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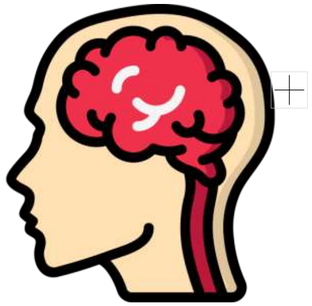
Fitoativos e Suplementos: Alternativas naturais para fortalecer a saúde mental

Dra. Fernanda Guimarães Drummond e Silva
Nutricionista | PhD em Alimentos e Nutrição pela UNICAMP
Docente do curso de Nutrição da UFOP
Docente do curso de Pós- Graduação em Fitoterapia Clínica da UFSCar

Saúde Mental e Transtorno Mental: Conceitos



Saúde Mental

É um estado de **bem estar mental** que permite que as pessoas lidem com o estresse, sejam capazes de **aprender** e **executar** bem as suas **tarefas** e que saibam perceber e colocar em prática suas **habilidades** (OMS, 2022)

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Saúde Mental

CONNECT

- Have positive relationships
- Contribute to communities
- Get a sense of belonging
- Empathize with others

FUNCTION

- Apply cognitive skills
- Gain an education
- Earn a living
- Make healthy choices
- Learn new skills

COPE

- Deal with stress
- Adapt to change
- Adopt new ideas
- Make complex choices
- Understand and manage emotions

THRIVE

- Realize our own abilities
- Feel good
- Find purpose in live
- Think about our well-being and that of others

Saúde Mental e Transtorno Mental: Conceitos

Saúde Mental

É um estado de **bem estar mental** que permite que as pessoas lidem com o estresse, sejam capazes de **aprender** e **executar** bem as suas **tarefas** e que saibam perceber e colocar em prática suas **habilidades** (OMS, 2022)

Transtorno Mental (podem ser referidas de forma mais geral como condições de saúde mental)

Distúrbio clinicamente significativo na cognição, comportamento e na capacidade de administrar emoções e pensamentos.

Existem diversos tipos de transtornos mentais, os mais comuns são: depressão; ansiedade, transtorno bipolar, transtorno de estresse pós traumático, esquizofrenia, transtornos alimentares.(OMS, 2022)

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Transtornos mentais mais prevalentes no mundo

Depressão

Caracterizada por tristeza, perda de interesse ou prazer, sentimentos de culpa ou baixa autoestima, sono e apetite alterados, cansaço e falta de concentração.

A depressão é uma das principais causas de incapacidade em todo o mundo e em seu estado mais grave, pode levar ao suicídio.

Em 2019, 280 milhões foram diagnosticadas com depressão.

Transtorno de Ansiedade

Caracterizam-se por medo e preocupação excessivos, resultando em sofrimento e perda da capacidade funcional. com alterações de comportamento.

Em 2019, 301 milhões de pessoas vivam com transtorno de ansiedade

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Diante do cenário mundial, quais aos caminhos?

Organização Mundial da Saúde

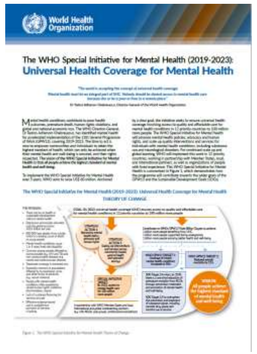
1 em cada 8 pessoas no mundo vivem com algum transtorno mental

Iniciativas:

Sustainable Development Goals

2019: Special Initiative for Mental Health (2019-2023)

2022: World mental health report: transforming mental health for all



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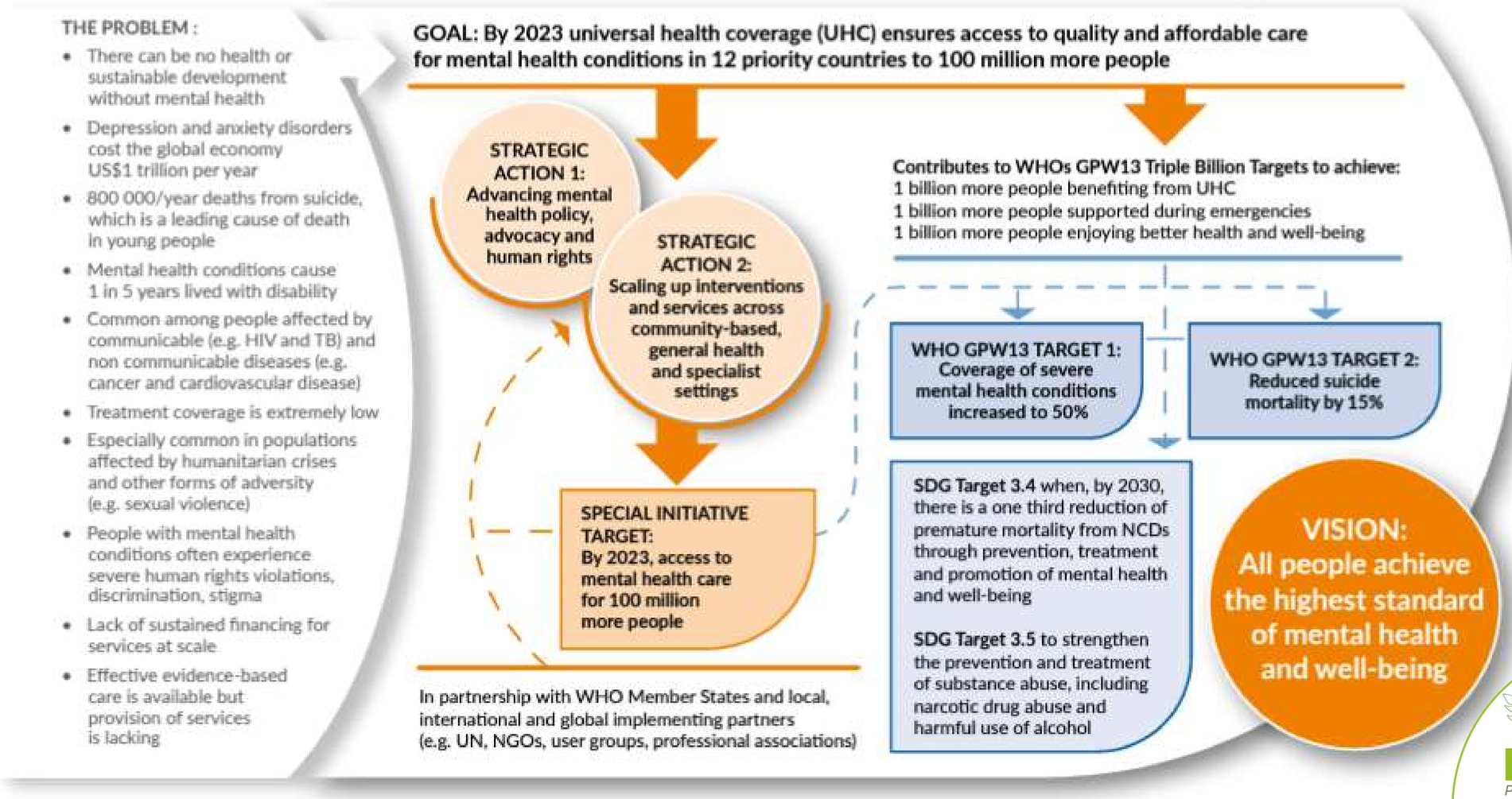
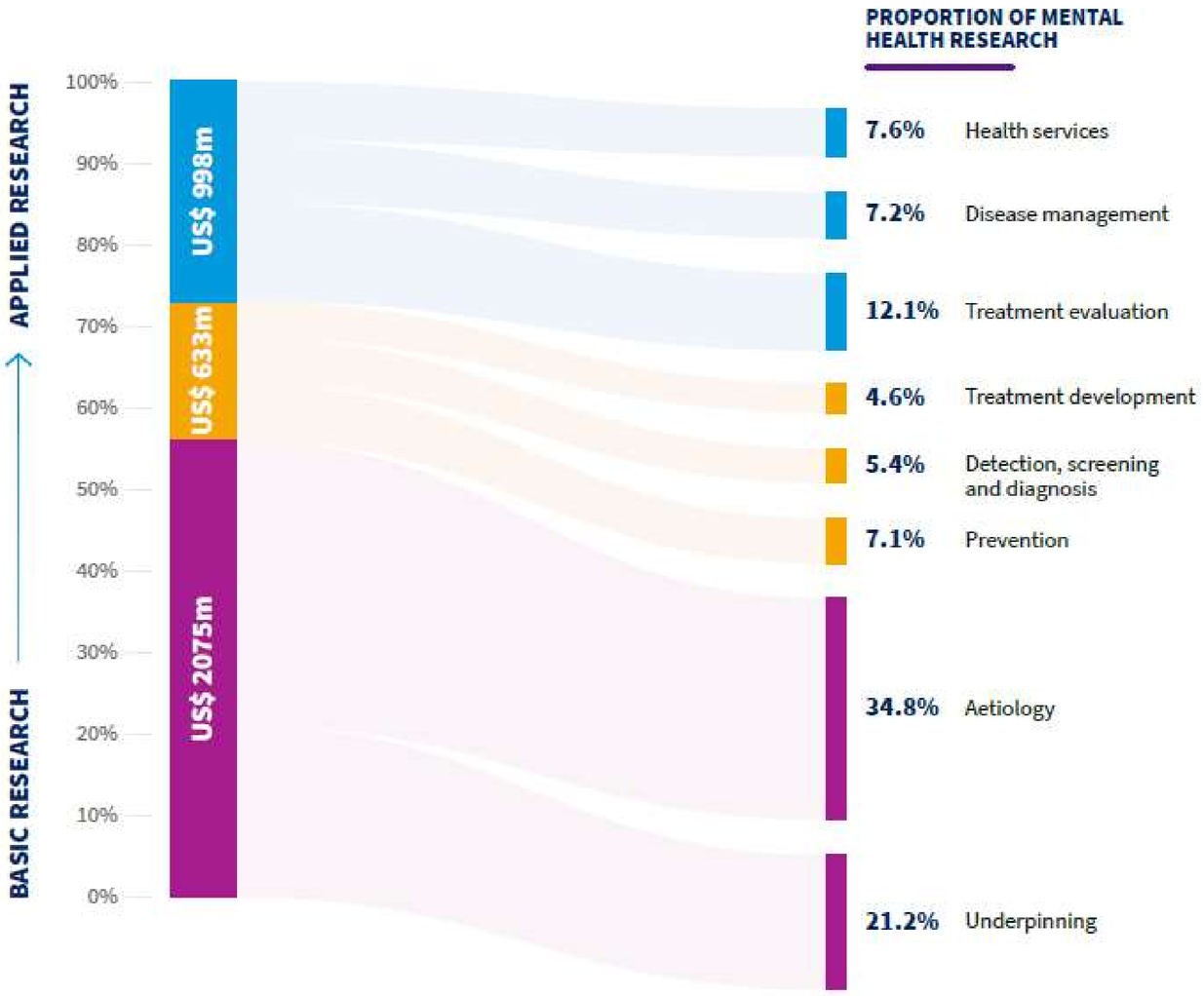
The WHO Special Initiative for Mental Health (2019-2023):
Universal Health Coverage for Mental Health



Pesquisas em Saúde Mental

FIG. 3.10

Most mental health research is focused on the basic end of the spectrum



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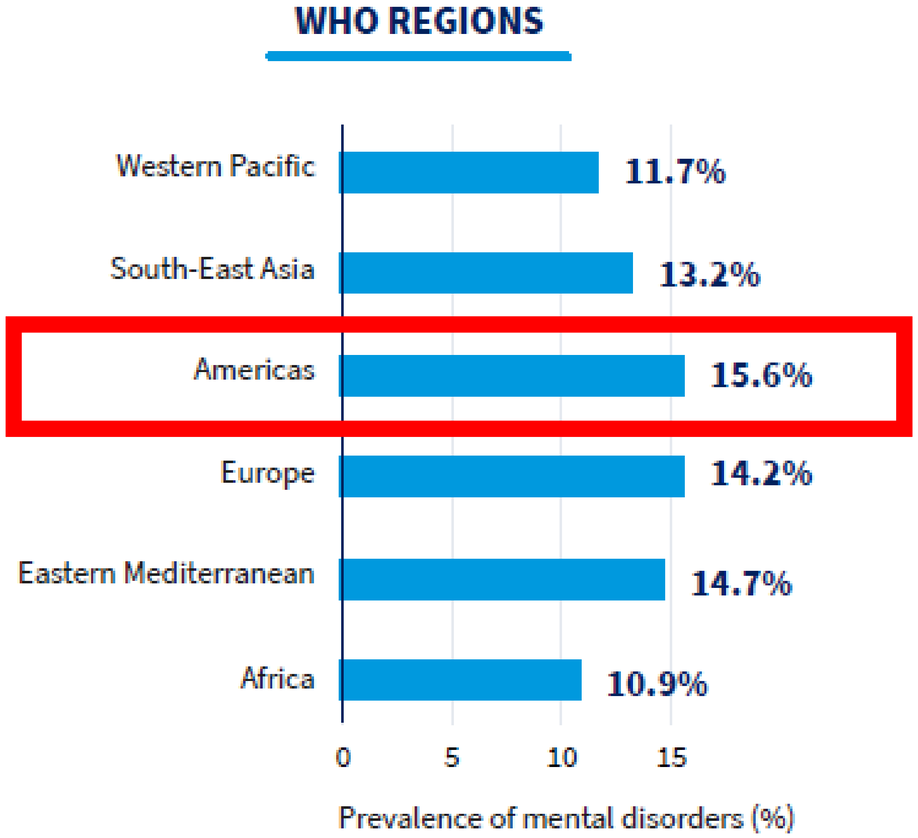
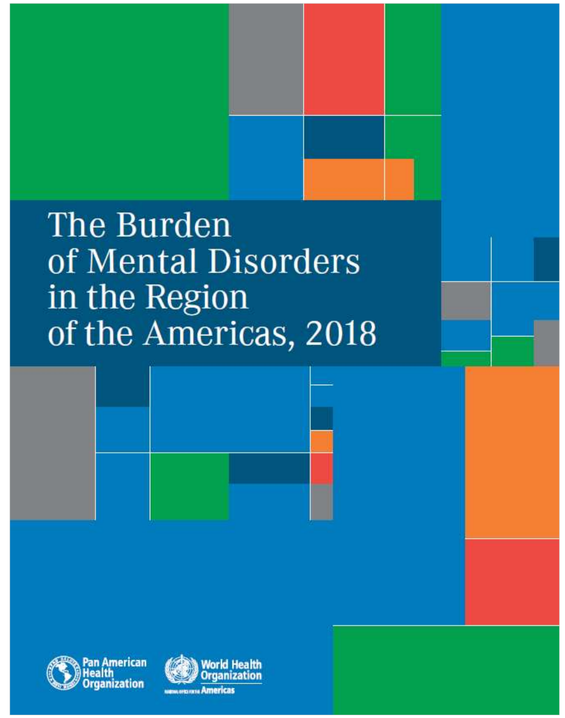
Prevalência de transtornos mentais no mundo, por região

FIG. 3.3

Prevalence of mental disorders across WHO regions, 2019



Source: IHME, 2019 *(112)*.



