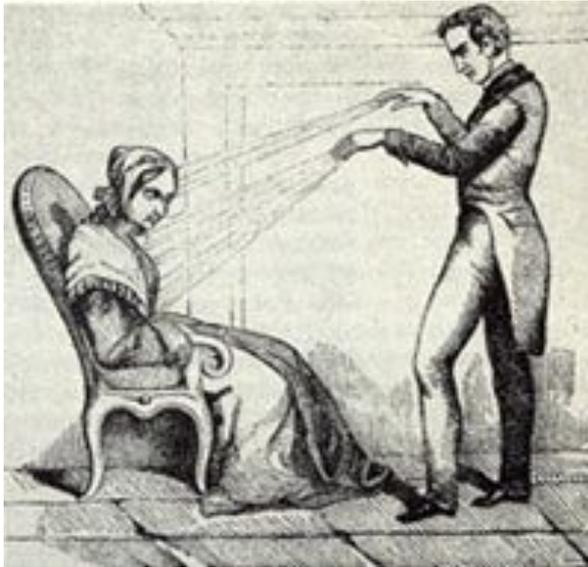
" [...] nella misura in cui la psicoterapia funziona, funziona allo stesso livello dei farmaci - quello dei circuiti neurali e delle sinapsi - [...]"

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

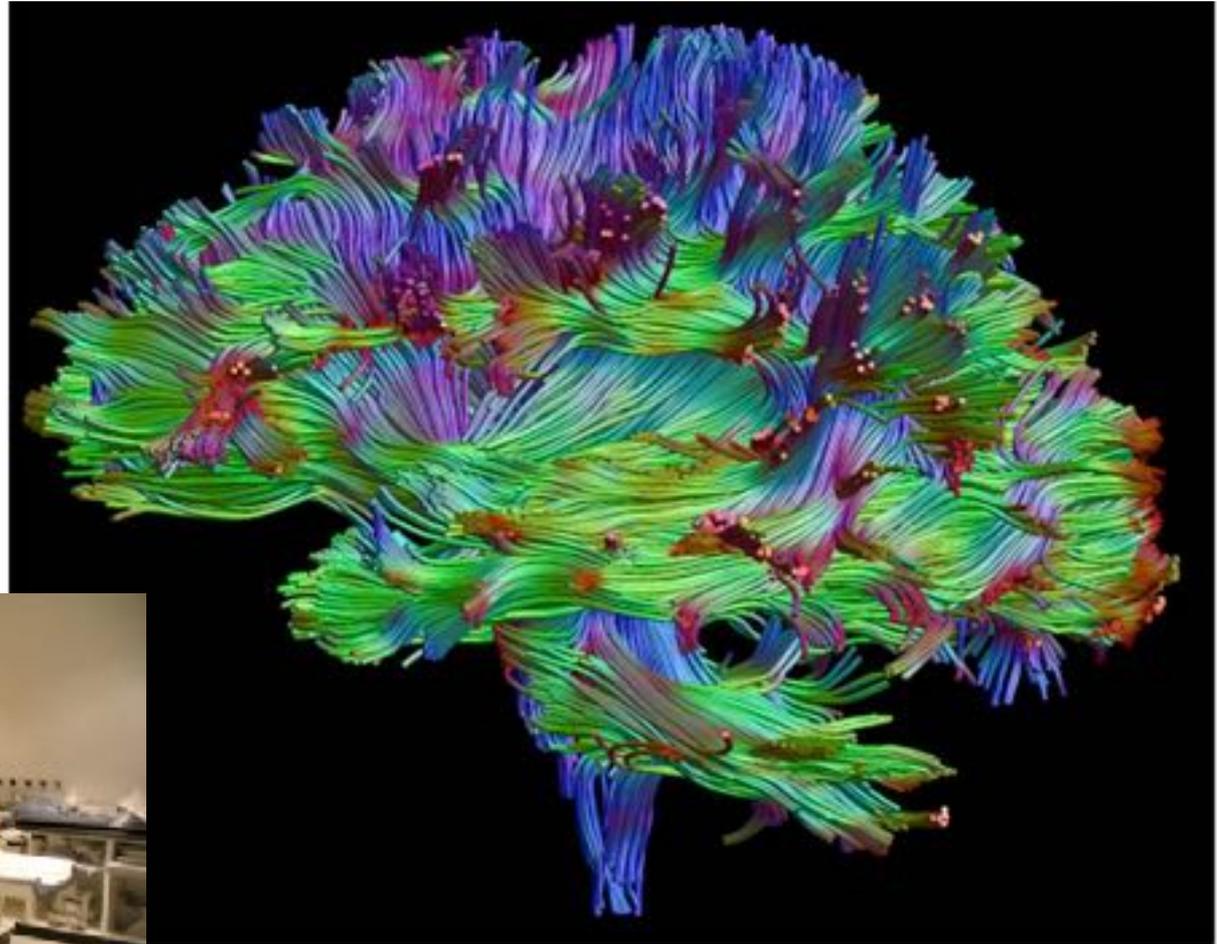
Nevrosi e difese inconsce



C'è dialogo tra neuroscienze e psicoterapia?



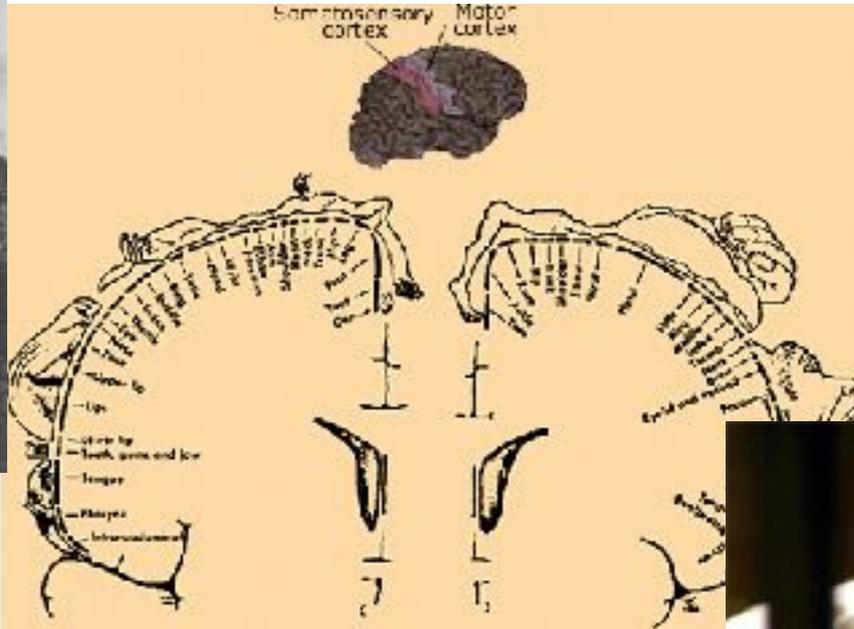
Neuroimaging



Da Penfield a Lecter



Wilder Penfield





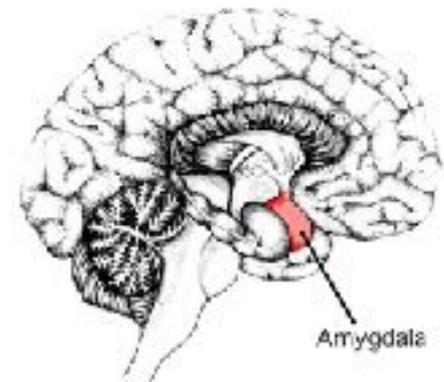
Gli studi sulla neurobiologia degli effetti delle psicoterapie hanno creato i presupposti per la validazione della loro efficacia



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^{1,2,*}, M Nakic¹, D Fridberg³, N Kamel¹, DS Pine¹, and RJR Blair¹