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Anos vividos com incapacidade no continente Americano provocado por desordens mentais

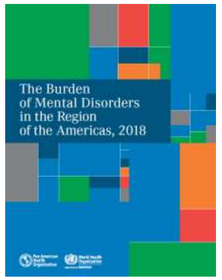
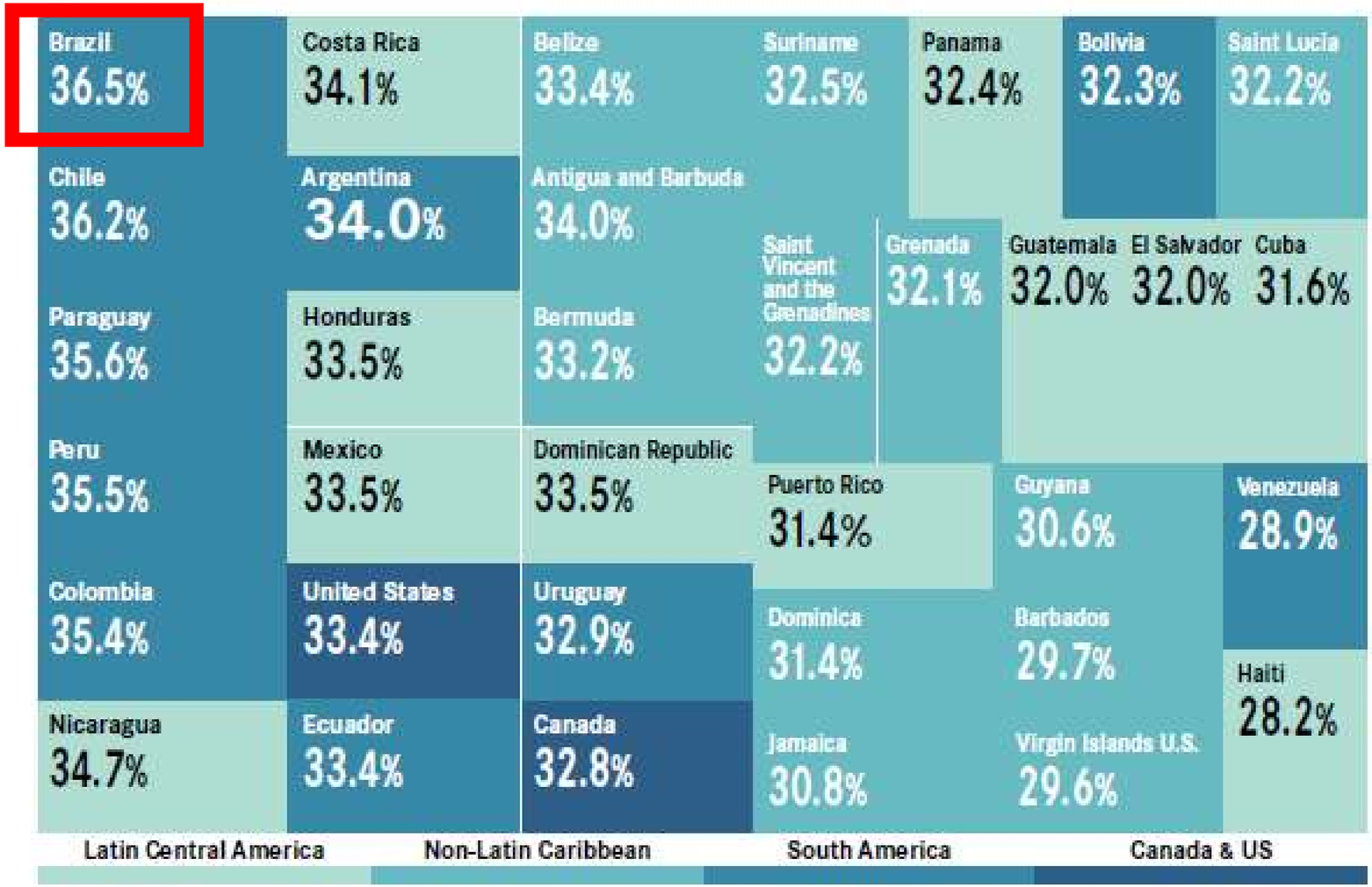


Figure 8: Mental, neurological and substance use disorders and suicide disability tree map (YLDs by country as a percentage of total disability)



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Impacto das condições mentais de saúde em YLD

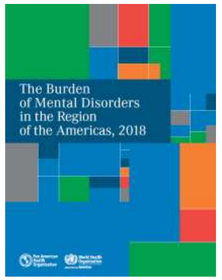
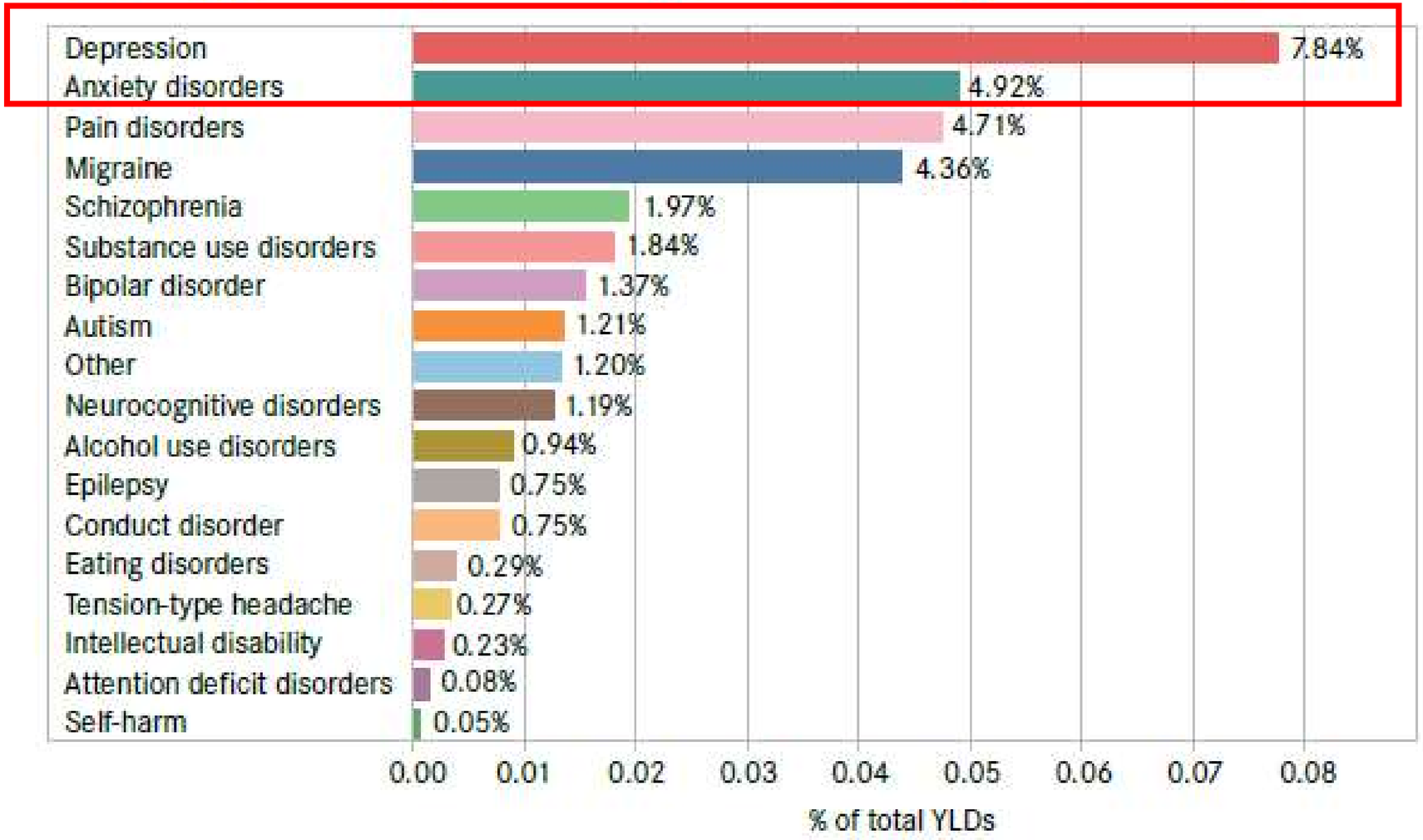


Figure 4: Ranking of mental, neurological, and substance use disorders, and suicide years lived with disability (YLDs)



Impacto das diferentes condições mentais em YLD

Globally, mental disorders account for

1 in 6 years

lived with disability.

FIG. 3.5

The global burden of mental disorders in disability-adjusted life years (DALYs), 2019

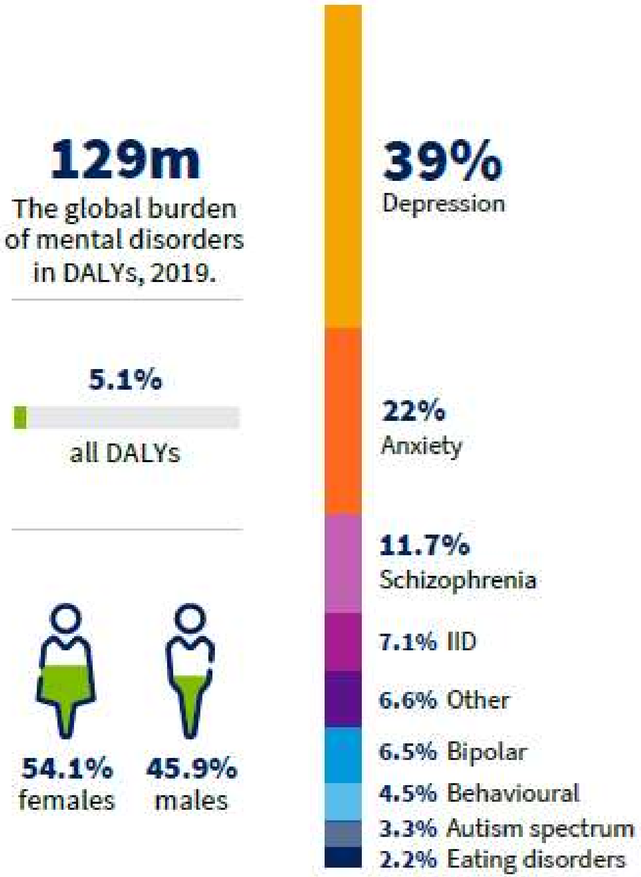
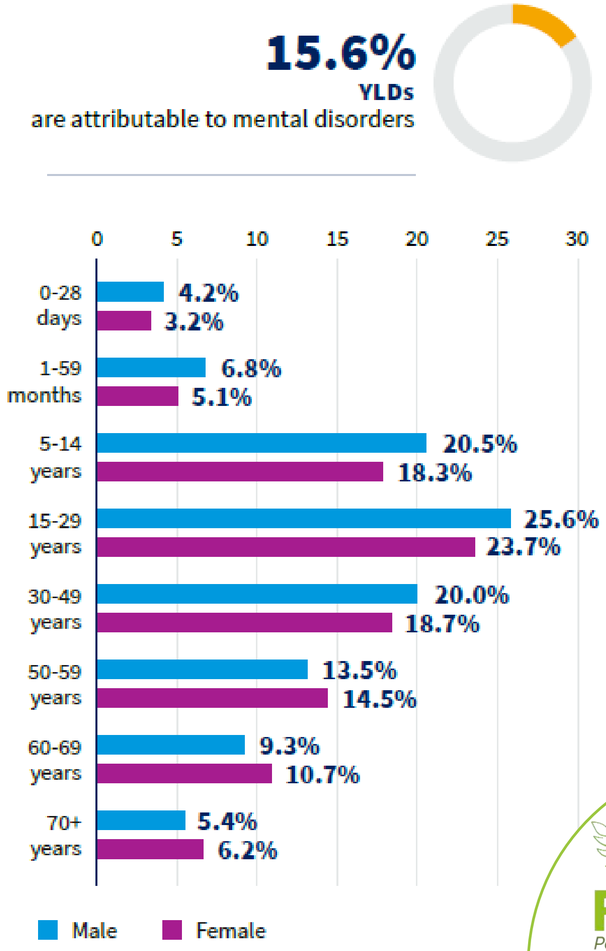


FIG. 3.6

Proportion of all-cause years lived with disability (YLDs) attributable to mental disorders, across the life-course, 2019



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Global, regional, and national burden of 12 mental disorders in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019

Lancet Psychiatry 2022; 9: 137–50

Objetivos do Estudo:

Medir a prevalência mundial, regional e nacional das desordens mentais incluídas no Global Burden Disease (GBD) em DALYS, YLD, YLL entre os anos de 1990 a 2019.

Disability-adjusted life-Years (DALYS): Anos de vida ajustados por incapacidade

Years lived with disability (YLD): Anos vividos com deficiência

Years of life lost (YLL): Anos de vida perdidos

	1990		2019	
	Prevalence, in millions (95% UI)	Age-standardised prevalence per 100 000 people (95% UI)	Prevalence, in millions (95% UI)	Age-standardised prevalence per 100 000 people (95% UI)*
Mental disorders				
Total	654·8 (603·6–708·1)	12 579·3 (11 634·4–13 552·2)	970·1 (900·9–1044·4)	12 262·0 (11 382·9–13 213·3)
Male	317·8 (290·8–346·7)	12 020·0 (11 061·2–13 042·4)	462·2 (427·5–499·7)	11 727·3 (10 835·7–12 693·9)
Female	337·0 (310·1–363·8)	13 100·4 (12 114·8–14 090·9)	507·9 (471·2–547·4)	12 760·0 (11 831·7–13 763·1)
Anxiety disorders				
Total	194·9 (165·1–231·2)	3791·6 (3194·0–4476·6)	301·4 (252·6–356·0)	3779·5 (3181·1–4473·3)
Male	73·4 (61·3–87·0)	2839·2 (2388·7–3332·9)	113·9 (95·4–135·1)	2859·8 (2397·0–3379·9)
Female	121·5 (102·0–144·7)	4732·2 (3983·0–5605·5)	187·5 (157·7–221·6)	4694·7 (3945·6–5576·9)
Depressive disorders				
Total	170·8 (152·7–190·4)	3486·2 (3140·8–3855·7)	279·6 (251·6–310·3)	3440·1 (3097·0–3817·6)
Male	65·6 (58·5–73·2)	2700·7 (2432·1–2987·4)	109·2 (98·0–121·4)	2713·3 (2438·3–3013·1)
Female	105·2 (94·3–117·3)	4262·5 (3844·6–4730·0)	170·4 (153·6–188·7)	4158·4 (3746·9–4616·3)
Other mental disorders				
Total	67·7 (52·7–86·5)	1434·7 (1116·4–1822·6)	117·2 (90·8–148·7)	1428·7 (1108·4–1816·1)
Male	39·9 (30·8–51·0)	1702·3 (1323·7–2155·4)	68·3 (53·0–86·6)	1690·1 (1311·0–2138·8)
Female	27·8 (21·4–35·4)	1173·9 (909·9–1485·8)	48·9 (37·8–61·8)	1173·1 (905·6–1484·9)
Idiopathic developmental intellectual disability				
Total	92·8 (58·3–128·6)	1641·9 (1028·1–2278·2)	107·6 (65·8–150·4)	1426·6 (873·6–1991·7)
Male	47·7 (29·4–66·7)	1657·2 (1017·0–2325·9)	54·9 (32·8–77·6)	1436·4 (860·4–2027·8)
Female	45·2 (29·2–61·6)	1625·3 (1048·2–2220·8)	52·7 (33·1–72·8)	1415·4 (891·3–1954·5)
Attention-deficit hyperactivity disorder				
Total	72·4 (52·9–96·4)	1240·5 (909·6–1647·1)	84·7 (62·5–111·3)	1131·9 (831·7–1494·5)
Male	52·6 (38·6–70·7)	1768·3 (1304·2–2350·6)	61·5 (45·4–80·9)	1611·6 (1184·8–2134·1)
Female	19·8 (14·2–26·4)	693·4 (497·9–918·5)	23·2 (16·8–31·0)	631·0 (455·7–846·5)

Lancet Psychiatry 2022; 9: 137–50

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Years lived with disability (YLD): Anos vividos com incapacidade

Years of life lost (YLL): Anos de vida perdidos por morte prematura

Conduct disorder				
Total	32·7 (23·6–42·5)	537·9 (388·2–699·0)	40·1 (29·0–52·0)	559·0 (405·0–722·3)
Male	21·6 (16·1–27·7)	694·7 (517·7–891·4)	26·3 (19·6–33·4)	711·2 (530·5–904·0)
Female	11·1 (7·4–15·3)	374·0 (248·7–515·5)	13·8 (9·1–19·0)	397·3 (263·8–545·5)
Bipolar disorder				
Total	24·8 (20·6–29·4)	490·1 (411·0–576·5)	39·5 (33·0–46·8)	489·8 (407·5–580·6)
Male	11·6 (9·6–13·8)	459·4 (384·9–540·6)	18·8 (15·7–22·3)	466·9 (388·5–552·9)
Female	13·2 (10·9–15·5)	520·9 (435·1–613·3)	20·7 (17·3–24·6)	512·8 (425·6–609·0)
Autism spectrum disorders				
Total	20·3 (16·9–24·2)	372·8 (309·1–444·9)	28·3 (23·5–33·8)	369·4 (305·9–441·2)
Male	15·6 (13·0–18·6)	571·2 (473·8–679·6)	21·6 (18·0–25·8)	560·1 (465·2–667·3)
Female	4·7 (3·8–5·7)	173·4 (140·9–211·5)	6·7 (5·4–8·2)	176·3 (143·0–214·5)
Schizophrenia				
Total	14·2 (12·2–16·5)	289·9 (249·8–333·2)	23·6 (20·2–27·2)	287·4 (246·2–330·9)
Male	7·5 (6·4–8·7)	304·5 (262·6–350·0)	12·4 (10·6–14·3)	302·7 (259·7–348·4)
Female	6·7 (5·8–7·7)	274·9 (236·9–315·5)	11·2 (9·6–12·9)	272·0 (232·7–313·7)
Eating disorders				
Total	8·5 (6·4–10·9)	150·5 (113·1–192·1)	13·6 (10·2–17·5)	174·0 (130·1–222·1)
Male	2·8 (2·0–3·7)	96·7 (69·1–128·0)	4·7 (3·3–6·2)	117·9 (84·6–156·1)
Female	5·7 (4·3–7·2)	205·8 (156·2–258·6)	9·0 (6·8–11·3)	231·5 (175·1–291·4)

95% UI=95% uncertainty interval. *Disorders ordered from highest to lowest on the basis of total age-standardised rates in 2019.