Mood 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

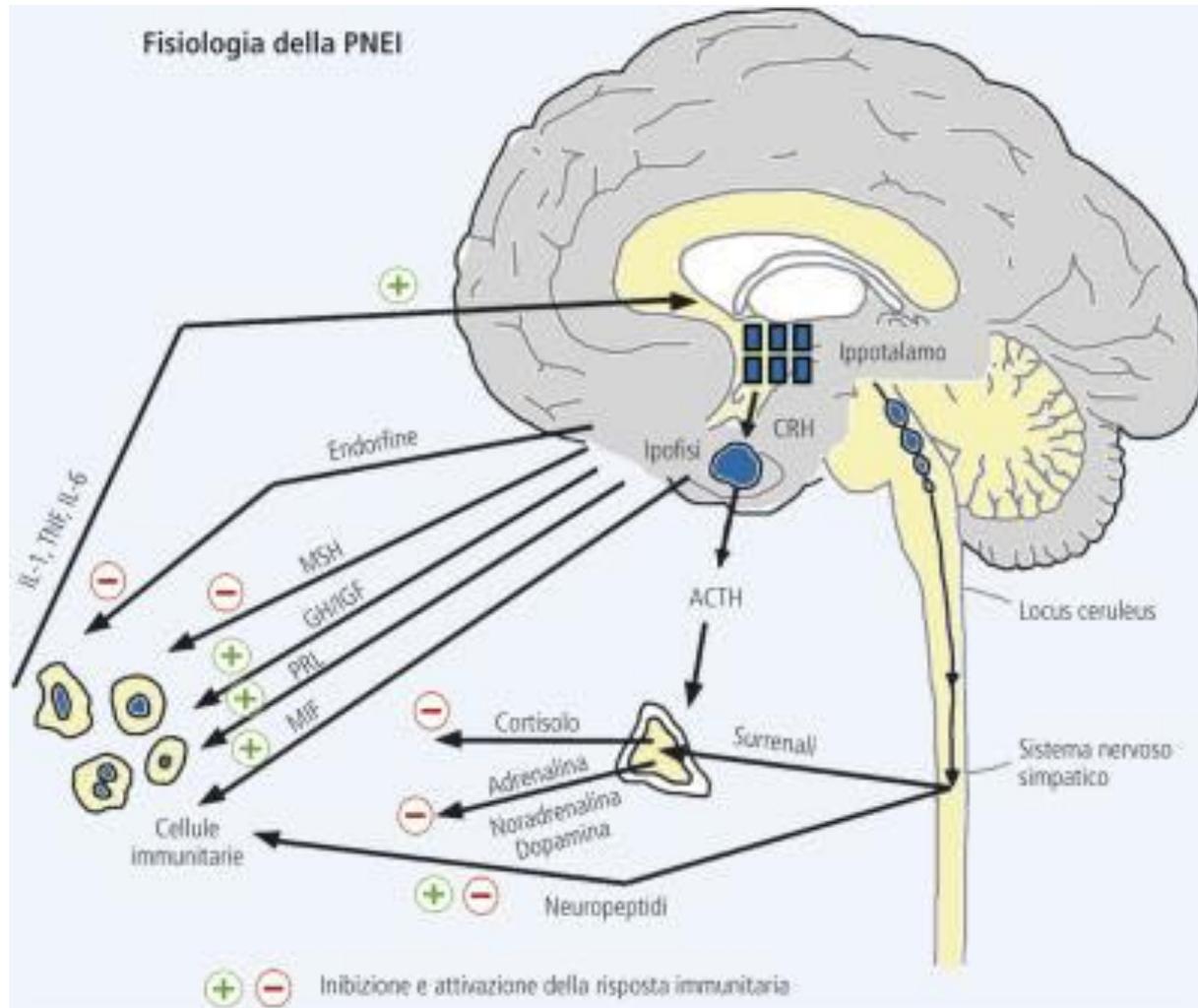


La Psiche



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



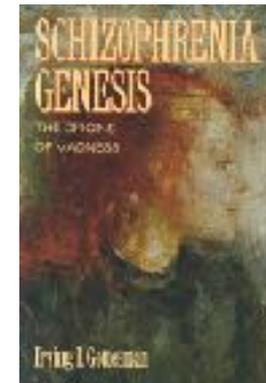
Studi su gemelli omozigoti



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-

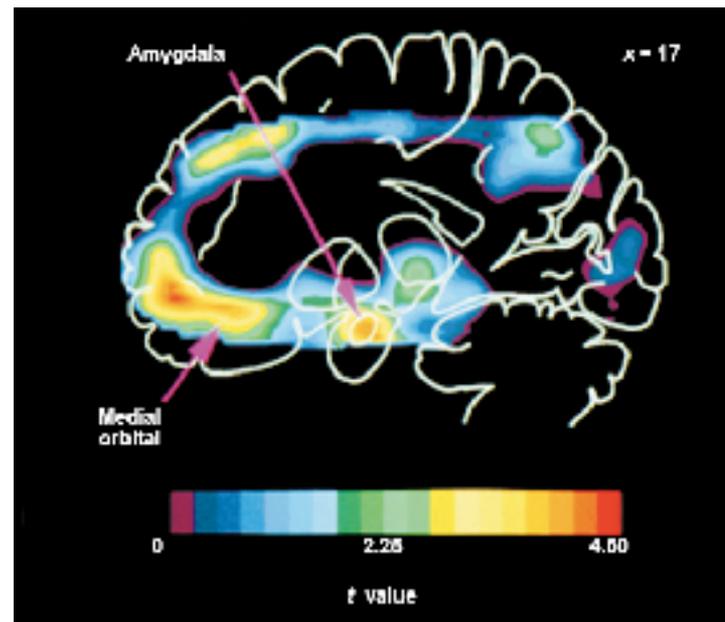
NEUROIMAGING



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

Nancy C. Andreasen

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

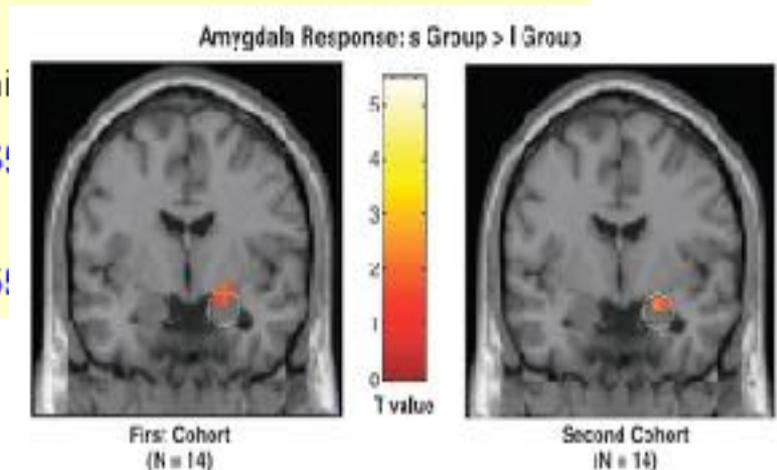
The following resources related to this article are available online at www.sciencemag.org (this information is current as of April 7, 2007):

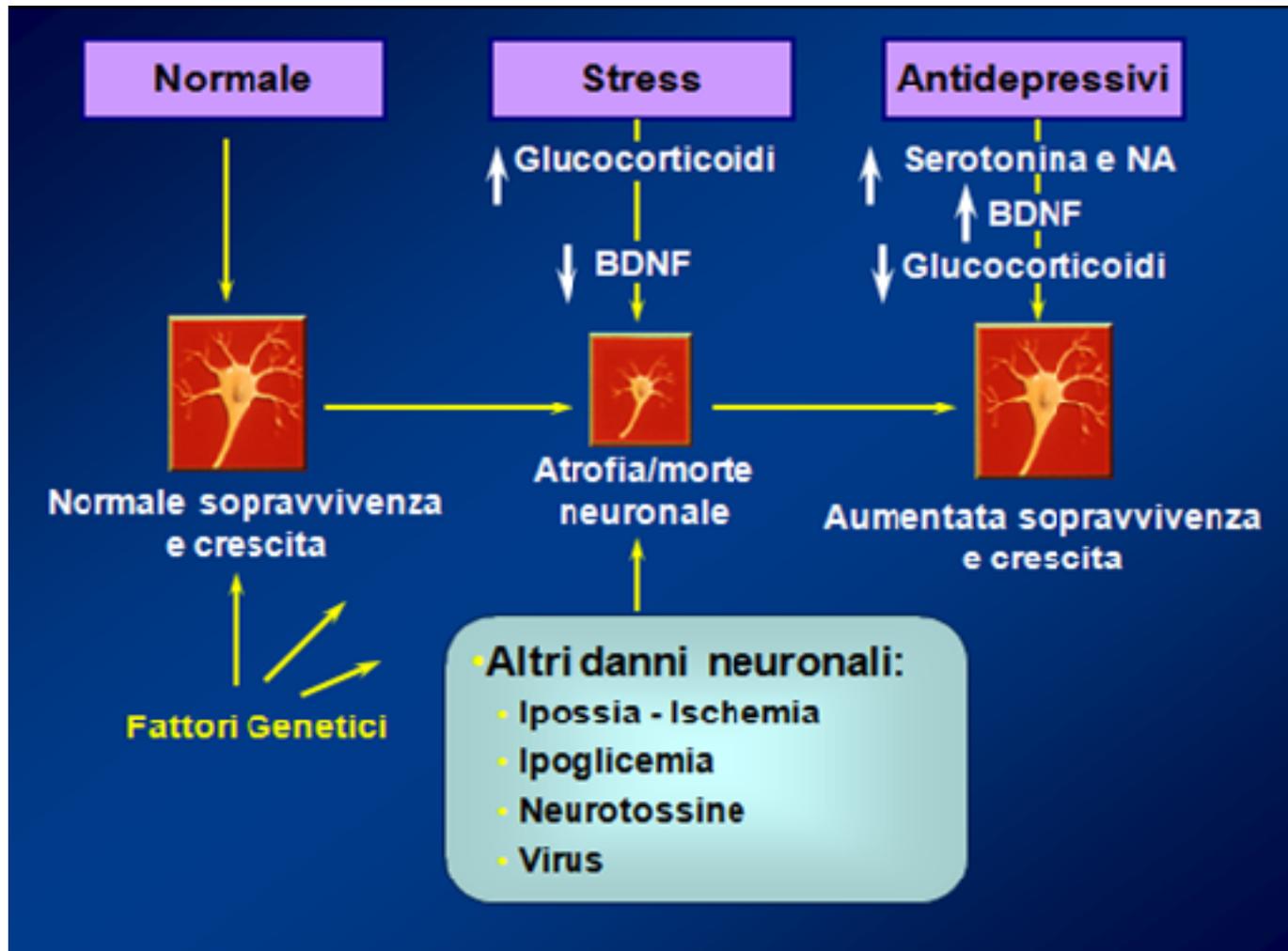
Updated information and services, including high-resolution figures and a full-text version of this article at:

<http://www.sciencemag.org/cgi/content/full/297/5111/400>

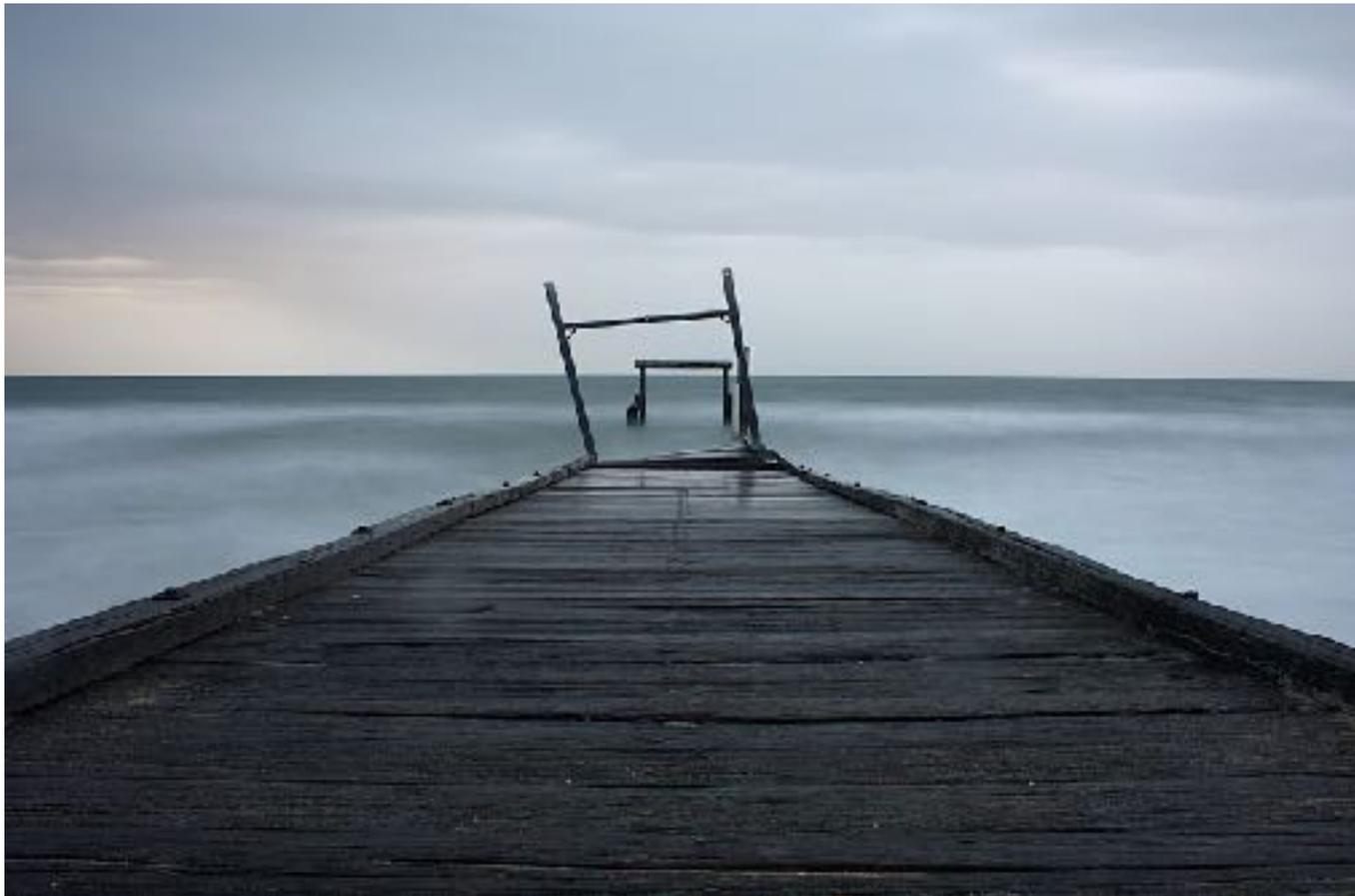
Supporting Online Material can be found at:

<http://www.sciencemag.org/cgi/content/full/297/5111/400>





Il caso Depressione



Il caso Depressione



World Health Organization

العربي | 中文 | English | français | Pycckий | Español

Home | About WHO | Countries | Health topics | Publications | Data and statistics | Programmes and projects | Mental health | Evidence and research | Policy and services | Advocacy | Neurology and public health | Disorders management | Suicide prevention and special programmes

Mental health

WHO → 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 870 000 lives every year.

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

Depression occurs

Facts

- Depression
- Depression

Home > Health

WHO: Depression to become silent epidemic

Nov 22 Nov 2009 15:30:40 GMT

Font size [] [] []



WHO officials have predicted that the number of individuals affected with depressive syndromes will be higher than any other health problem within 25 years.

According to a report released by WHO in first Global Mental Health Summit in Athens, Greece, some 460 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



Environ Biol Psychiatr 2006; 60: 4-11
DOI: 10.1016/j.ebi.2005.11.004

ORIGINAL PAPER

Giovanni de Girolamo · Susanna Faldut · Pierluigi Stordani · Vito Scapellato · Valeria Invernizzi · Chiara Invernizzi · Jacopo Masi · Jacopo Masi · Gianni Nanni · Giovanni Nanni · Francesco Palmieri · Alberto Rossi · Richard Murray

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

Received 27 April 2005; accepted online 14 August 2005

ABSTRACT Objective: To present results of 12-month and lifetime prevalence estimates of mood, anxiety and alcohol disorders in Italy on the basis of the socio-cultural context and comorbidity patterns of these estimated disorders. Method: A representative random sample of non-institutionalized citizens in Italy aged 18 years or older ($N = 17,121$) was interviewed between January 2004 and July 2005, with a weighted response rate of 73%. DSM-IV disorders were assessed by lay interviewers using Version 2.1 of the Composite International Diagnostic Interview (CIDI). Results: A total of 12% of respondents reported a lifetime history of any mental disorder, 6.7% any anxiety disorder and 1.7% any alcohol disorder. About 10% reported having an anxiety disorder in the past 12 months compared to 2.7% for any mood disorder and 0.2% for any alcohol disorder. High depression and specific phobia were the most common mood 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 European European countries. Conclusion: High proportion of adults in Italy have a history of mood, anxiety alcohol disorders. The lower than expected prevalence estimates of alcohol use disorder may be due to underreporting or to low social harm from alcohol consumption.

KEY WORDS community survey · prevalence · epidemiology

INTRODUCTION

It is well established that the prevalence of mood, anxiety and alcohol disorders is higher in the socio-cultural context and comorbidity patterns of these estimated disorders. Method: A representative random sample of non-institutionalized citizens in Italy aged 18 years or older ($N = 17,121$) was interviewed between January 2004 and July 2005, with a weighted response rate of 73%. DSM-IV disorders were assessed by lay interviewers using Version 2.1 of the Composite International Diagnostic Interview (CIDI). Results: A total of 12% of respondents reported a lifetime history of any mental disorder, 6.7% any anxiety disorder and 1.7% any alcohol disorder. About 10% reported having an anxiety disorder in the past 12 months compared to 2.7% for any mood disorder and 0.2% for any alcohol disorder. High depression and specific phobia were the most common mood 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 European European countries. Conclusion: High proportion of adults in Italy have a history of mood, anxiety alcohol disorders. The lower than expected prevalence estimates of alcohol use disorder may be due to underreporting or to low social harm from alcohol consumption.

KEY WORDS community survey · prevalence · epidemiology

INTRODUCTION

It is well established that the prevalence of mood, anxiety and alcohol disorders is higher in the socio-cultural context and comorbidity patterns of these estimated disorders. Method: A representative random sample of non-institutionalized citizens in Italy aged 18 years or older ($N = 17,121$) was interviewed between January 2004 and July 2005, with a weighted response rate of 73%. DSM-IV disorders were assessed by lay interviewers using Version 2.1 of the Composite International Diagnostic Interview (CIDI). Results: A total of 12% of respondents reported a lifetime history of any mental disorder, 6.7% any anxiety disorder and 1.7% any alcohol disorder. About 10% reported having an anxiety disorder in the past 12 months compared to 2.7% for any mood disorder and 0.2% for any alcohol disorder. High depression and specific phobia were the most common mood 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 European European countries. Conclusion: High proportion of adults in Italy have a history of mood, anxiety alcohol disorders. The lower than expected prevalence estimates of alcohol use disorder may be due to underreporting or to low social harm from alcohol consumption.

KEY WORDS community survey · prevalence · epidemiology

INTRODUCTION

It is well established that the prevalence of mood, anxiety and alcohol disorders is higher in the socio-cultural context and comorbidity patterns of these estimated disorders. Method: A representative random sample of non-institutionalized citizens in Italy aged 18 years or older ($N = 17,121$) was interviewed between January 2004 and July 2005, with a weighted response rate of 73%. DSM-IV disorders were assessed by lay interviewers using Version 2.1 of the Composite International Diagnostic Interview (CIDI). Results: A total of 12% of respondents reported a lifetime history of any mental disorder, 6.7% any anxiety disorder and 1.7% any alcohol disorder. About 10% reported having an anxiety disorder in the past 12 months compared to 2.7% for any mood disorder and 0.2% for any alcohol disorder. High depression and specific phobia were the most common mood 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 European European countries. Conclusion: High proportion of adults in Italy have a history of mood, anxiety alcohol disorders. The lower than expected prevalence estimates of alcohol use disorder may be due to underreporting or to low social harm from alcohol consumption.