Table 1: **Global prevalence and age-standardised prevalence for mental disorders in 1990 and 2019**

Lancet Psychiatry 2022; 9: 137–50

Global, regional, and national burden of 12 mental disorders in 204 countries and territories, 1990–2019: a systema analysis for the Global Burden of Disease Study 2019

Lancet Psychiatry 2022; 9: 137–50

Interpretation GBD 2019 showed that mental disorders remained among the top ten leading causes of burden worldwide, with no evidence of global reduction in the burden since 1990. The estimated YLLs for mental disorders were extremely low and do not reflect premature mortality in individuals with mental disorders. Research to establish causal pathways between mental disorders and other fatal health outcomes is recommended so that this may be addressed within the GBD study. To reduce the burden of mental disorders, coordinated delivery of effective prevention and treatment programmes by governments and the global health community is imperative.

Lancet Psychiatry 2022; 9: 137–50

Como está a saúde mental no pós- Covid?

Contents lists available at ScienceDirect

Journal of Psychosomatic Research

journal homepage: www.elsevier.com/locate/jpsychores

Review article

Physical and mental health complications post-COVID-19: Scoping review

Sanaz Shanbehzadeh [a], Mahnaz Tavahomi [b,*], Nasibeh Zanjari [c], Ismail Ebrahimi-Takamjani [b], Somayeh Amiri-arimi [d]

Estudo de revisão:

Pergunta: **Quais são as complicações físicas e de saúde mental em pacientes adultos que foram infectados com COVID-19?**

34 artigos publicados de jan a nov 2020, destes 18 avaliaram a saúde mental

- 8932 participantes: 56, 3% mulheres e 43,7% homens
- Sintomas: 1 a 3 meses após COVID-19
- Média de dias hospitalizados: 15 dias

Resultados

Ansiedade: 1ª desordem mental mais frequente, com prevalência de 6,5 a 63% dos pacientes

Depressão: 2ª desordem mental mais frequente, com prevalência de 4 a 31% dos pacientes

Estresse: 3ª desordem mental mais frequente, com prevalência de 12,1 a 46,9% dos pacientes

Insônia, redução da capacidade cognitiva

Quanto > severidade da COVID-19 > prevalência de desordens mentais

Mais de 50% dos pacientes relatou apresentar pelo menos um dos sintomas: ansiedade, depressão ou estresse

Journal of Psychosomatic Research 147 (2021) 110525

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Table 3
Mental health outcomes in COVID-19 survivors.

Author	Study design	Country	Sample size (N, Male/Female)	Age (years) Mean (SD)	Follow-up period month/or days Mean (SD)	Hospitalization period, days Mean (SD)	Outcomes (Measurement tools)	Results, Prevalence of outcomes
Daher et al. [15]	Case series	Germany	33 22/11	64 (3)	58.49 (17.82) days after discharge	15 (1.8)	Depression (PHQ-9) Anxiety (GAD-7) Cognitive problems	Median [IQR] Depression 7 [4–11] Anxiety 4 [1–9] Cognitive problems 6/33 (18%) ↑Insomnia (24%)
Arnold et al. [16]	Prospective cohort study	England	110 68/42	59.64 (20.28)	88.94 (12.77) days after hospital discharge	5(4.5)	Mental wellbeing (WEMWBS) Insomnia (NEWS, scored from 1 to 20)	Mental wellbeing in severity of COVID-19 Median [IQR] Mild 52 [44-56] Moderate 53 [42-59] Severe 50 [39-58] Mental wellbeing was similar to healthy population norms
Garrigues et al. [19]	Cohort study	France	120 75/45	63.2 (15.7)	110.9 (11.1) days after hospital admission	11.2 (13.4)	Cognitive and sleep problems (short phone questionnaire)	Attention problem 32/120 (26.7%) Memory loss 41/120 (34.2%) Sleep problems 37/120 (30.8%)
Halpin et al. [21]	Cross-sectional study	England	100 (19/13 in ICU group, 35/33 in Ward group)	ICU patients: 58.85 (38.8) Ward patients: 60.61 (55.29)	48 (10.3) days after hospital discharge	ICU patients: 12.71 (4.65) Ward patients: 8.26 (7.57)	PTSD symptoms, cognitive problems (COVID-19 rehabilitation telephone screening tool, Likert scale)	ICU (n=32) / Ward (n=68) PTSD 46.9% / 23.5% Worsened anxiety/depression 12 (37.5%) / 11 (16.2%) Thoughts of self-harm 1 (3.1%) / 1 (1.5%) New or worsened concentration problem 11 (34.4%) / 11 (16.2%) New or worsened short-term memory problem 6 (18.8%) / 12 (17.6%)

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Table 3 (*continued*)

Author	Study design	Country	Sample size (N, Male/Female)	Age (years) Mean (SD)	Follow-up period month/or days Mean (SD)	Hospitalization period, days Mean (SD)	Outcomes (Measurement tools)	Results, Prevalence of outcomes
Liu et al. [60]	Cross-sectional survey study	China	675 317/358	53.94 (18.57)	36.75 days after hospital discharge	27.87	Anxiety (GAD-7) Depression (PHQ-9) PTSD symptoms (PCL-5) Sleep difficulties (item analysis for PTSD, depression)	PTSD 84/675 (12.4%) Anxiety 70/675 (10.4%) Depression 128/675 (19%) PCL-5 12 [IQR 4–16] GAD-7 4 [IQR 2–6] PHQ-9 5 [IQR 3–8] Sleep difficulty was the most frequently reported symptom. Perceived discrimination was a central predictor of mental illness.
Ismael et al. [74]	Retrospective cohort study	Brazil	895 354/541	40.79 (0.45)	56.6 days after treatment	N/A	Depression (PHQ-9) Anxiety (GAD-7) PTSD (PCL-C) (online assessment, website or phone)	Depression ($n = 235$) 26.26% Anxiety ($n = 201$) 22.46% PTSD ($n = 155$) 17.32%
Weerahandi et al. [75]	Prospective cohort study	New York, USA	152 95/57	59.54 (12.72)	36.64 (9.72) days after hospital discharge	19.75 (15.71)	Overall and mental health status (PROMIS Global Health-10 instrument) Survey completed by phone or online	During follow-up: Mean (SD) ↓Mental health 47.3 (9.3) * Indicating worse mental health after COVID-19 compared to baseline

E por que a preocupação e vigilância da OMS em relação à melhora dos serviços de saúde direcionados à Saúde Mental em nível mundial?

Benefícios de investir em Saúde Mental

Some of the potential social and economic benefits of investing in mental health

IMPROVED MENTAL HEALTH

HEALTH IMPACT	SOCIAL IMPACT	ECONOMIC IMPACT
Death and disability	Need for informal caregiving	Health care costs
Life expectancy	Social functioning	Productivity → Output → Investment
Suicide	Household production	Presenteeism, Absenteeism
Health of others (children, carers, spouse)		Employment (ability to work) → Income → Welfare needs, Savings

Source: adapted from WHO and UNDP, 2021 (221)

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Pesquisa e conhecimento magistral

Global Mental Health 1

No health without mental health

Martin Prince, Vikram Patel, Shekhar Saxena, Mario Maj, Joanna Maselko, Michael R Phillips, Atif Rahman

Lancet 2007; 370: 859–77

Global Mental Health 1

No health without mental health

impactam

impactam

Desordens Mentais

Doenças Crônicas Não Transmissíveis

Doenças Cardiovasculares

Moderada a forte associação entre Depressão e ansiedade na DCV

Estudos com pacientes hipertensos: alto score de pacientes com depressão e ansiedade

Estudo mostrou associação entre derrame (AVC hemorrágico)

Diabetes

Depressão aumenta o risco do aparecimento de diabetes

Pessoas com esquizofrenia tem aumento de 15% na prevalência de diabetes

Condições de Saúde

Hábitos e doenças que afetam diretamente a saúde cerebral: AVC, uso de álcool e drogas

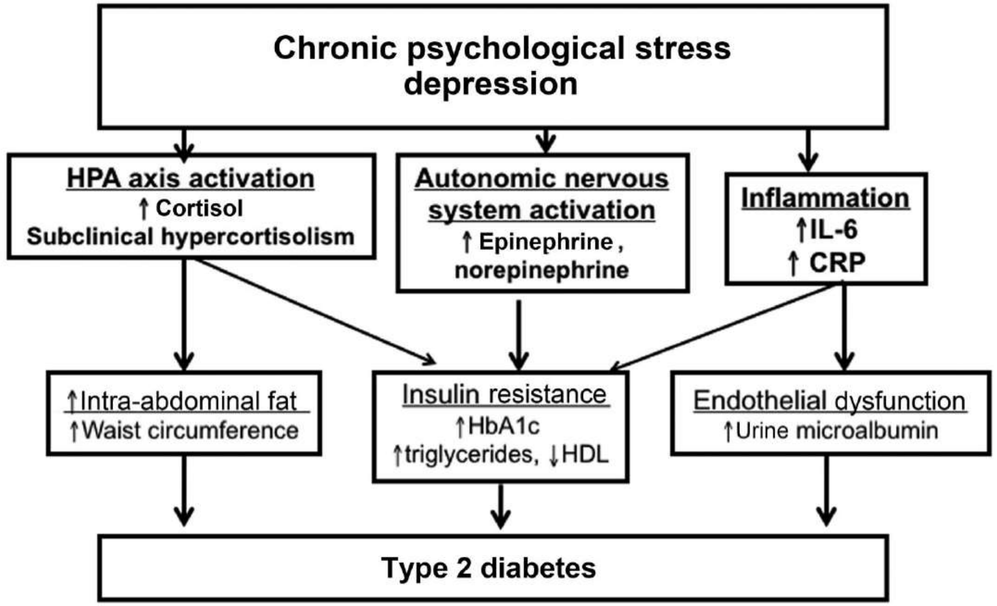
Doenças com alto DALY (câncer, obesidade mórbida) ou condições que o indivíduo tem dificuldades de conviver – levando a perda de apoio social e de relações interpessoais

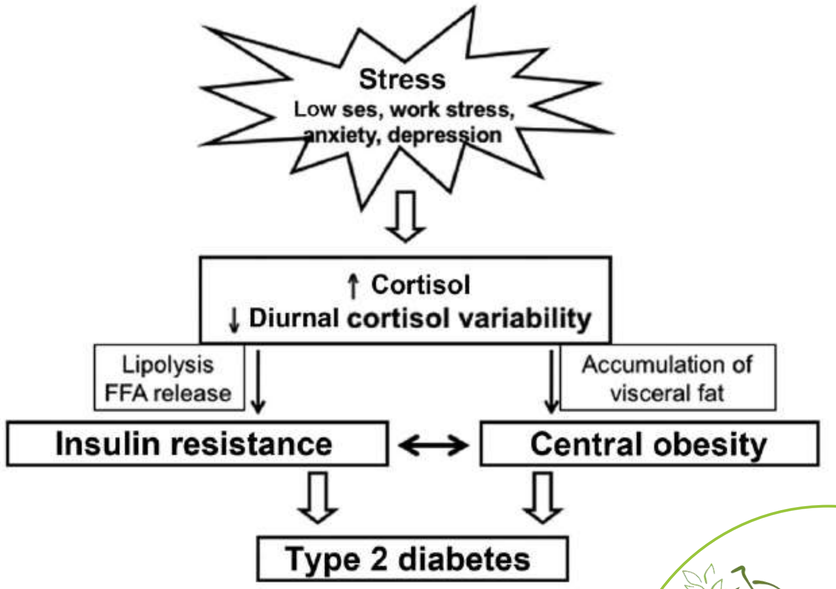
Lancet 2007; 370: 859–77

Exemplo:
Relação de mão dupla entre estresse, depressão e/ou ansiedade com Diabetes tipo 2

ANNALS OF THE NEW YORK ACADEMY OF SCIENCES
Issue: *The Year in Diabetes and Obesity*
REVIEW ARTICLE

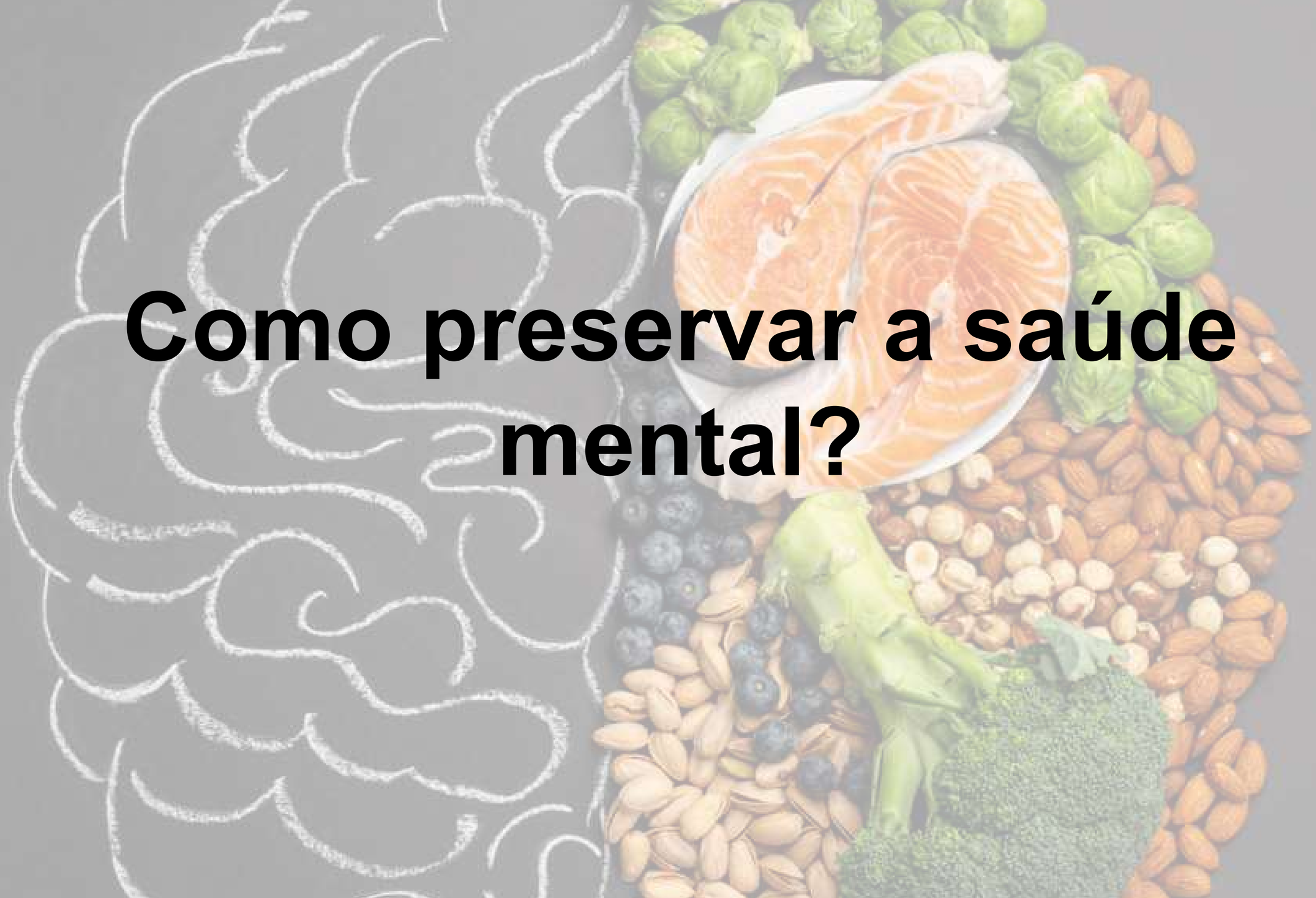
Cortisol dysregulation: the bidirectional link between stress, depression, and type 2 diabetes mellitus





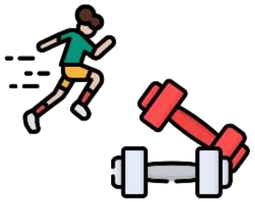
Ann. N.Y. Acad. Sci. ISSN 0077-8923

Como preservar a saúde mental?



Como preservar/recuperar a saúde mental?