KEY WORDS community survey · prevalence · epidemiology

INTRODUCTION

It is well established that the prevalence of mood, anxiety and alcohol disorders is higher in the socio-cultural context and comorbidity patterns of these estimated disorders. Method: A representative random sample of non-institutionalized citizens in Italy aged 18 years or older ($N = 17,121$) was interviewed between January 2004 and July 2005, with a weighted response rate of 73%. DSM-IV disorders were assessed by lay interviewers using Version 2.1 of the Composite International Diagnostic Interview (CIDI). Results: A total of 12% of respondents reported a lifetime history of any mental disorder, 6.7% any anxiety disorder and 1.7% any alcohol disorder. About 10% reported having an anxiety disorder in the past 12 months compared to 2.7% for any mood disorder and 0.2% for any alcohol disorder. High depression and specific phobia were the most common mood 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 European European countries. Conclusion: High proportion of adults in Italy have a history of mood, anxiety alcohol disorders. The lower than expected prevalence estimates of alcohol use disorder may be due to underreporting or to low social harm from alcohol consumption.

KEY WORDS community survey · prevalence · epidemiology

Perché epidemia...?

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

Fattori rischio:

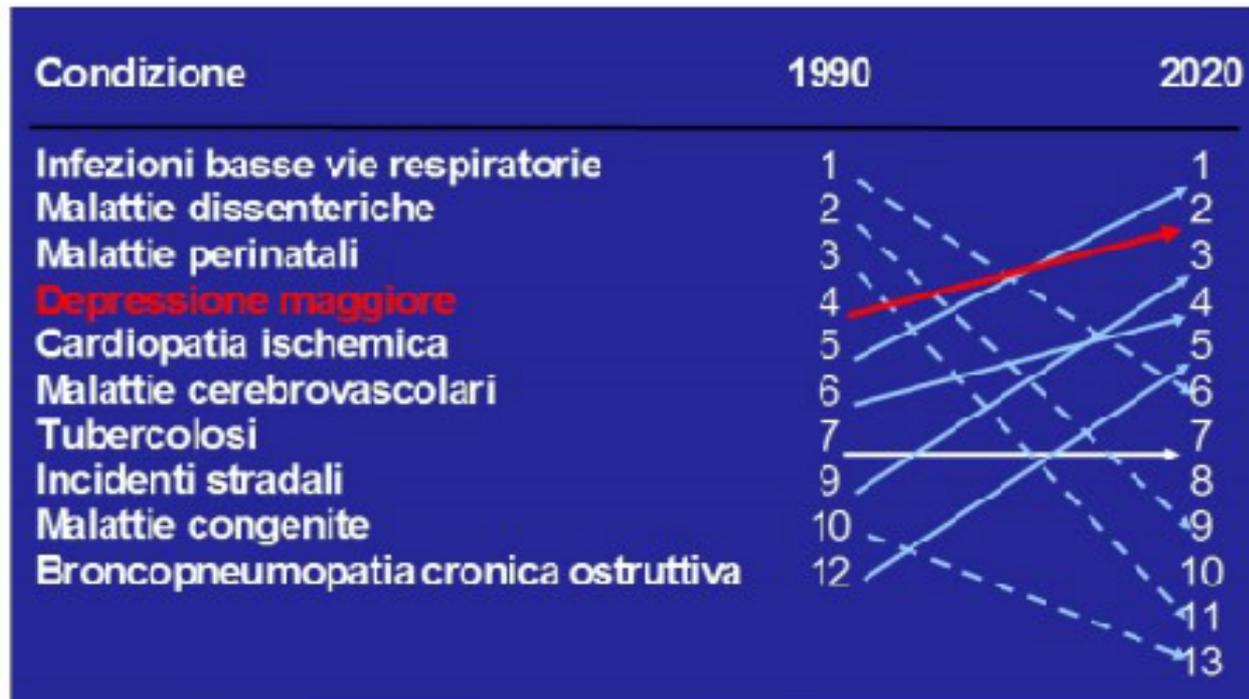
- ✓ Età giovanile (2.0 OR)
- ✓ Genere (donne 2.0 OR)
- ✓ Disoccupazione (2.0 OR)
- ✓ Malattia cronica (2.4 OR)

Incidenza in aumento..?

Il caso Depressione



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



Il caso Depressione

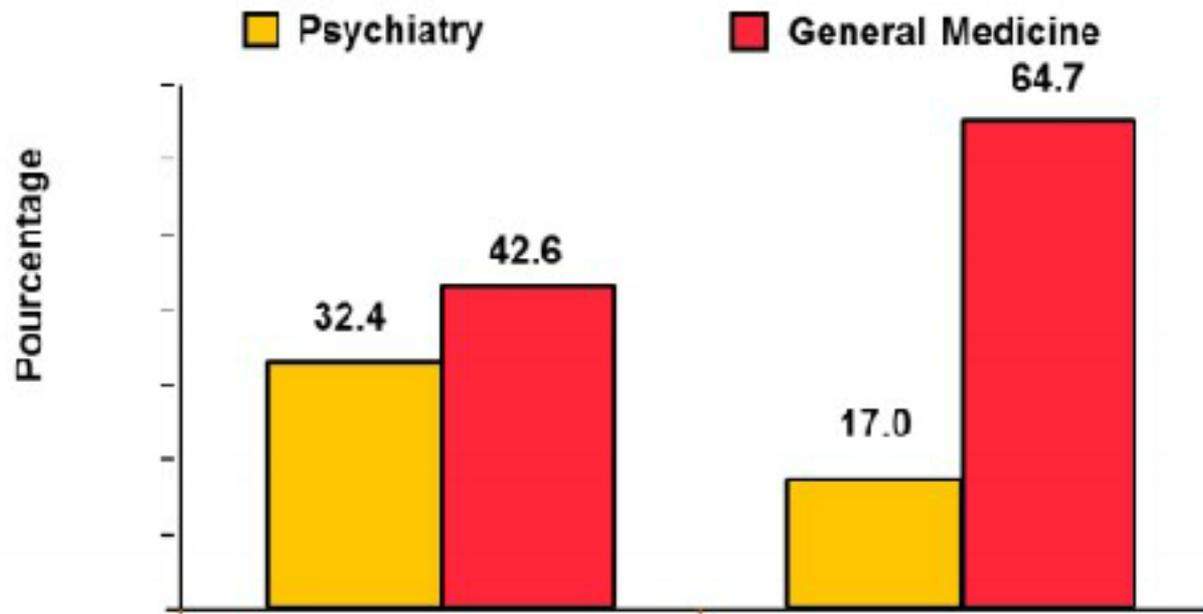


- TRA I CASI DI MANIA O IPOMANIA:
 - 33,9% DI USO DI ANTIPSIKOTICI
 - 36,6% DI USO DI ANTIDEPRESSIVI
 - 27,7% DI USO DI STABILIZZATORI
 - 11,7% VALPROATO 8,6% LITIO
- TRA I CASI DI DISTURBO BIPOLARE:
 - 42,7% DI USO DI ANTIPSIKOTICI
 - 43,6% DI USO DI ANTIDEPRESSIVI
 - 58,8% DI USO DI STABILIZZATORI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



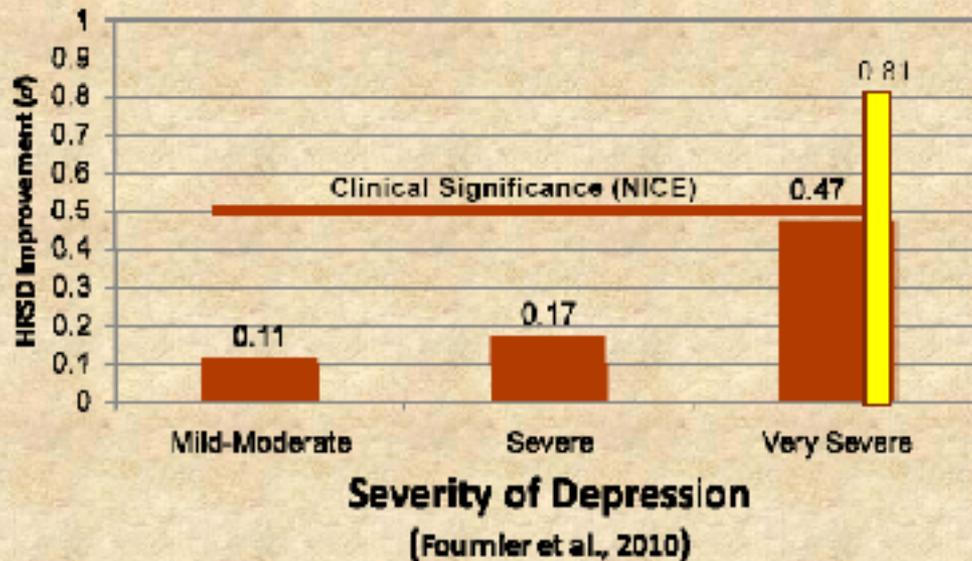
NON SOLO FARMACI E NON SOLO PSICOTERAPIE

- 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?



Dr. Candace Pert is an internationally recognized pharmacologist who has published over 250 scientific articles on peptides and their receptors and the role of these neuropeptides in the immune system.



...NON POSSIAMO PIU 'ATTRIBUIRE ALLE EMOZIONI E AGLI ATTEGGIAMENTI MENTALI MINORE VALIDITA ' CHE ALLA SOSTANZA FISICA, ANZI, DOBBIAMO CONSIDERARLI SEGNALI CELLULARI COINVOLTI NEL PROCESSO DI TRADUZIONE DELLE INFORMAZIONI IN REALTA' FISICA, CHE TRASFORMANO LETTERALMENTE LA MENTE IN MATERIA

Candace Pert

PNEI

(C.Pert e lo studio sui recettori dell'oppio)

La Pert scoprì che l'oppio, somministrato dall'esterno ad un individuo, si legava a particolari recettori posti nel cervello e che da questo legame scaturiva una cascata di eventi.