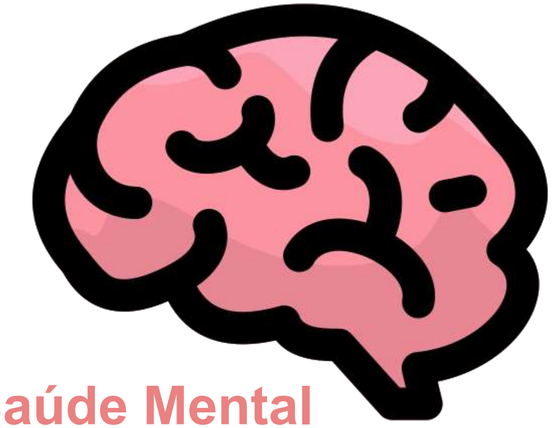
Exercícios



Qualidade do sono

Cultivar amizades e bons relacionamentos inter-pessoais

Manejo do Estresse



Saúde Mental

Alimentação

Religiosidade e Espirirtualidade

Fitoterapia

Medicamentos

Yoga, Meditação, Atividades de relaxamento e lazer

Acompanhamento com equipe de saúde

FlorienTech
Pesquisa e conhecimento magistral

Fitoterápicos e Suplementos como coadjuvantes para o restabelecimento da saúde mental

DEPRESSÃO

ANSIEDADE

Serotonina
Dopamina

Serotonina
GABA

INSÔNIA

Glutamato

Triptofano

Adrenalina

5-HTP

Melatonina

SEROTONINA

Cortisol

Triptofano Hidroxilase
Cofator: **Fe** e BH4 (**Vitamina B9**)

Cofator
Vitamina D

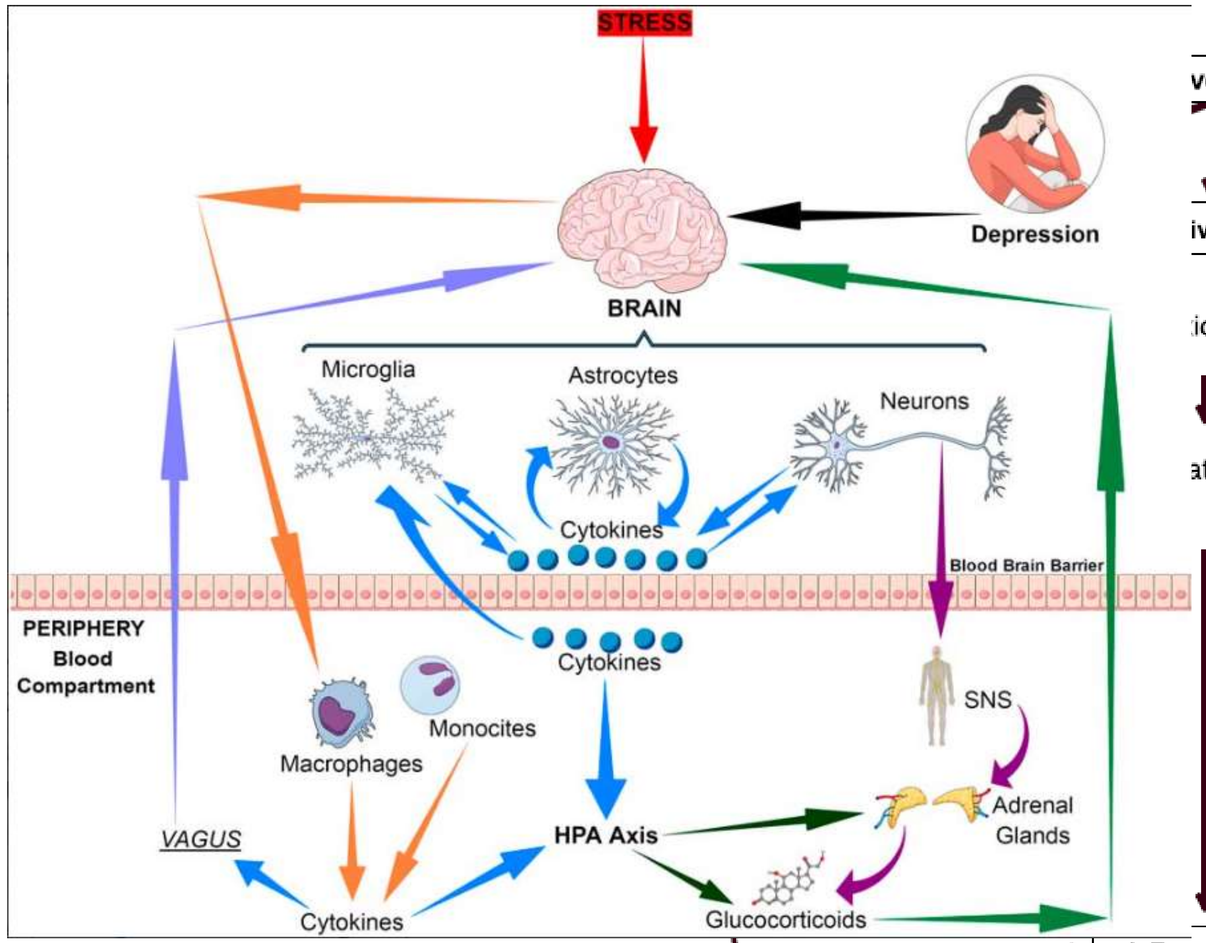
5-HTP descarboxilase
Cofator: Fe e BH4
(**Piridoxal 5-fosfato Vit B6**)

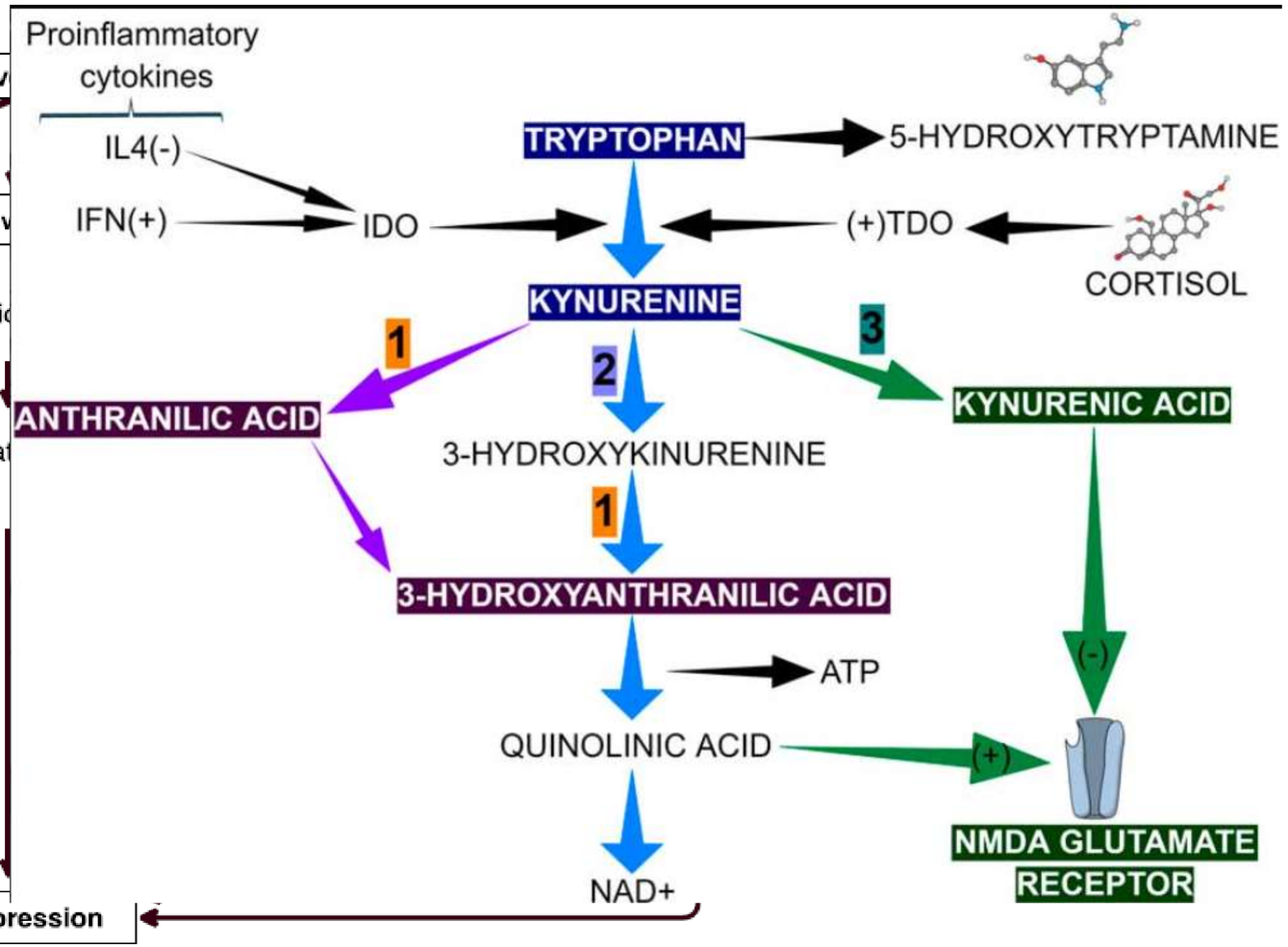
Ácido 5-hidroxi-indol-acético
(MAO-a – **Vit B2**)

ESTRESSE

Fonte: Clínica Marina Baitello

Fitoterápicos e Suplementos como coadjuvantes para o restabelecimento da saúde mental





Acta Neuropsychiatrica , Volume 30 , Issue 1 , February 2018 , pp. 1 – 16; *Antioxidants* 2021, *10*(9), 1439

Fitoterápicos e Suplementos como coadjuvantes para o restabelecimento da saúde mental

Received: 5 October 2017 | Revised: 8 December 2017 | Accepted: 21 December 2017
DOI: 10.1002/ptr.6033

REVIEW

WILEY

Herbal medicine for depression and anxiety: A systematic review with assessment of potential psycho-oncologic relevance

Reviews

Thieme

Medicinal Plants for Insomnia Related to Anxiety: An Updated Review#

Received: 19 November 2017 | Revised: 18 January 2018 | Accepted: 19 January 2018
DOI: 10.1002/ptr.6055

REVIEW

WILEY

Herbal medicines in the treatment of psychiatric disorders: 10-year updated review

Lakhan and Vieira *Nutrition Journal* 2010, **9**:42
http://www.nutritionj.com/content/9/1/42

NUTRITION JOURNAL

RESEARCH Open Access

Nutritional and herbal supplements for anxiety and anxiety-related disorders: systematic review

Shaheen E Lakhan*, Karen F Vieira

Ações possíveis do Fitoterápicos e Suplementos como coadjuvantes para o restabelecimento da saúde mental:

1 Aumento de Serotonina:
Griffonia simplicifolia
Probióticos e prebióticos
Vitaminas B 6, 9, B12 e Ferro

2 Agonista de Serotonina:
Ansiless ®
Bacopa monnieri

3 Aumentar Dopamina
Rhodiola rosea
Mucuna pruriens

4 Inibição da recaptação de serotonina
Crocus sativus

5 Regulação Melatonina:
Herbatonin ®
Ansiless ®
Melissa officinalis
Passiflora incarnata

6 Regulação de Cortisol:
Ocibest®
Panax ginseng
Rhodiola rosea
CoQ10 Ubquisome

7 Agonismo de Gaba
Ansiless ®
Rhodiola rosea
Erythrina mulungu
Passiflora incarnata
Whitania somnifera

8 Inibição da recaptação
Crocus sativus

FlorienTech
Pesquisa e conhecimento magistral

Ações possíveis do Fitoterápicos e Suplementos como coadjuvantes para o restabelecimento da saúde mental:

9	**Redução de glutamato:**	*L-theanina* *Rhodiola rosea* *Vitaminas B 6, 9, B12 e Ferro*
10	**Redução da Inflamação e Estresse Oxidativo:**	***CoQ10 Ubqsome Phytosome ®*** ***Querceteam Phytosome ®***
11	**Neuroplasticidade (Aumento de BDNF)**	***Neurozen ®*** *EPA e DHA*
12	**Antagonista do receptor de glutamato**	***Fitaxin ®***

FlorienTech
Pesquisa e conhecimento magistral

Scutellaria lateriflora L (Ansiless ®)

ANSILESS®

***Scutellaria lateriflora* L.**

(5 % escutelarina)

Skullcap

Rica em flavonoides: Baicaleina, baicalin, wogonina e escutelarina

- **Ação ansiolítica**
- **Ação anti-depressiva**

Ação ansiolítica → **Afinidade pelo sítios benzodiazepínicos dos receptores de GABA-a** → **Redução da liberação de neurotransmissores excitatórios (adrenalina e noradrenalina)**

Ação Anti-depressiva → **Afinidade pelos receptores de serotonina-7 ($5HT_7$)** → **Melhora do humor (reduz sensações negativas: tristeza, desânimo, apatia)**

FlorienTech
Pesquisa e conhecimento magistral

Scutellaria lateriflora L (Ansiless ®)

European Neuropsychopharmacology (2011) 21, 841–860

ELSEVIER www.elsevier.com/locate/euroneuro

REVIEW

Herbal medicine for depression, anxiety and insomnia: A review of psychopharmacology and clinical evidence

Estudo Clínico:

Randomizado, duplo cego

2 grupos: Placebo x tratamento com Ansiless

Pacientes auto avaliaram o nível de ansiedade 30, 60, 90 e 120 min após a ingestão em:

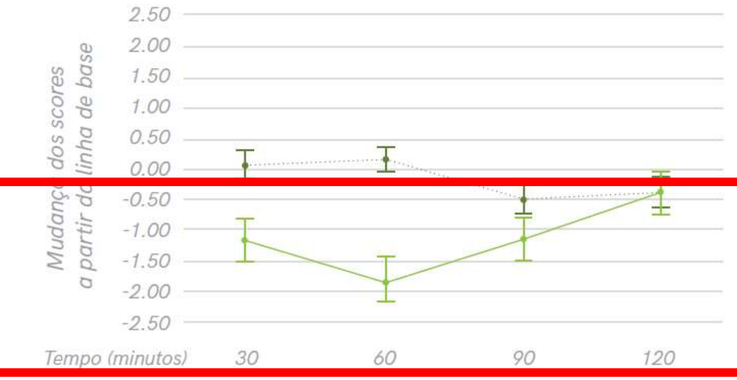
+ 5: máximo de tensão

- 5: mínimo de tensão

Table 2 (*continued*)

Herbal medicine	Mechanisms of action	Evidence *			Potential clinical application	Major active constituents
		Dep	Anx	Ins		
	◇ β-adrenergic downregulation ◇ MAO-B inhibition ◇ Re-uptake inhibition of norepinephrine in the prefrontal cortex (Boonen and Haberlein, 1998; Davies et al., 1992; Jussofie et al., 1994; Magura et al., 1997; Uebelhack et al., 1998)				Pain	
Lemonbalm (*Melissa officinalis*)	◇ Potent in vitro inhibitor of rat brain GABA transaminase (GABA-T) ◇ MAO-A inhibition ◇ Acute dosing caused a significant increase in self-rated calmness on a human stress tests	2,3	1,2,3	3	Acute stress Anxiety Depression	citranellal, geraniol

Figura 1



Ação Ansiolítica

Grupo tratado com placebo

Grupo tratado com a espécie de **Ansiless®**

WOLFSON P, HOFFMANN DL. An investigation into the efficacy of Scutellaria lateriflora in healthy volunteers. Altern Ther He

FlorienTech
Pesquisa e conhecimento magistral

Ansiedade e Desalinhamento do Ciclo Circadiano: a pandemia de COVID-19 como exemplo

Environmental Science and Pollution Research (2022) 29:28062–28069
https://doi.org/10.1007/s11356-021-18384-4

RESEARCH ARTICLE

Circadian rhythm disorder and anxiety as mental health complications in post-COVID-19

Dmytro I. Boiko[1] · Andrii M. Skrypnikov[1] · Anastasiia D. Shkodina[2,3] · Mohammad Mehedi Hasan[4] · Ghulam Md. Ashraf[5,6] · Md. Habibur Rahman[7,8]

Estudo de coorte retrospectivo:

278 pacientes consultados em 2021, entre 18 e 51 anos com sintomas de desordens do sono e ansiedade

- **Grupo 1: 158 pacientes diagnosticados com COVID-19**
- **Grupo 2: 125 pacientes que não tiveram COVID-19**

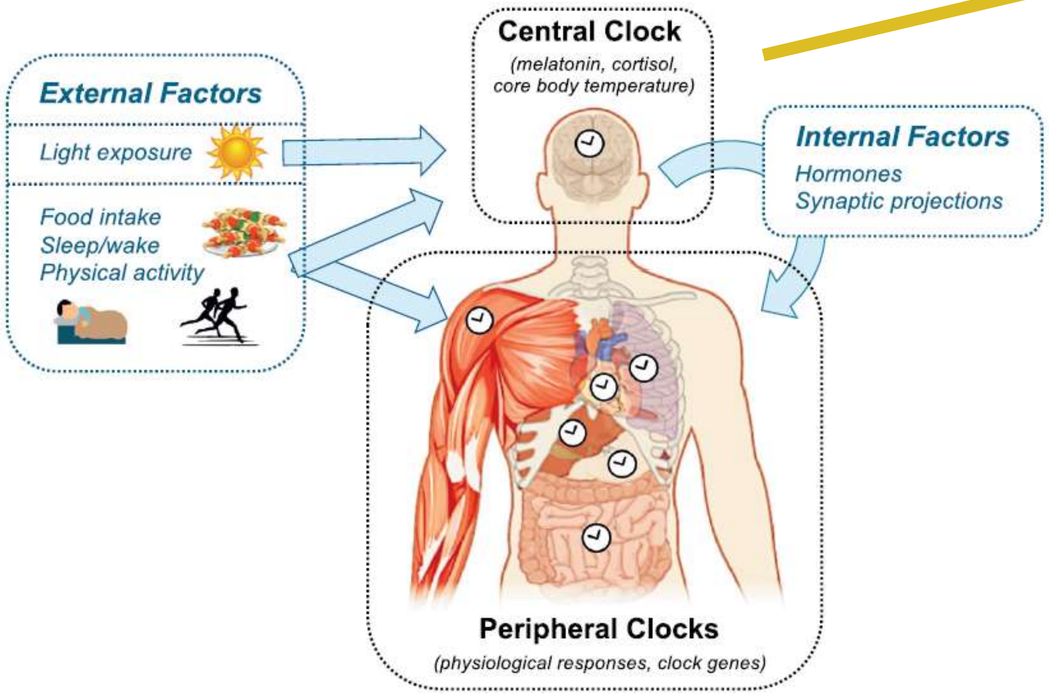
The most common circadian rhythm disorders were sleep phase shifts. We found that COVID-19 in the anamnesis caused a greater predisposition of patients to the development of circadian rhythm disorders, in particular delayed sleep phase disorder. In addition, it was found that after COVID-19 patients have increased levels of both trait and state anxiety. The prevalence of delayed sleep phase disorder may be due to both the neurotropic nature of the

Concluding Remarks

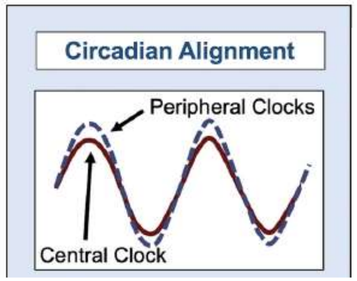
The post-COVID period is characterized by complications in the form of mental disorders, in particular anxiety disorders. An equally important symptoms of the post-COVID period are circadian rhythm disorders, which can enhance the level of affective disorders. Among the circadian rhythm disorders, delayed sleep phase disorder occurs most frequently in the post-COVID period, which is associated with a higher level of anxiety in these patients. These links

Possível Mecanismo e sugestão de tratamento

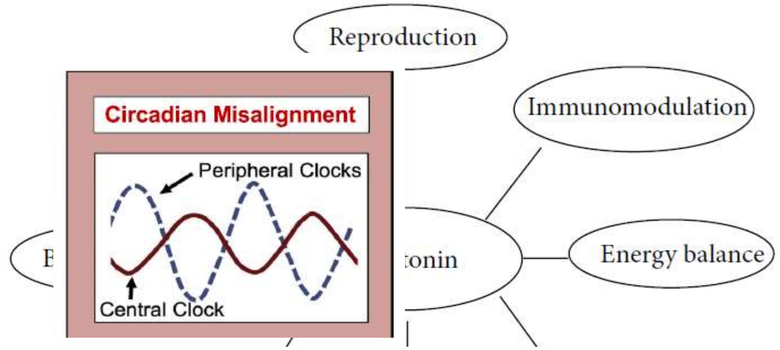
Ciclo Circadiano



Videnovic, A. *et al. Nat. Rev. Neurol.* **10**, 683–693 (2014);



https://doi.org/10.1016/j.metabol.2017.11.017

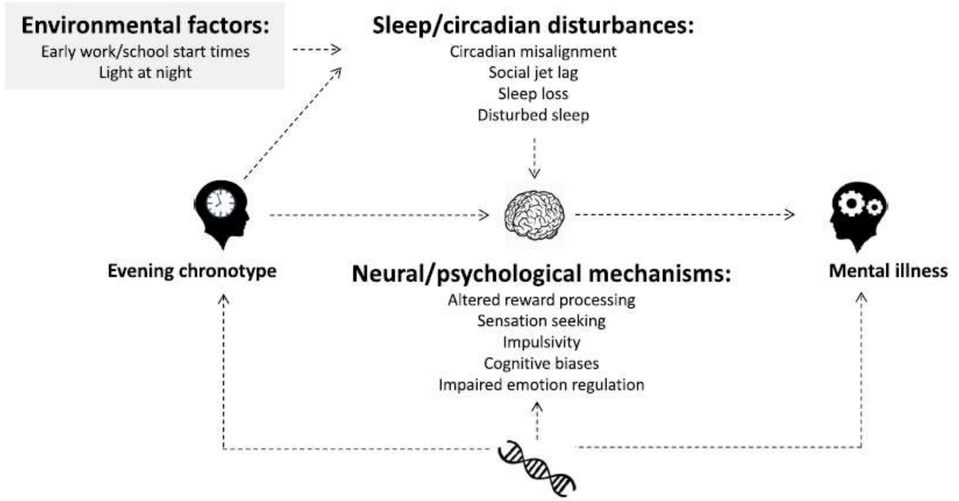


Current Psychiatry Reports (2018) 20: 59
https://doi.org/10.1007/s11920-018-0925-8

SLEEP DISORDERS (P GEHRMAN, SECTION EDITOR)

Chronotype and Mental Health: Recent Advances

Briana J. Taylor[1] · Brant P. Hasler[2]



Adv Nutr 2015;6:648–59; doi:10.3945/an.115.008623.

frontiers in Psychiatry

SYSTEMATIC REVIEW
published: 10 June 2021
doi: 10.3389/fpsyt.2021.688890

Check for updates

International Expert Opinions and Recommendations on the Use of Melatonin in the Treatment of Insomnia and Circadian Sleep Disturbances in Adult Neuropsychiatric Disorders

OPEN ACCESS

Edited by:
Daniel P. Cardinali,
UCA Pontificia Universidad Católica Argentina, Argentina

Reviewed by:
Dario Acuña-Castroviejo,
University of Granada, Spain
Gregory M. Brown,

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International Expert Opinions and Recommendations on the Use of Melatonin in the Treatment of Insomnia and Circadian Sleep Disturbances in Adult Neuropsychiatric Disorders

Recommendations for Melatonin Use in Mood Disorders

Insomnia

1) The administration of PR melatonin at 2–10 mg, 1–2 h before bedtime, should be used in the treatment of insomnia symptoms or comorbid insomnia in mood disorders.
2) The administration of PR melatonin at 2 mg may be useful during sedative-hypnotics discontinuation in mood disorders and may improve sleep quality during discontinuation
3) The chronotype of patients should be taken into account to adapt the timing of the administration
4) The administration of IR melatonin in the treatment of insomnia symptoms or comorbid insomnia in mood disorders gave uncertain results, more studies are needed for recommendation in the clinical practice

Circadian sleep disorders

1) Melatonin is useful in the treatment of circadian sleep disorders in mood disorders; IR melatonin ≤1 mg should be used and timing of administration ideally calculated with the DLMO or with a chronotype questionnaire like the MEQ.

LEGEND: PR, Prolonged Release; IR, Immediate Release; DLMO, Dim Light Melatonin Onset; MEQ, Morningness-Eveningness Questionnaire.

Recommendation for Melatonin Use in Anxiety Disorders

Insomnia

1) In the absence to date of well-conducted RCTs, the administration of melatonin might be useful in the treatment of insomnia symptoms or comorbid insomnia disorder in anxiety disorders according to international guidelines for insomnia disorder treatment (>55 years 2 mg PR melatonin 1–2 h before bedtime)

Circadian sleep disorders

2) Melatonin might be useful in the treatment of circadian sleep disorders in anxiety disorders; IR melatonin ≤1 mg should be used and timing of administration ideally calculated with the DLMO or with a chronotype questionnaire like the MEQ.

LEGEND: RCT, Randomized controlled trial; PR, Prolonged Release; IR, Immediate Release; DLMO, Dim Light Melatonin Onset; MEQ, Morningness-Eveningness Questionnaire.

Oryza sativa, Medicago sativa e Chlorella vulgaris (Herbatonin®)

Oryza sativa

Medicago sativa

Chlorella vulgaris

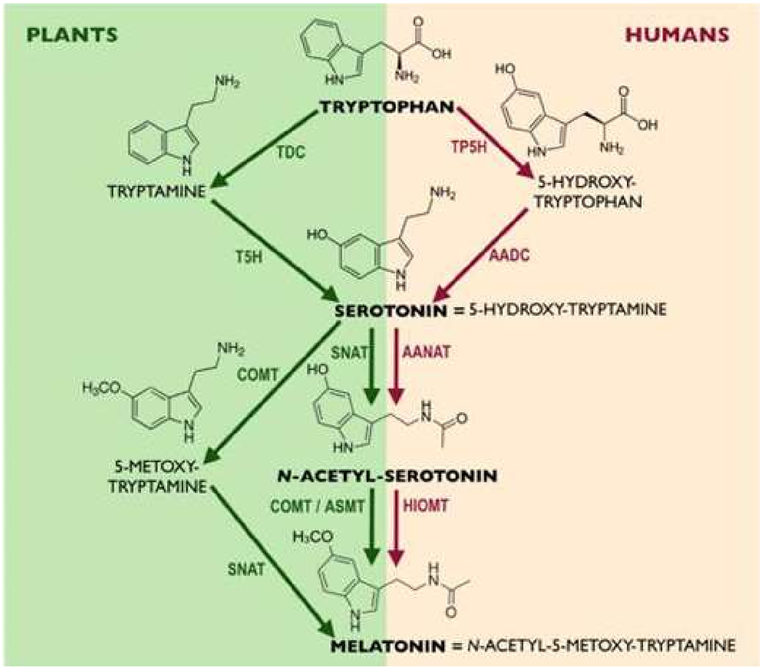
1% Fitomelatonina
(Bioidentica a melatonina animal)

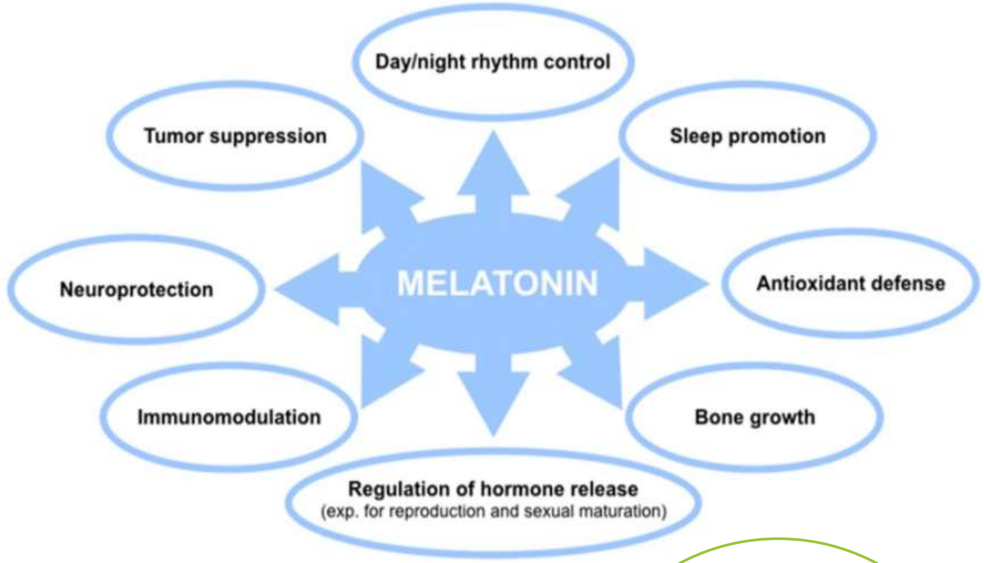
cells

MDPI

Review

Melatonin in Medicinal and Food Plants: Occurrence, Bioavailability, and Health Potential for Humans





FlorienTech
Pesquisa e conhecimento magistral

Oryza sativa, Medicago sativa e Chlorella vulgaris (Herbatonin®)

J. Sleep Res. (2003) **12,** 207–212

Neurobehavioural performance effects of daytime melatonin and temazepam administration

NAOMI L. ROGERS[1], DAVID J. KENNAWAY[2] and DREW DAWSON[3]

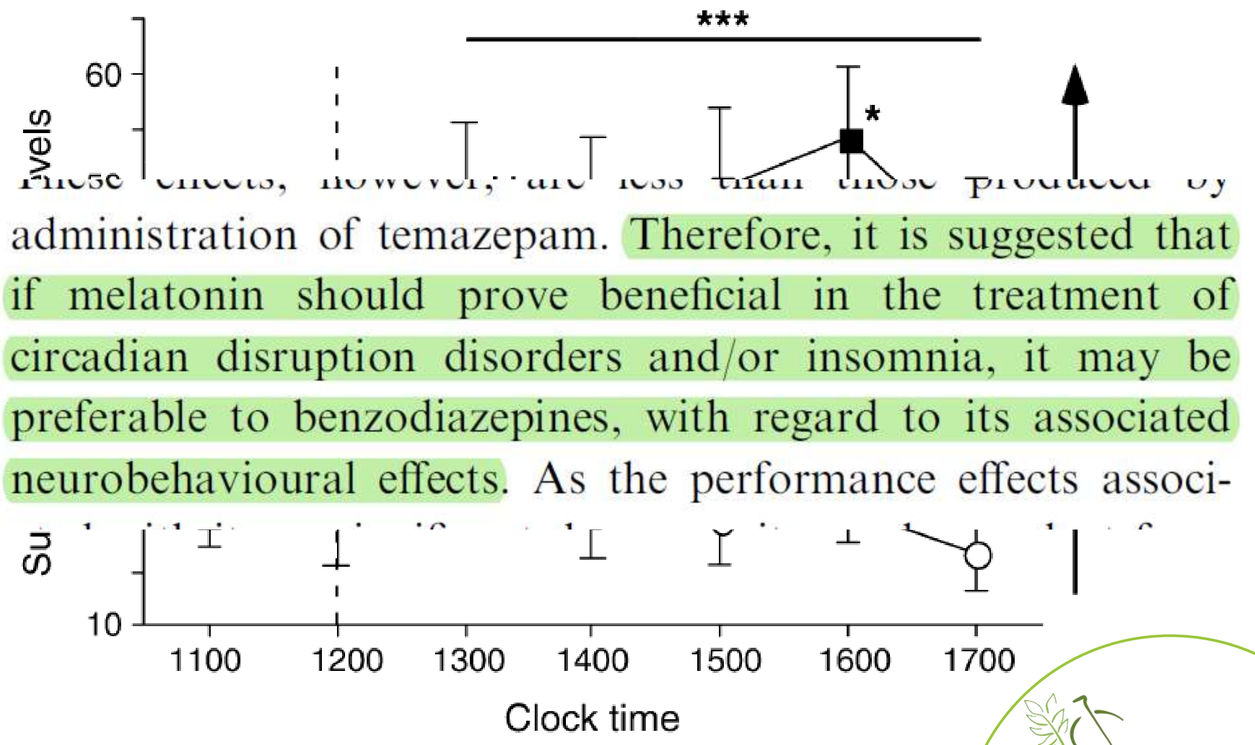
Estudo randomizado, duplo cego, crossover

16 pacientes adultos, 21 ± 6 anos

Dose:
5 mg de melatonina ou
10 mg temazepan

Duração do estudo:
3 dias alternados

Testes: lógica, memória, vigilância



administration of temazepam. Therefore, it is suggested that if melatonin should prove beneficial in the treatment of circadian disruption disorders and/or insomnia, it may be preferable to benzodiazepines, with regard to its associated neurobehavioural effects. As the performance effects associ-