Successivamente individuò e localizzò tali recettori e osservò che non solo l'oppio si legava a quei recettori, ma anche tutta una serie di sostanze appartenenti alla stessa famiglia degli oppiacei, quali la morfina, la codeina, e l'eroina.

7:25 PM



PNEI

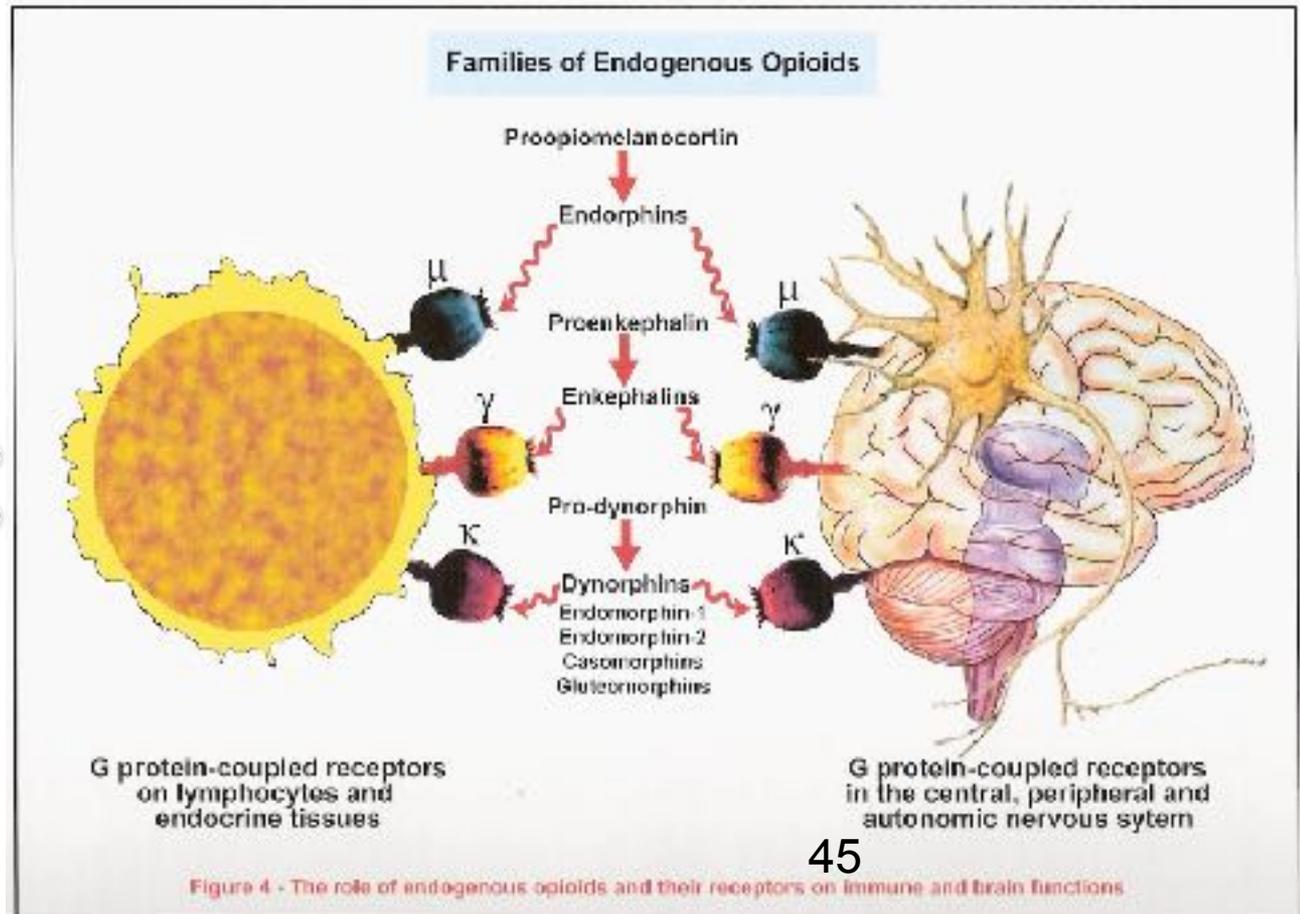
(La scoperta delle ENDORFINE)



“...Se il cervello ha recettori per legare sostanze provenienti dall'esterno, è logico supporre che le stesse sostanze possano essere prodotte anche dal cervello stesso, altrimenti perché dovrebbero esistere tali recettori?”

Fu così che la Dott.ssa C. Pert scoprì le ENDORFINE, oppiacei endogeni naturali.

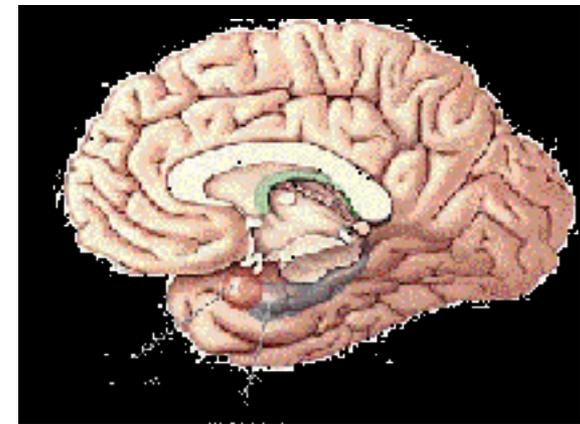
Tale scoperta le procurò la candidatura al premio Nobel.

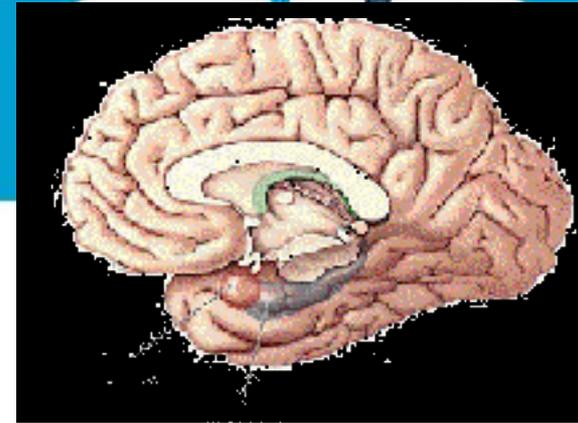




Le **ENDORFINE** scoperte dalla Dott.ssa Pert furono chiamati **NEUROPEPTIDI** in quanto peptidi sintetizzati da cellule nervose.

Quando si andò a studiare la mappa dei recettori delle endorfine, si vide che la maggiore concentrazione era presente a livello del **sistema limbico** del cervello (40 volte maggiore rispetto alle altre aree)





Il sistema limbico (**amigdala e ipotalamo**) è la sede delle emozioni; esso riceve i segnali di pericolo che gli giungono dall'udito e dalla vista; l'amigdala, in particolare, è la sede della paura e si forma precocemente durante lo sviluppo del cervello e può essere segnata da traumi o eventi stressanti fin nel grembo materno, alterando e condizionando il sistema dello stress del nascituro.

Sono state scoperti più di **40 neuropeptidi**, fra cui ormoni e neurotrasmettitori (fra cui l'insulina che è anch'essa un neuropeptide)

PNEI (i recettori oppiacei)



Continuando a studiare la mappa dei recettori delle endorfine la Dott.ssa Pert fece una scoperta straordinaria:

I recettori oppiacei non si trovano solo nel cervello e particolarmente nel sistema limbico, ma in moltissime altre parti del corpo, molto distanti dal cervello: come il **Sistema Endocrino e il **Sistema Immunitario** (linfociti e monociti) a loro volta presenti in modo ubiquitario!**

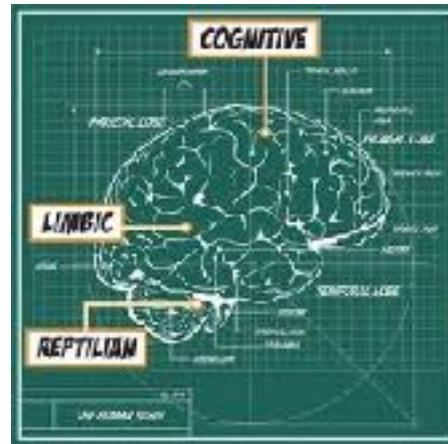
IL SISTEMA LIMBICO (SEDE DELLE EMOZIONI) COMUNICA CON IL RESTO DEL CORPO GRAZIE ALLE ENDORFINE!

LE EMOZIONI, GRAZIE AI NEUROPEPTIDI, POSSONO CAUSARE MODIFICAZIONI CORPORALI IMPORTANTI A CARICO DI TUTTI QUEGLI ORGANI PROVVISI DEI CORRISPONDENTI RECETTORI OPIACEI!

Emozioni e coscienza sono impastate, nel bene e nel male



Damasio



Le Douarin

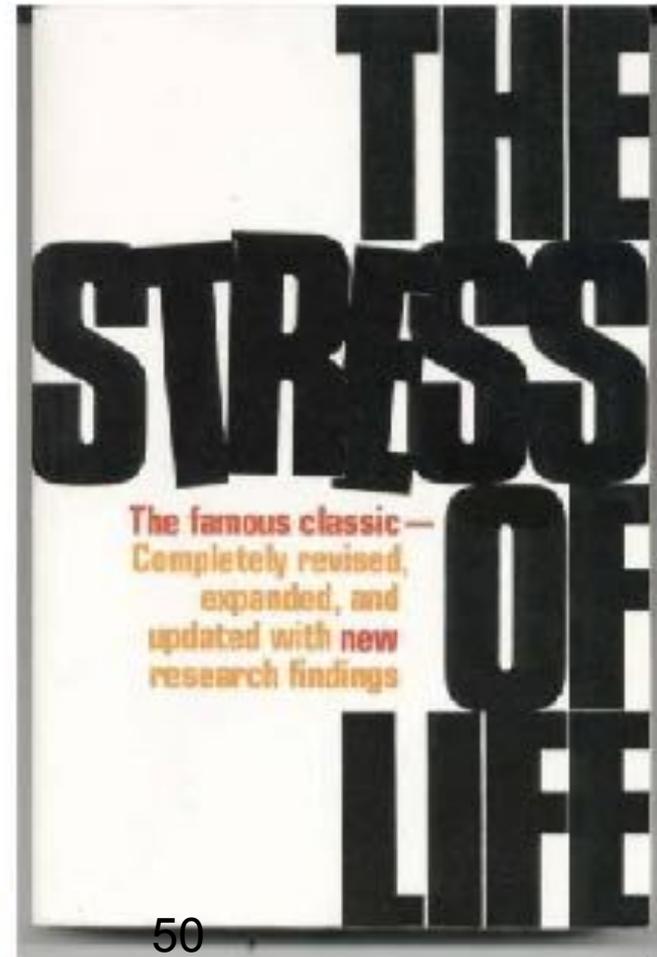


HANS SELYE: la ricerca sullo stress come ricerca dell'unità

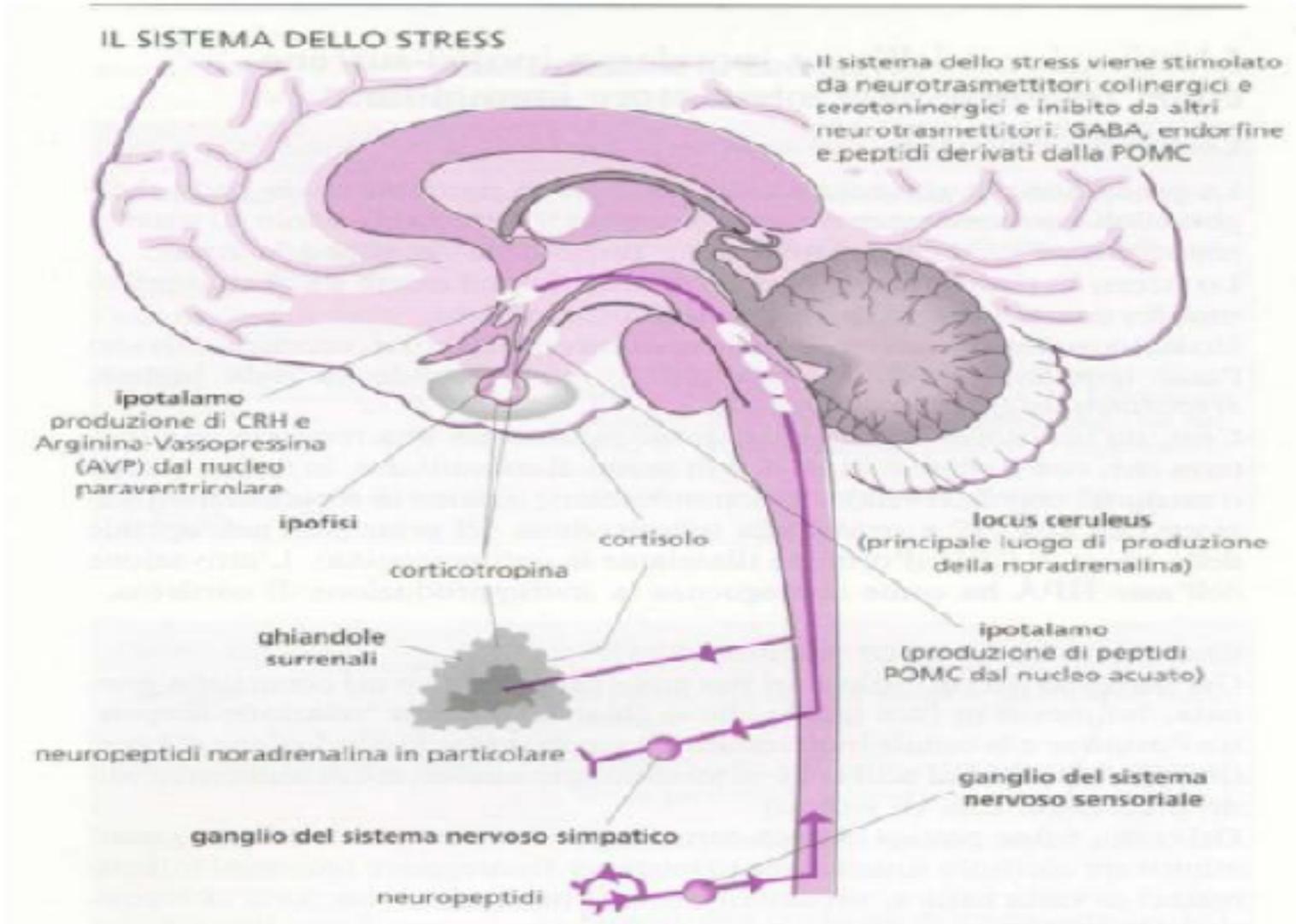
Hans Selye (Vienna, 26 gennaio 1907 – Montréal, 16 ottobre 1982) è stato un medico austriaco. Viene ricordato per le ricerche effettuate sullo stress e per la Sindrome Generale di Adattamento da lui identificata e descritta



Hans (Janos) Selye (1907-1982)



Il sistema dello stress



Lo stress indebolisce il S.I. e favorisce lo squilibrio ormonale che può incrementare lo sviluppo di cellule anormali.



Paolo Pancheri 16/06/1938-12/08/2007

Dal 1983 Professore Ordinario di Psichiatria presso l'Università degli Studi di Roma "La Sapienza".

Direttore della I Scuola di Specializzazione in Psichiatria Università degli Studi di Roma "La Sapienza".

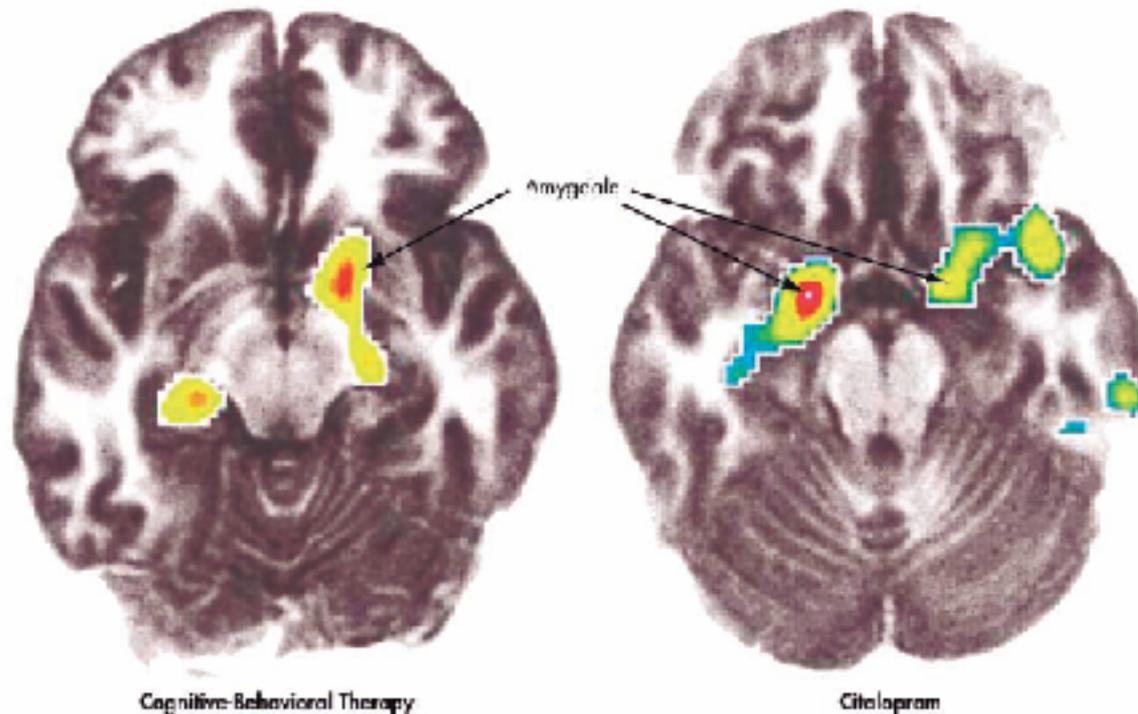
Autore di oltre 300 pubblicazioni scientifiche su argomenti di Psicometria, Psicologia Clinica, Psicopatologia, Psicofarmacologia, Psiconeuroendocrinologia.