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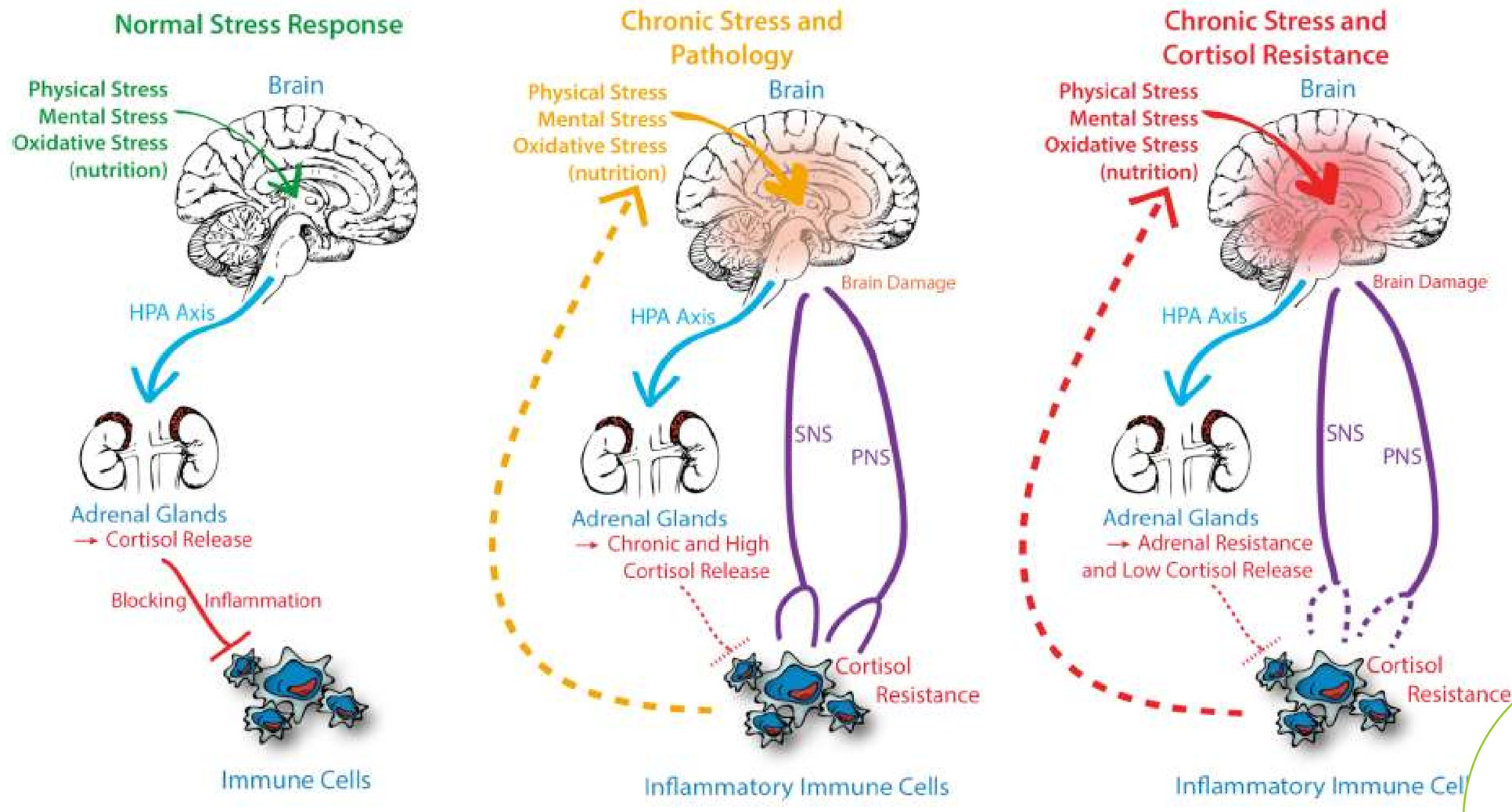
Pesquisa e conhecimento magistral

Eixo HPA e Depressão



Journal of Basic & Applied Sciences, 2014, 10, 177-182

Modulação do eixo HPA por meio do cortisol

Manjericão- santo Tulsi (*Ocimum tenuiflorum*)
OciBest®
0,1% de ociglicosídeo-I
0,2% de ácido rosmarínico
2,5% de ácidos triterpênicos

Adaptógeno

Mecanismo de ação:

Inibe a liberação de cortisol pela suprarrenal

Inibe a transformação de cortisona em cortisol

Antagonista do receptor de ACTH na hipófise

Atividade inibitória da COMT → Retarda degradação de dopamina e serotonina

Florien

Modulação do eixo HPA por meio do cortisol

Research Article

Efficacy of an Extract of *Ocimum tenuiflorum* (OciBest) in the Management of General Stress: A Double-Blind, Placebo-Controlled Study

Ensaio Clínico, duplo cego, placebo:
158 adultos, 3 ou + sintomas de estresse
76 → Ocibest 3 x dia
82 → placebo
6 semanas

Hindawi Publishing Corporation
Evidence-Based Complementary and Alternative Medicine
Volume 2012, Article ID 894509, 7 pages
doi:10.1155/2012/894509

Table 3: Effect of OciBest on symptom scores of stress.

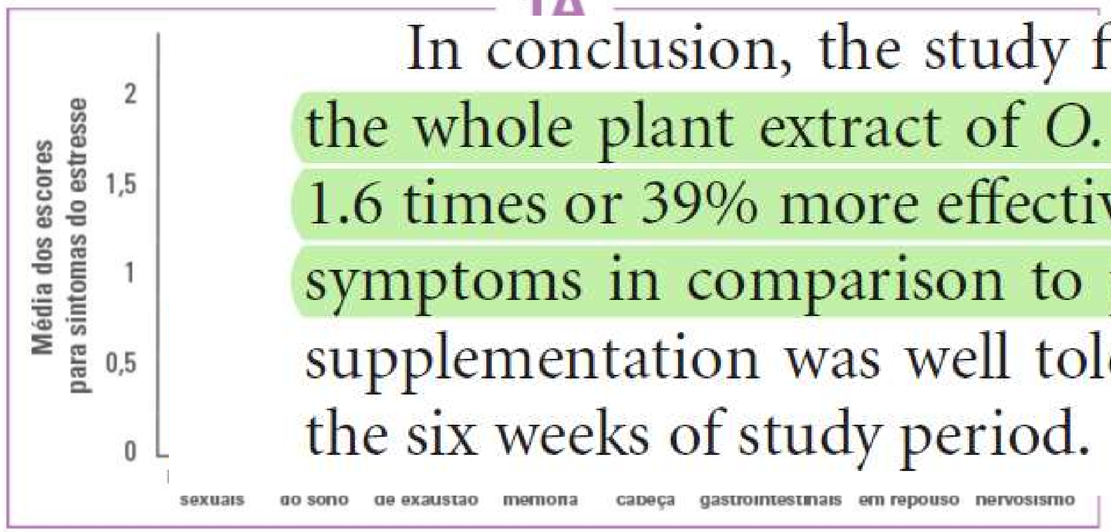
Symptoms	Groups	Assessment period				Effect[X]	Effect size[Y]
		Week 0	Week 2	Week 4	Week 6		
Headache	Placebo	1.34 ± 0.17	0.96 ± 0.14[a]	0.78 ± 0.13[a]	0.58 ± 0.12[ab]	0.76 ± 0.16	
	OciBest	1.24 ± 0.18	0.77 ± 0.14[a]	0.51 ± 0.11[ab]	0.31 ± 0.09[ab]	0.93 ± 0.15	0.17
Palpitation at rest	Placebo	1.29 ± 0.16	0.76 ± 0.12[a]	0.66 ± 0.11[a]	0.51 ± 0.11[a]	0.78 ± 0.15	
	OciBest	1.56 ± 0.19	0.93 ± 0.14[a]	0.59 ± 0.12[ab]	0.46 ± 0.11[ab]	1.10 ± 0.17	0.31
Abnormal perception of hearing	Placebo	0.25 ± 0.09	0.20 ± 0.08	0.18 ± 0.06	0.14 ± 0.06	0.11 ± 0.05	
	OciBest	0.45 ± 0.13	0.30 ± 0.09[a]	0.27 ± 0.09[a]	0.21 ± 0.08[a]	0.24 ± 0.08	0.13
Blurring of vision	Placebo	0.51 ± 0.13	0.37 ± 0.10	0.28 ± 0.08[a]	0.29 ± 0.09[a]	0.22 ± 0.07	
	OciBest	0.75 ± 0.14	0.45 ± 0.10[a]	0.31 ± 0.09[a]	0.28 ± 0.09[a]	0.46 ± 0.11	0.25
Forgetfulness	Placebo	1.25 ± 0.17	1.10 ± 0.16	0.99 ± 0.15[a]	0.95 ± 0.15[a]	0.30 ± 0.08	
	OciBest	1.32 ± 0.19	1.03 ± 0.16[a]	0.87 ± 0.14[a]	0.32 ± 0.08[abc*]	1.00 ± 0.15	0.70
Sexual problems of recent origin	Placebo	0.71 ± 0.16	0.65 ± 0.14	0.61 ± 0.14	0.56 ± 0.13	0.15 ± 0.05	
	OciBest	0.85 ± 0.17	0.75 ± 0.16	0.54 ± 0.12[a]	0.07 ± 0.03[abc*]	0.77 ± 0.16	0.62
Frequent GI symptoms	Placebo	1.61 ± 0.18	1.11 ± 0.14[a]	0.77 ± 0.13[ab]	0.59 ± 0.11[ab]	1.01 ± 0.15	
	OciBest	1.63 ± 0.20	1.07 ± 0.15[a]	0.63 ± 0.12[ab]	0.44 ± 0.10[ab]	1.20 ± 0.17	0.18
Abnormal movements	Placebo	0.39 ± 0.11	0.35 ± 0.11	0.28 ± 0.09	0.20 ± 0.08[a]	0.19 ± 0.08	
	OciBest	0.44 ± 0.12	0.27 ± 0.10[a]	0.23 ± 0.09[a]	0.20 ± 0.08[a]	0.24 ± 0.08	0.05
Abnormal sensory perceptions	Placebo	0.25 ± 0.09	0.16 ± 0.06	0.14 ± 0.06	0.15 ± 0.07	0.10 ± 0.05	
	OciBest	0.48 ± 0.13	0.32 ± 0.11[a]	0.27 ± 0.10[a]	0.25 ± 0.10[a]	0.23 ± 0.09	0.12
Quarrelsome behavior	Placebo	1.06 ± 0.17	0.96 ± 0.16	0.82 ± 0.15[a]	0.65 ± 0.12[abc]	0.42 ± 0.09	
	OciBest	0.90 ± 0.19	0.70 ± 0.15[a]	0.59 ± 0.13[a]	0.34 ± 0.09[abc]	0.56 ± 0.13	0.15
Frequent feeling of exhaustion	Placebo	2.00 ± 0.17	1.53 ± 0.14[a]	1.19 ± 0.13[ab]	1.04 ± 0.14[ab]	0.96 ± 0.14	
	OciBest	1.72 ± 0.19	1.13 ± 0.15[a]	0.86 ± 0.13[a]	0.37 ± 0.08[abc*]	1.35 ± 0.17	0.39
Frequent sleep problems	Placebo	1.49 ± 0.17	1.14 ± 0.14[a]	0.82 ± 0.13[ab]	0.84 ± 0.14[ab]	0.66 ± 0.12	
	OciBest	1.30 ± 0.19	0.89 ± 0.15[a]	0.58 ± 0.13[ab]	0.27 ± 0.08[abc*]	1.03 ± 0.17	0.37
Avoidance of even familiar people	Placebo	0.28 ± 0.10	0.23 ± 0.08	0.20 ± 0.08	0.20 ± 0.08	0.08 ± 0.06	
	OciBest	0.38 ± 0.12	0.21 ± 0.09[a]	0.17 ± 0.07[a]	0.10 ± 0.05[a]	0.28 ± 0.11	0.21

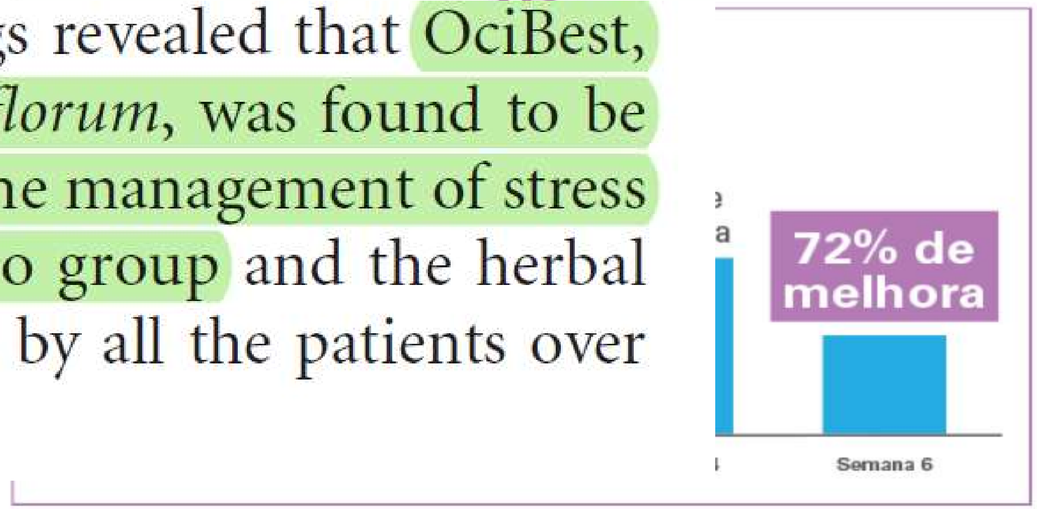
Modulação do eixo HPA por meio do cortisol

Research Article

Efficacy of an Extract of *Ocimum tenuiflorum* (OciBest) in the Management of General Stress: A Double-Blind, Placebo-Controlled Study

In conclusion, the study findings revealed that OciBest, the whole plant extract of *O. tenuiflorum*, was found to be 1.6 times or 39% more effective in the management of stress symptoms in comparison to placebo group and the herbal supplementation was well tolerated by all the patients over the six weeks of study period.





Hindawi Publishing Corporation
Evidence-Based Complementary and Alternative Medicine
Volume 2012, Article ID 894509, 7 pages
doi:10.1155/2012/894509

Associação entre
Scutellaria baicalensis + Hericum erinaceus + Rhodiola rosea

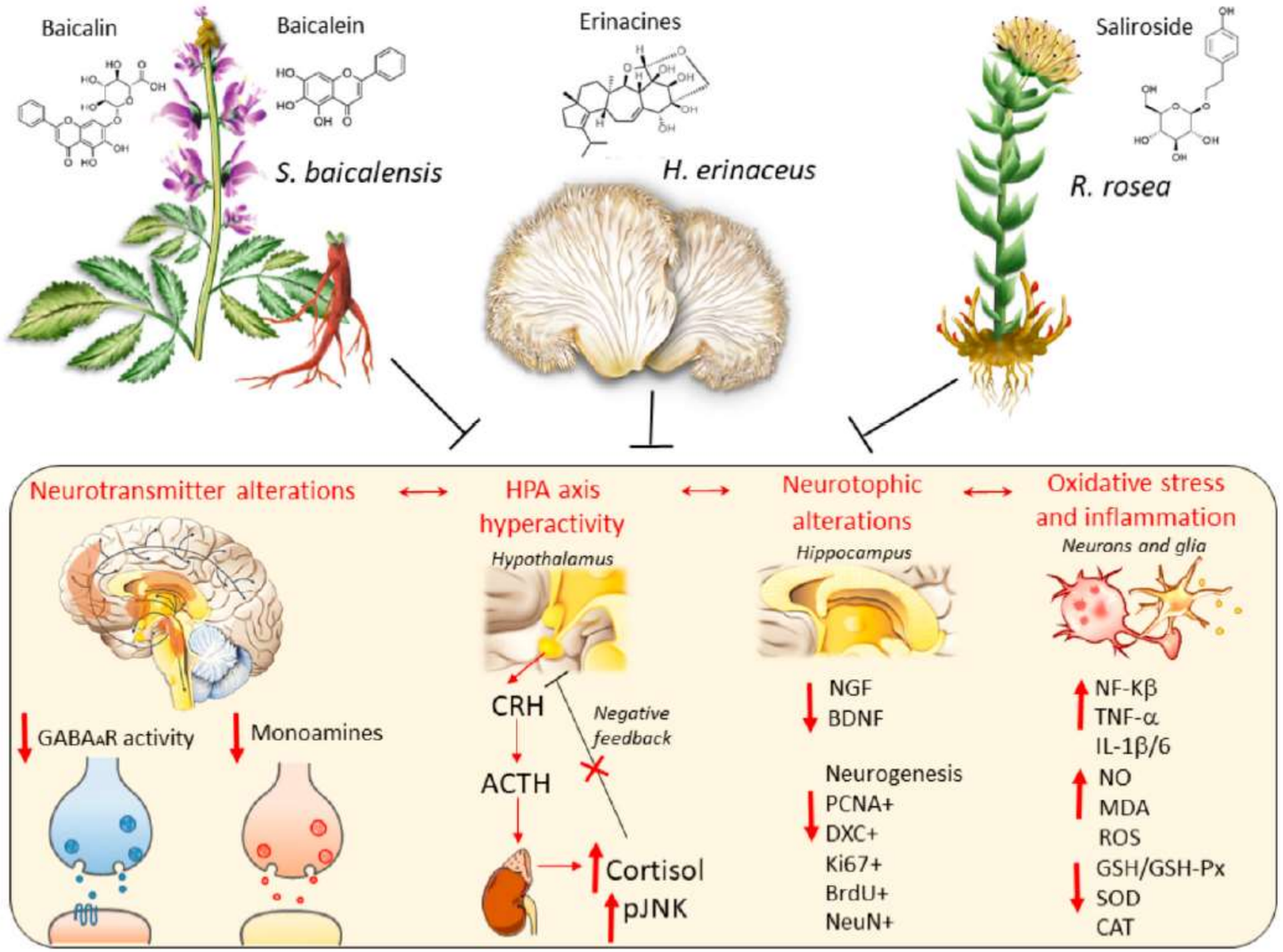
antioxidants

MDPI

Review

Potential Antidepressant Effects of Scutellaria baicalensis, Hericium erinaceus and Rhodiola rosea

Fiona Limanaqi [1,†], Francesca Biagioni [2,†], Carla Letizia Busceti [2], Maico Polzella [3], Cinzia Fabrizi [4] and Francesco Fornai [1,2,*]



Associação garante efeitos complementares e suplementares.