NEUROBIOLOGIA DEGLI EFFETTI DELLA PSICOTERAPIA



FIGURE 1. Effects of Cognitive-Behavioral Therapy (CBT) or Citalopram Treatment on Brain Activity in Patients With Social Phobia While Carrying Out a Public Speaking Task. Cognitive-Behavioral Therapy (left) and Citalopram (right) Treatment are Both Associated With Decreased Activation of the Amygdala During Performance of an Anxiogenic Public Speaking Task After Therapy, Compared With Before Therapy. Depleted Are Regions Showing a Significant Postversus Pre-treatment Decrease in Activity. (Reprinted with permission from Furmark et al. 2002.)



NEUROBIOLOGIA DEGLI EFFETTI DELLA PSICOTERAPIA



1386

J. L. Roffman et al.

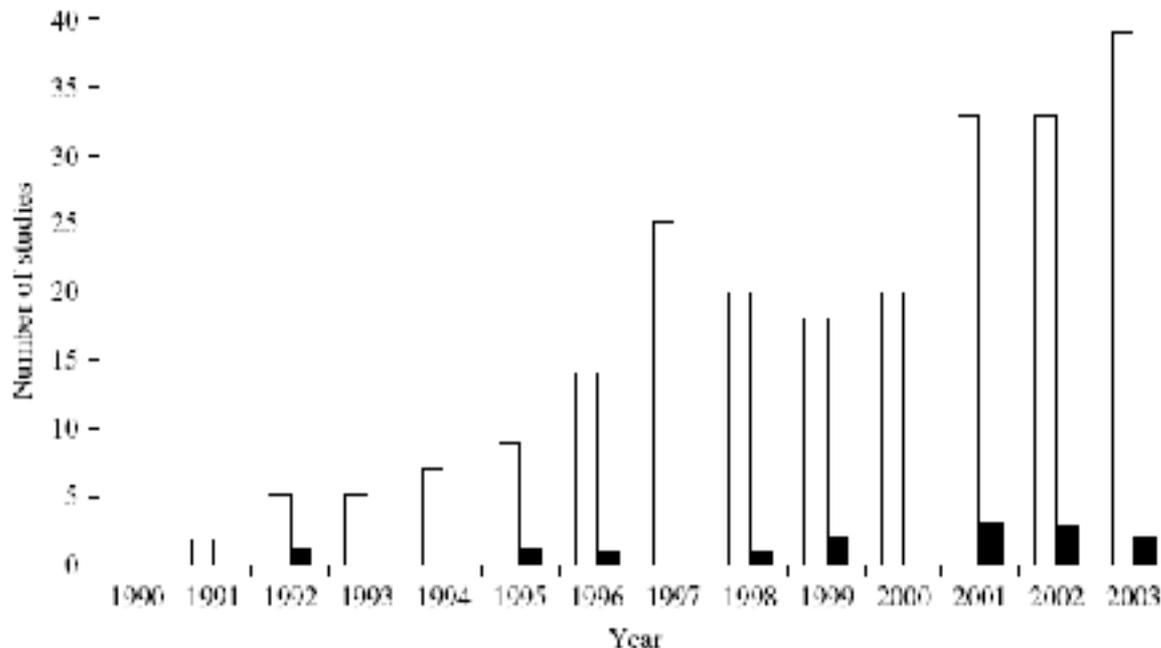
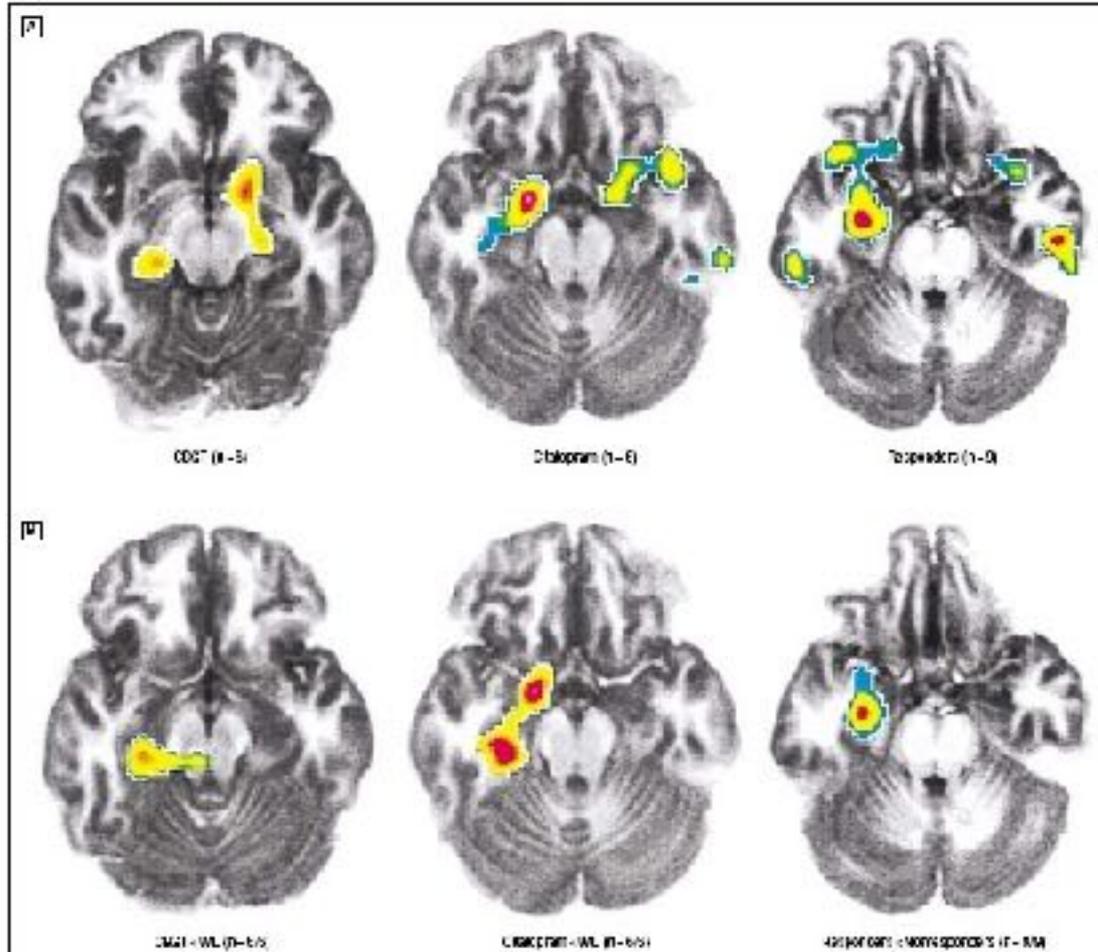


FIG. 1 Imaging/medication (□) and imaging/psychotherapy (■) studies by year. Method: An Ovid *medline* search was completed using key words related to neuroimaging (e.g. PET, fMRI, SPECT), and medication (e.g. psychotropic) to find studies including both neuroimaging and medication between the years 1966 and 2003. Based on the abstracts generated from this search, we selected studies based on four criteria: included studies were published in English between 1990 and 2003, used human subjects, and investigated psychiatric (e.g. depression) rather than neurological (e.g. Parkinson's Disease) disorders. A similar search was conducted using key words related to neuroimaging and psychotherapy (e.g. psychotherapy, intrapersonal therapy, cognitive behavioral therapy, and psychodynamic therapy).

NEUROBIOLOGIA DEGLI EFFETTI DELLA PSICOTERAPIA



- Furmark

NEUROBIOLOGIA DEGLI EFFETTI DELLA PSICOTERAPIA

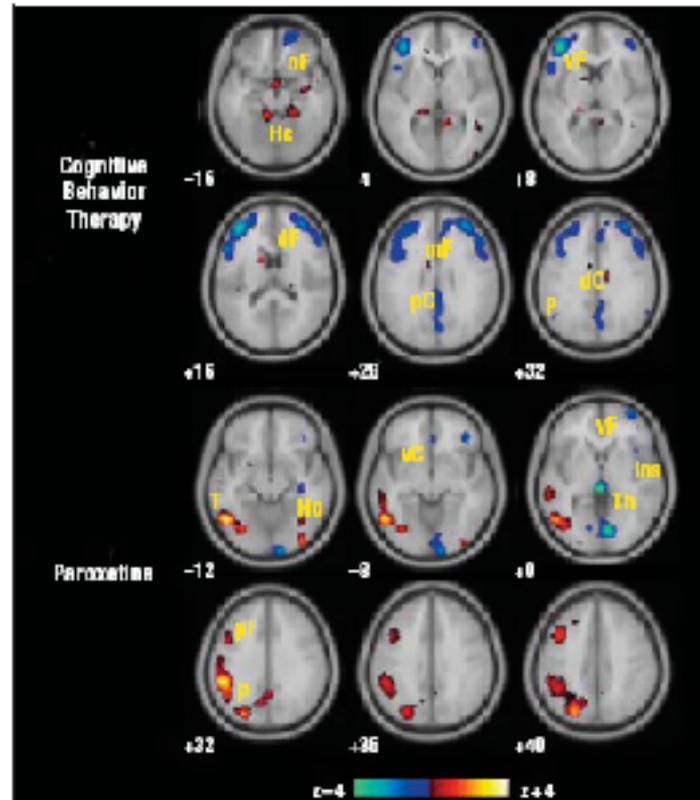


Figure 1. Changes in regional glucose metabolism (¹⁸F-fluorodeoxyglucose positron emission tomography) in cognitive behavior therapy

- Goldapple

Studi sugli effetti della Psicoterapia dinamica



Mind does really matter: Evidence from neuroimaging studies of emotional self-regulation, psychotherapy, and placebo effect