Efeitos adicionais: estímulo a neurogênese e a fatores de crescimento neuronal.

Antioxidants **2020**, 9, 234; doi:10.3390/antiox9030234

Ação de Scutellaria baicalensis (padronização semelhante à Scutellaria lateriflora)

antioxidants

MDPI

Review

Potential Antidepressant Effects of Scutellaria baicalensis, Hericium erinaceus and Rhodiola rosea

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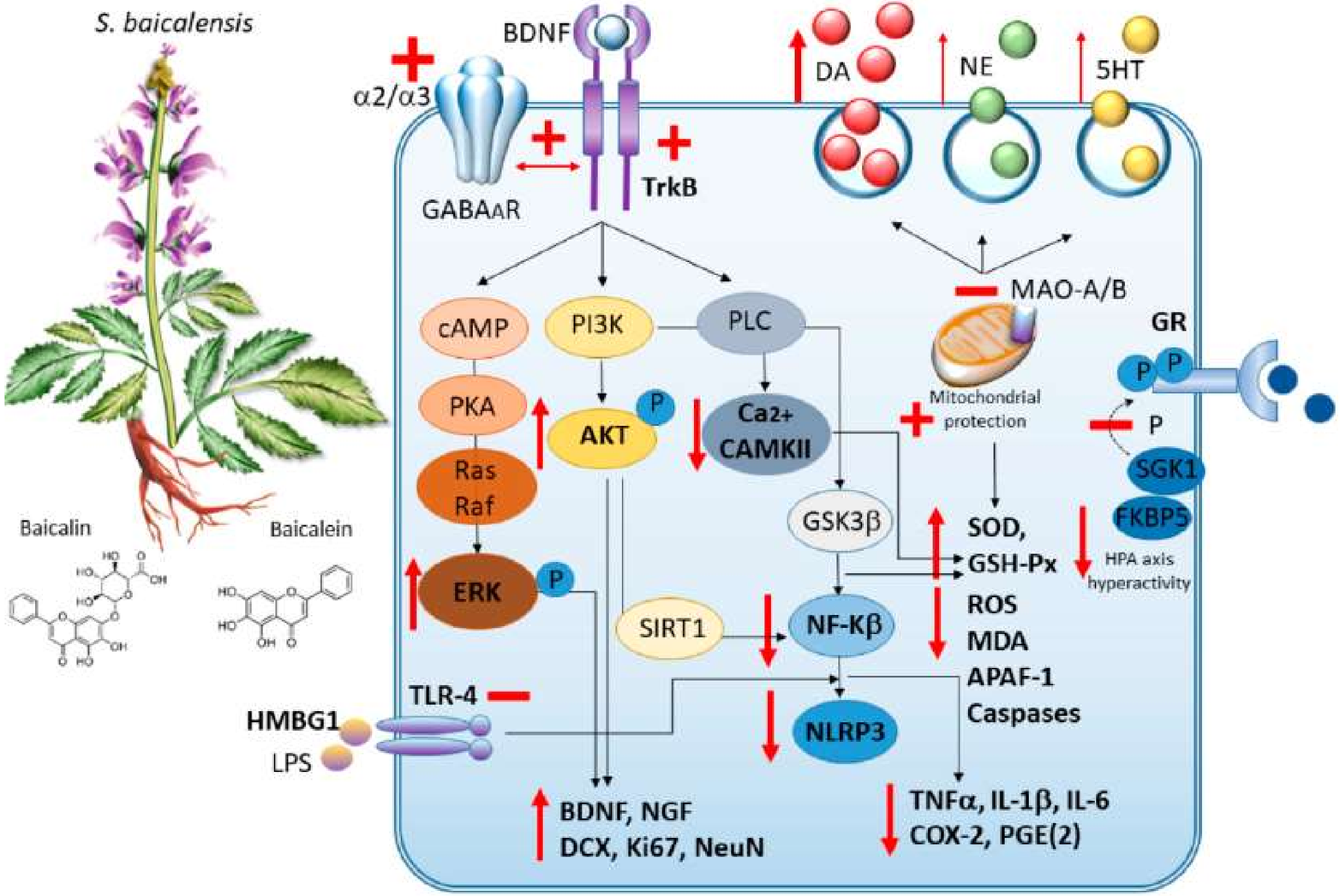
Ação da baicalina e baicaleína:

- Anti-depressiva semelhante a fluoxetina: reduz os receptores de glicocorticoídes, reduzindo a hiperestimulação do eixo HPA.

- Ação ansiolítica: agonista parcial de receptores benzodiazepínicos GABA-a. Mimetiza a ção do Diazepam, porém sem efeitos colaterais (amnésia)



Antioxidants **2020**, 9, 234; doi:10.3390/antiox9030234

Ação ansiolítica e anti-depressiva de Hericum erinaceus (Neurozen®)

antioxidants

MDPI

Review

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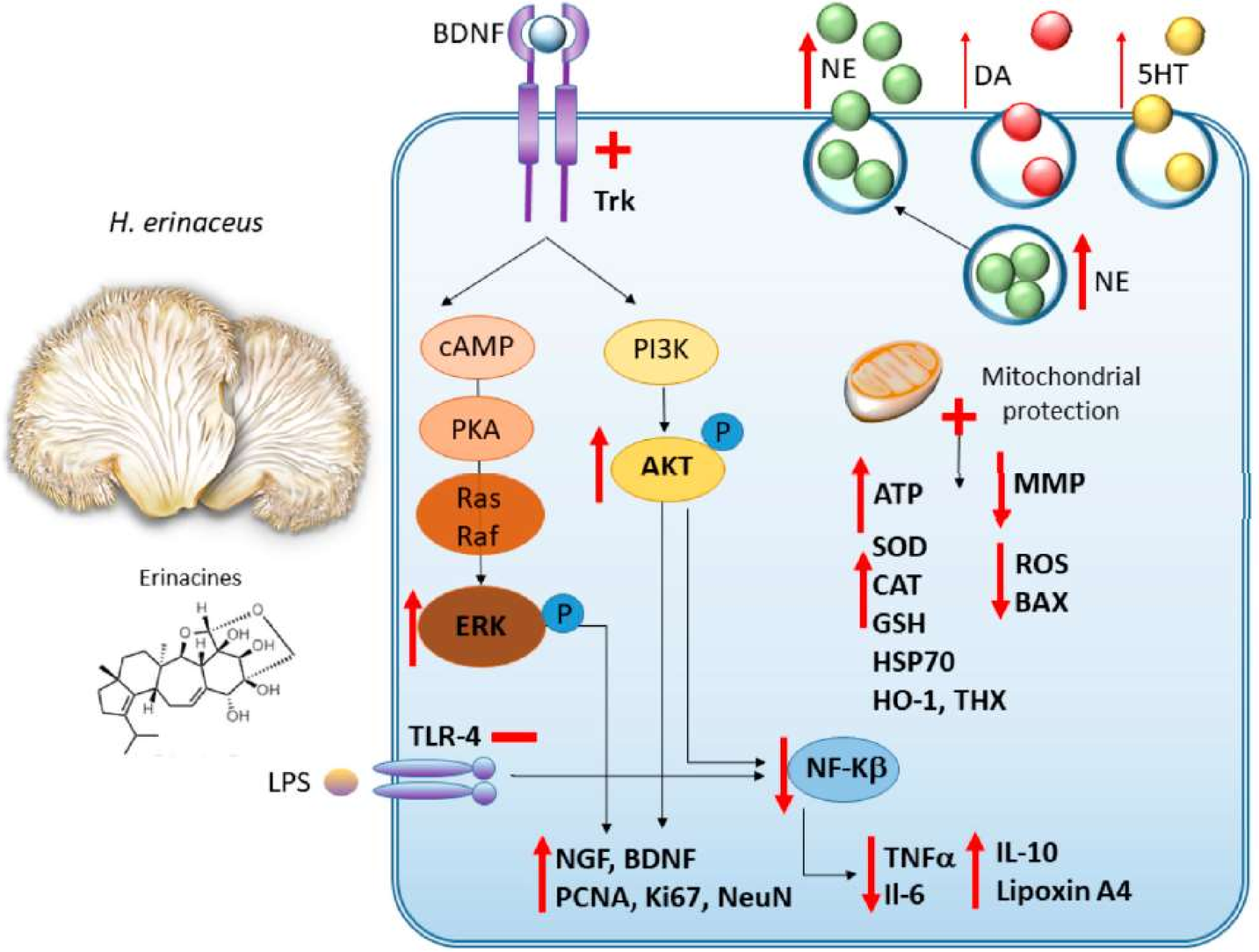
Hericum erinaceus

Atividade neurotrófica principalmente nos neurônios do hipocampo, que estão fortemente associados a resposta ao estresse, depressão e distúrbios do sono



Antioxidants **2020**, 9, 234; doi:10.3390/antiox9030234

Ação ansiolítica e anti-depressiva de Rhodiola rosea

antioxidants

MDPI

Review

Potential Antidepressant Effects of Scutellaria baicalensis, Hericium erinaceus and Rhodiola rosea

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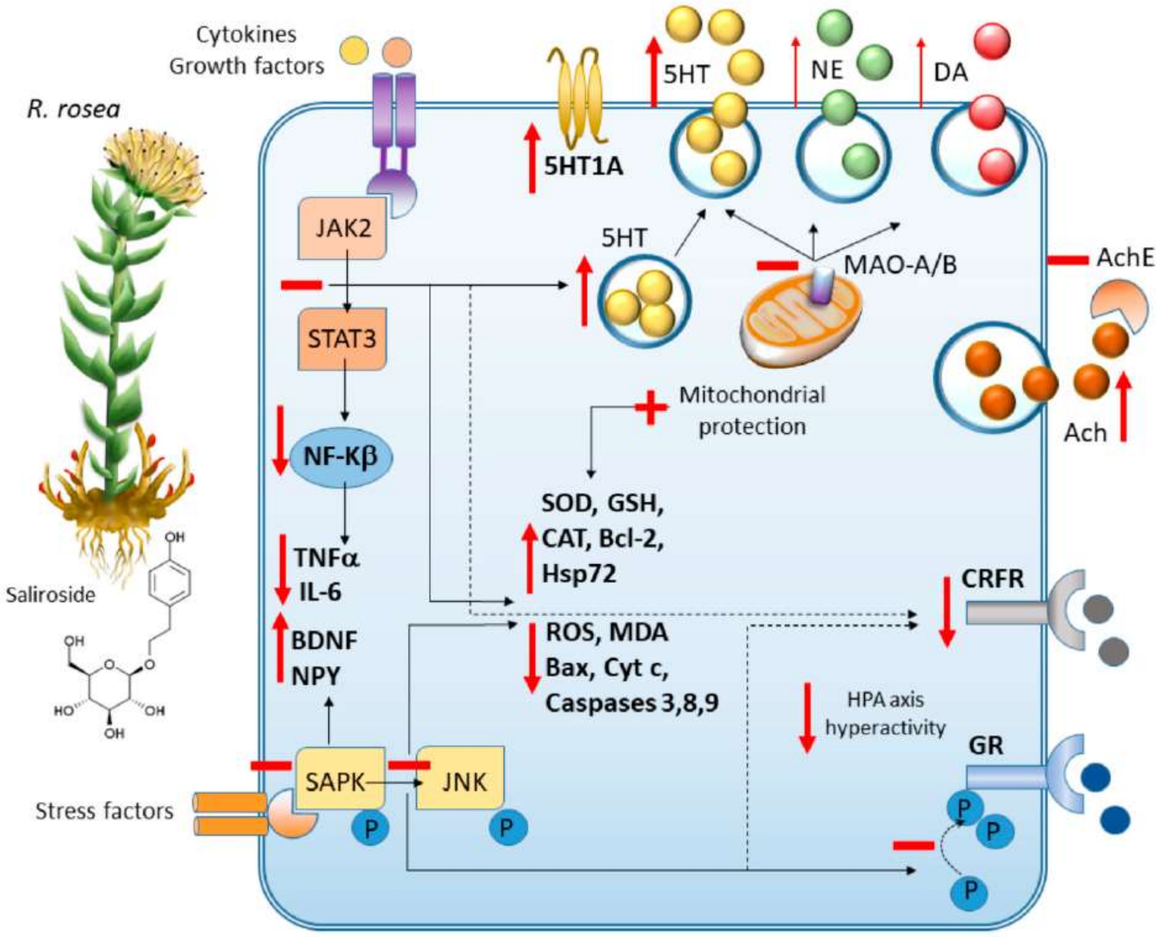
Rhodiola rosea

Aumenta os níveis de 5-HT e de seus receptores → melhora o humor

Modula o estresse: agonista dos receptores do Hormônio Liberadorador de Corticotropina, reduzindo a liberação de cortisol

Anti-depressivo: reduz a responsividade dos receptores de glicocorticóides



Antioxidants **2020**, 9, 234; doi:10.3390/antiox9030234

Ação ansiolítica e anti-depressiva de Hericum erinaceus (Neurozen®)

antioxidants

MDPI

Review

Potential Antidepressant Effects of Scutellaria baicalensis, Hericium erinaceus and Rhodiola rosea

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Estudos Clínicos

Table 1. *Cont.*

S. baicalensis	*H. erinaceus*	*R.rosea*
		R. rosea extract (340 mg/day for 10 weeks). Improvement of general anxiety disorder symptoms evaluated by HARS scores. Generally mild adverse effects, the most common being dizziness and dry mouth [161].
	H. erinaceus cookies (0.5 g of fruit bodies powder for 4 weeks). Lower scores associated with insensitivity, agitation, irritation, palpitation and anxiety in H. erinaceus-receiving women compared with placebo group [155].	*R. rosea* extract (SHR-5, 340 or 680 mg/day for six weeks). Safe and well tolerated. Improvement of depressive symptoms, insomnia, emotional instability and somatization compared with placebo group [69].
Baicalein chewable tablets (200, 400, and 800 mg once daily on days 1 and 10, and twice daily on days 3–9). Safe and well tolerated. Related mood effects were not analysed/reported [57].	*H. erinaceus* (1.650 g/day, 80% mycelium extract and 20% fruiting body extract for 8 weeks). Safe and well tolerated. Coupled with a low calorie diet improves depression, anxiety, sleep, and binge eating compared with subjects undergoing low calorie diet only [91]. Increases circulating pro-BDNF levels and pro-BDNF/BDNF ratio [91].	*R. rosea* powdered extract (SHR-5 capsule, 340 mg, one capsule/day for the first week, two capsules/day for the following two weeks, up to up to 4 capsules/day for the last six weeks). Improves depressive symptoms compared with placebo and produces antidepressant effects which are comparable with sertraline (50 mg). Fewer adverse effects were reported for R. rosea compared with sertraline [164,165].
S. baicalensis extract (300 mg daily for 30 days). Safe and well tolerated. Marked improvement in speed and accuracy of processing complex information in computer tasks [58].	*H. erinaceus* extract (Amyloban®) daily for 6 months combined with Mirtazapine. Combats depression, and improves cognitive function and body weight in the absence of adverse reactions [151].	*R. rosea* extract (Vitano®, 200 mg twice a day for 14 days). Safe and well tolerated. Reduces self-reported anxiety, stress, anger, confusion and depression, and overall improvement in mood [166]
	H. erinaceus extract (Amyloban®3399) intake for 4 weeks counteracts sleep disturbances in a pilot study on female undergraduate students. It increases the levels of salivary free-3-methoxy-4-hydroxyphenylglycol, an index of chronic stress and depressive symptoms reflecting sympathetic nervous system activity [152].	*R. rosea* extract (one tablet, 154mg, combined with saffron tablet 15 mg, twice a day for 6 weeks). Excellent safety, no serious adverse effects. Improvements in HARS scores and depression symptoms reported by both general practitioners and patients [167].