Mario Beauregard^{a,b,c,d,e,*}

^aDepartment of Radiology, Université de Montréal, Montreal (Quebec), Canada

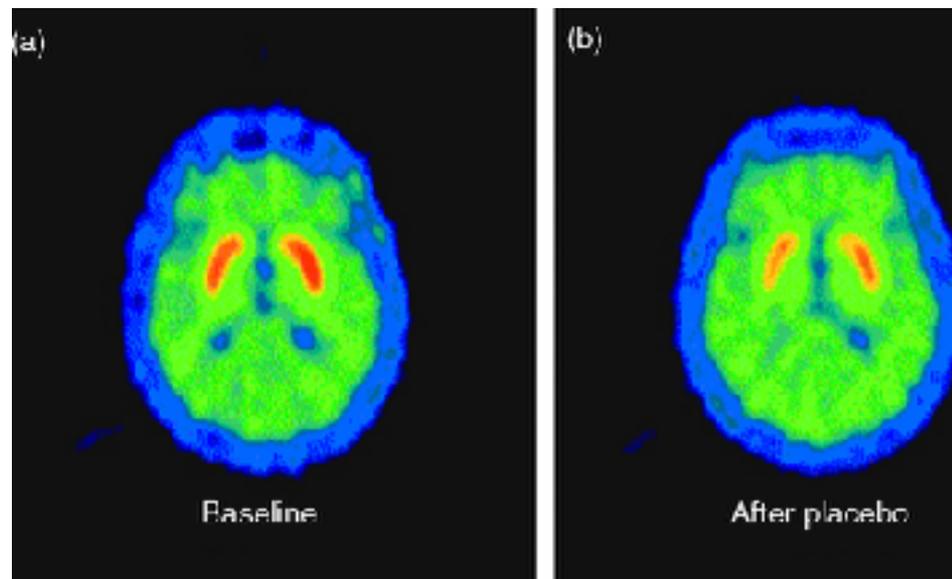
^bDepartment of Psychology, Université de Montréal, Montreal (Quebec), Canada

^cCentre de Recherche en Neuropsychologie et Cognition (CERNEC), Université de Montréal, Montreal (Quebec), Canada

^dCentre de Recherche en Sciences Neurologiques (CRSN), Université de Montréal, Montreal (Quebec), Canada

^eCentre de Recherche, Institut universitaire de gériatrie de Montréal (CRIUGM), Montreal (Quebec), Canada

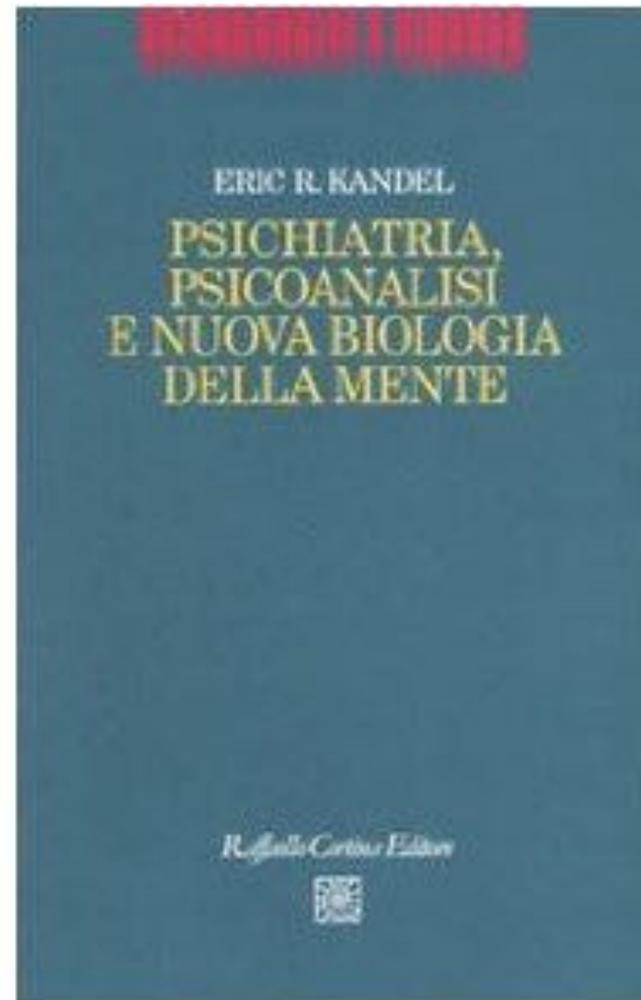
Received 4 September 2006; received in revised form 11 December 2006; accepted 16 January 2007





Esperienza della relazione
terapeuta-paziente

Interpretazione dinamiche
inconsce



Memoria ed emozioni, a livello cellulare e molecolare

- la memoria è in parte localizzata in certe aree cerebrali, in parte è distribuita
- la memoria è strettamente connessa alle emozioni
- il processo di consolidazione mnestica, avviene attraverso neuromediatori e ormoni
- la sede dei ricordi è la giunzione tra le cellule nervose, la sinapsi.



Cosa dicono le Neuroscienze

Ann. Rev. Physiol. 1993, 55:197-420
Copyright © 1993 by Annual Reviews Inc. All rights reserved

STRUCTURAL CHANGES ACCOMPANYING MEMORY STORAGE

Craig H. Bailey

Center for Neurobiology and Behavior, College of Physicians and Surgeons of
Columbia University, and The New York State Psychiatric Institute, 722 West
168th Street, New York, New York 10032

Eric R. Kandel

Howard Hughes Medical Institute, Center for Neurobiology and Behavior, College
of Physicians and Surgeons of Columbia University, and The New York State
Psychiatric Institute, 722 West 168th Street, New York, New York 10032

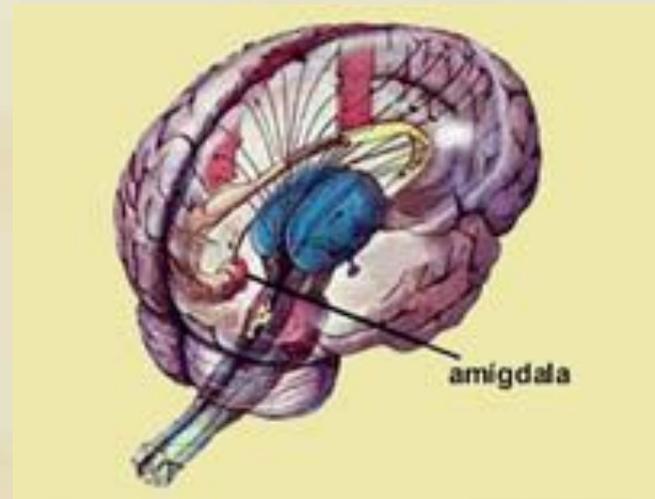
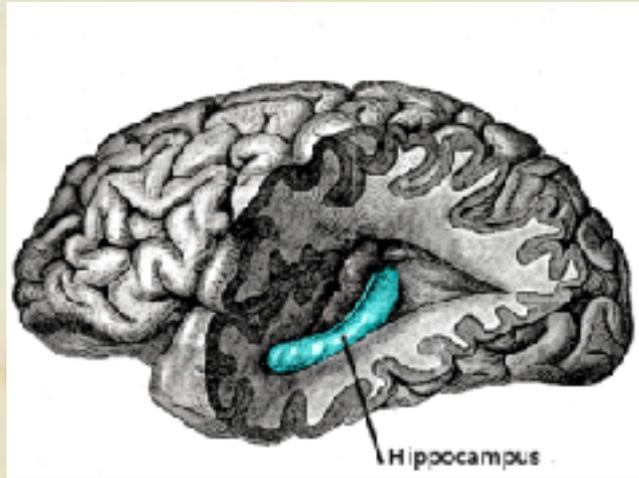
KEY WORDS: learning, synaptic plasticity, active zone, synaptic formation, NCAM
modulation



Joseph LeDoux

**La risposta ai segnali di
allarme, conscia ed inconscia**

Il gioco delle parti



Ippocampo Vs Amigdala



Un mondo di paura

: " la paura fa parte della vita di tutti [...] e nelle psicopatologie è onnipresente" (LeDoux, 1998)

La velina delle Neuroscienze



Aplysia Californica

Cosa fu dimostrato in ...



...soldoni?

Gli effetti di un processo psicoterapico



**La psicoterapia
produce cambiamenti
nell'espressione genica?**

Gli effetti di un processo psicoterapico

Modulation of Cortical-Limbic Pathways in Major Depression

Treatment-Specific Effects of Cognitive Behavior Therapy

Kimberly Goldapple, MSc; Zindel Segal, PhD; Carol Garson, MA; Mark Lau, PhD;
Peter Birling, PhD; Sidney Kennedy, MD; Helen Mayberg, MD

Background: Functional imaging studies of major depressive disorder demonstrate response-specific regional changes following various modes of antidepressant treatment.

Objective: To examine changes associated with cognitive behavior therapy (CBT).

Results: A full course of CBT resulted in significant clinical improvement in the 14 study completers (mean \pm SD posttreatment Hamilton Depression Rating Scale score of 6.7 ± 4). Treatment response was associated with significant metabolic changes: increases in hippocampus and dorsal cingulate (Brodmann area [BA] 24) and decreases in dorsal (BA 9/46), ventral (BA 47/11), and medial (BA 9/10/11) frontal cortex. This pattern is distinct

Goldapple, 2004

Gli effetti di un processo psicoterapico



Le fughe dalla guarigione



L'ipnosi e il suo ruolo determinante