Antioxidants **2020**, 9, 234; doi:10.3390/antiox9030234

Hericum erinaceus (Neurozen®)

Table 1. The behavioral and physiological effects of different *Hericium erinaceus* extracts in the studies of depression.

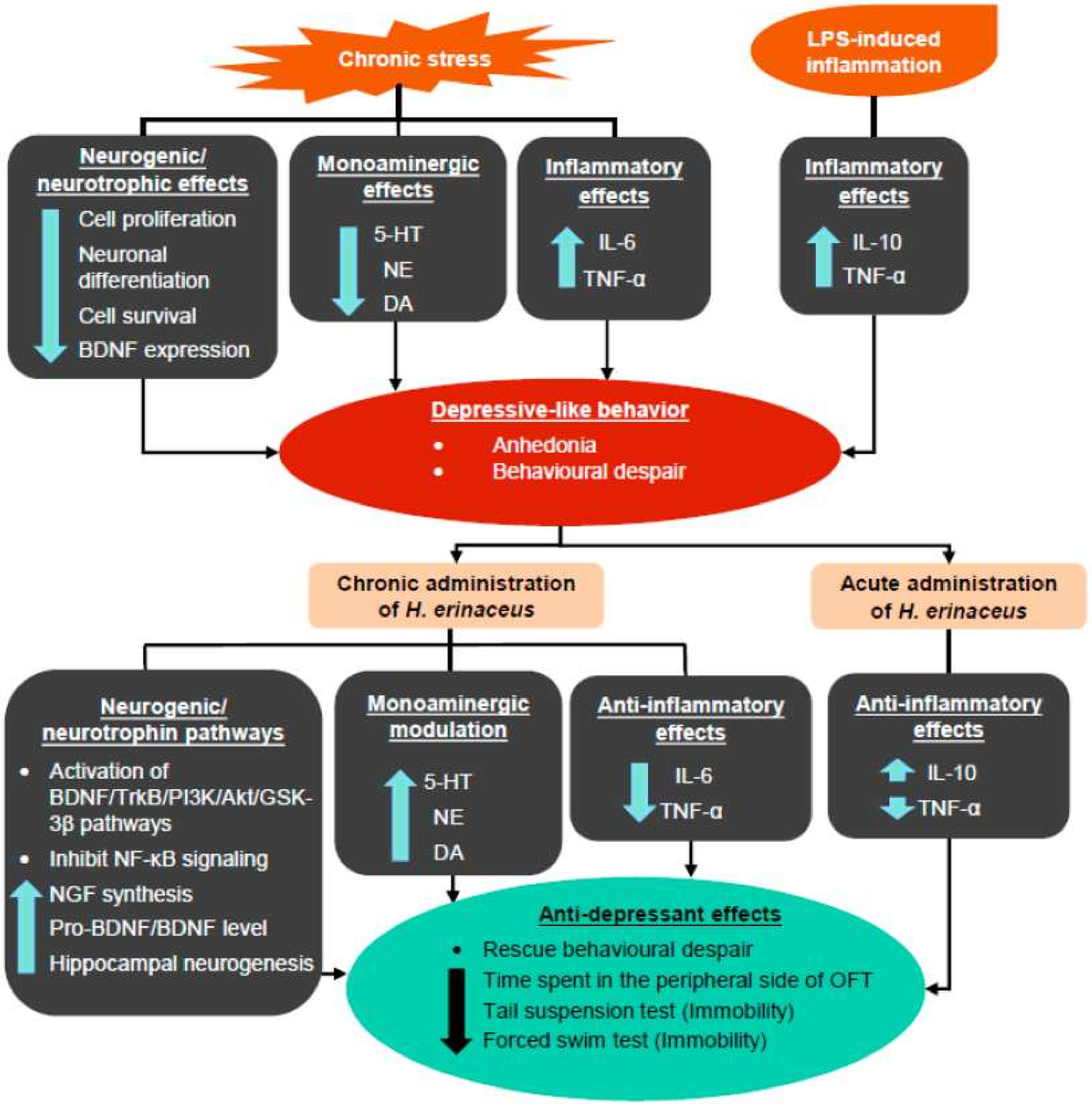
Types of Study	Authors	Material Studied	Method of Extraction	Dose and Dosage	Research Model	Behavioural Effects	Physiological Effects/Mechanism
Pre-clinical	Yao et al., 2015 [33]	Amycenone®, *H. erinaceus* fruiting body extract (0.5% hericenones and 6% amyloban)	Patented extraction	50, 100, or 200 * mg/kg amycenone (Amyloban® 3399), administered 60 min prior to 0.5 mg/kg LPS injection; P.O.	Male C57BL/6N *mus musculus* (LPS-induced inflammation model of depression)	Anti-inflammatory and antidepressant-like effects	• Attenuate a rise in the serum TNF-α level induced by LPS • Increase the serum IL-10 level induced by LPS
	Ryu et al., 2017 [32]	*H. erinaceus*	Ethanolic extract	10, 60 * mg/kg daily for 4 weeks; P.O.	Male C57BL/6 *mus musculus*	Antidepressant-like and anxiolytic effects	• Increase PCNA+, Ki67, BrdU+ cells. • Hippocampal neurogenesis.
	Chiu et al., 2018 [31]	Erinacine A enriched *H. erinaceus* mycelium	Ethanolic extract	100, 200 *, and 400 * mg/kg daily for 4 weeks; P.O.	50 (10/group) male ICR *mus musculus* (14 days restraint stress induced model of depression)	Antidepressant-like effects	• Induce BDNF/TrkB/PI3K/Akt/GSK-3β pathways. • Inhibit NF-κB signalling • Reduced IL-6 and TNF-α levels • Increase 5-HT, DA, NE levels
Clinical	Nagano et al., 2010 [77]	*H. erinaceus* fruiting body	Water extract	500 * mg powdered fruiting body of *H. erinaceus* (Aso Biotech Inc) per cookie, 4 cookies daily for 4 weeks; P.O.	30 female participants	Alleviate symptoms of depression and anxiety	• N.A.
	Inanaga, 2014 [78]	Amycenone®, *H. erinaceus* fruiting body extract (0.5% hericenones and 6% amyloban)	Patented extraction	1950 mg/tablet (Amyloban® 3399) 6 tablets, divided into 2 or 3 doses /day for 6 months; P.O.	1 male patient	Improve neurocognitive impairment	• N.A
	Okamura et al., 2015 [79]	Amycenone®, *H. erinaceus* fruiting body extract (0.5% hericenones and 6% amyloban)	Patented extraction	1950 mg/tablet (Amyloban® 3399) 6 tablets, divided into 2 or 3 doses /day for 4 weeks; P.O.	8 female healthy participants	Alleviate symptoms of depression and anxiety Alleviate sleep disorders	• Increase salivary levels of free-MHPG
	Vigna et al., 2019 [80]	*H. erinaceus* (80% mycelia and 20% fruiting body)	Water and ethanolic extract	1200 * mg per capsules (A.V.D. Reform s.r.l.), 3 capsules/day for 8 weeks; P.O.	62 females and 15 males overweight or obese participants	Alleviate symptoms of depression and anxiety Alleviate sleep disorders	• Increase circulating pro-BDNF level without any significant change in BDNF circulating level

Indicator: * Dose of *H. erinaceus* with significant antidepressant-like effects.

Hericum erinaceus (Neurozen®)

Possíveis mecanismos de Ação anti-depressiva do ***Hericum erinaceus*** **(Neurozen ®)**

H. erinaceus parece melhorar o transtorno depressivo por meio da modulação monoaminérgica, neurogênica/neurotrópica, e anti-inflamatórias.



Int. J. Mol. Sci. 2020, 21(1), 163; https://doi.org/10.3390/ijms21010163

Hericum erinaceus (Neurozen®)

Hericium erinaceus (Neurozen®)

(35% polissacarídeos e 0,55% de triterpenos)

Basidiomiceto - Juba de leão

FIGURE 1: Fruiting body and mycelium of *H. erinaceus*.

Triterpenos – 0,55%
(erinacinas e ericenomas)

→ **Aumentam NGF**
(Fator de Crescimento Neuronal)

NGF

Atua em neurônios colinérgicos do SNC

- Induz diferenciação neural
- Reduz neurodegeneração
- Estimula a regeneração de neurônios

Melhora da capacidade cognitiva

Possibilidade de prevenção e/ou tratamento de doenças neurodegenerativas

Biomedical Research **32** (1) 67-72, 2011

Hericum erinaceus (Neurozen®)

Alzheimer

↓

Perda de neurônios colinérgicos

↓

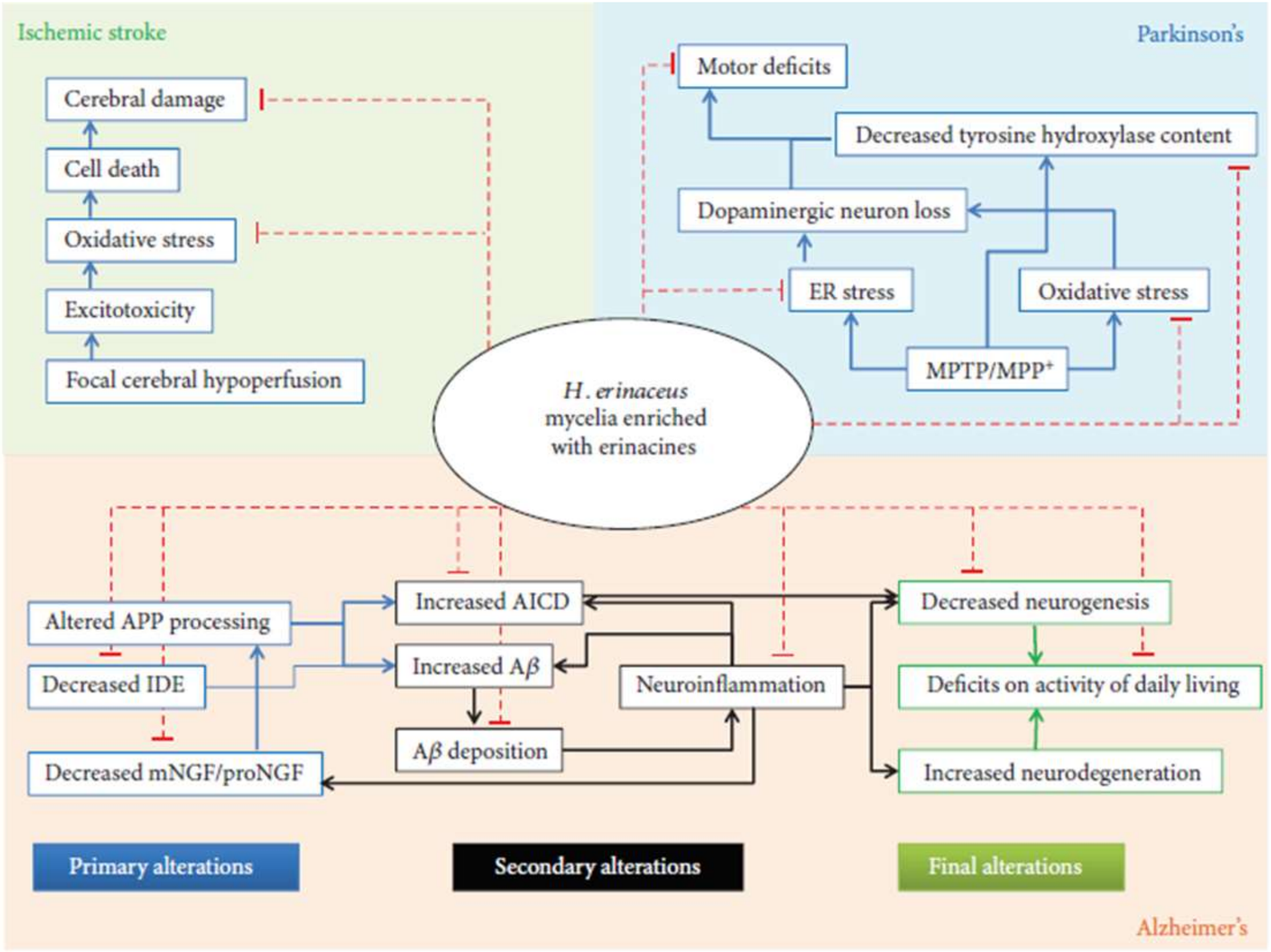
Formação de placas com peptídeo amilóide β (A**β**).

↓

Redução da capacidade de aprendizado e memória

↓

Demência



Hindawi
Behavioural Neurology
Volume 2018, Article ID 5802634, 10 pages
https://doi.org/10.1155/2018/5802634

Hericum erinaceus (Neurozen®)

PHYTOTHERAPY RESEARCH
Phytother. Res. **23**, 367–372 (2009)
Published online 10 October 2008 in Wiley InterScience
(www.interscience.wiley.com) **DOI**: 10.1002/ptr.2634

Improving Effects of the Mushroom Yamabushitake (*Hericium erinaceus*) on Mild Cognitive Impairment: A Double-blind Placebo-controlled Clinical Trial

Estudo clínico duplo-cego

Homens e mulheres; 50 – 80 anos com diagnóstico de perda da capacidade cognitiva

→ *Ingestão da espécie de Neurozen® por 16 semanas ou de placebo*

→ *Avaliação da capacidade cognitiva feita por auto-avaliação.*

Table 1. Composition of the test foods

Component	Yamabushitake (%)	Placebo (%)
Yamabushitake powder	96.0	0.0
Cornstarch	0.0	20.0
Lactose	0.0	70.0
Caramel	0.0	2.0
Silicon dioxide	1.6	4.0
Fat	2.4	4.0

Table 2. Nutrient composition of the test foods

Component	Yamabushitake	Placebo
Energy (kcal/100 g)	253	388
Protein (g/100 g)	41.1	0.3
Carbohydrate (g/100 g)	38.0	93.1
Fat (g/100 g)	4.4	1.9
Sodium (mg/100 g)	0.9	34.8

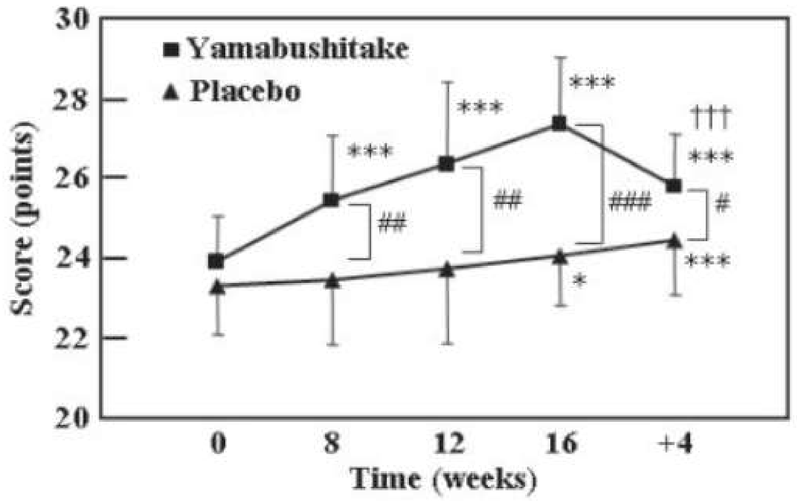


Figure 1. Score of the cognitive function scale. * $p < 0.05$, *** $p < 0.001$ vs week 0. ††† $p < 0.001$ vs week 16. #, ##, ### $p < 0.05$, 0.01, 0.001 Yamabushitake vs placebo at the same time.

Coenzima Q10 (Ubiqsome Phytosome)

frontiers in Physiology

REVIEW
published: 05 February 2018
doi: 10.3389/fphys.2018.00044

Coenzyme Q_{10} Supplementation in Aging and Disease

*Juan D. Hernández-Camacho[1], Michel Bernier[2], Guillermo López-Lluch[1] and Plácido Navas[1]**

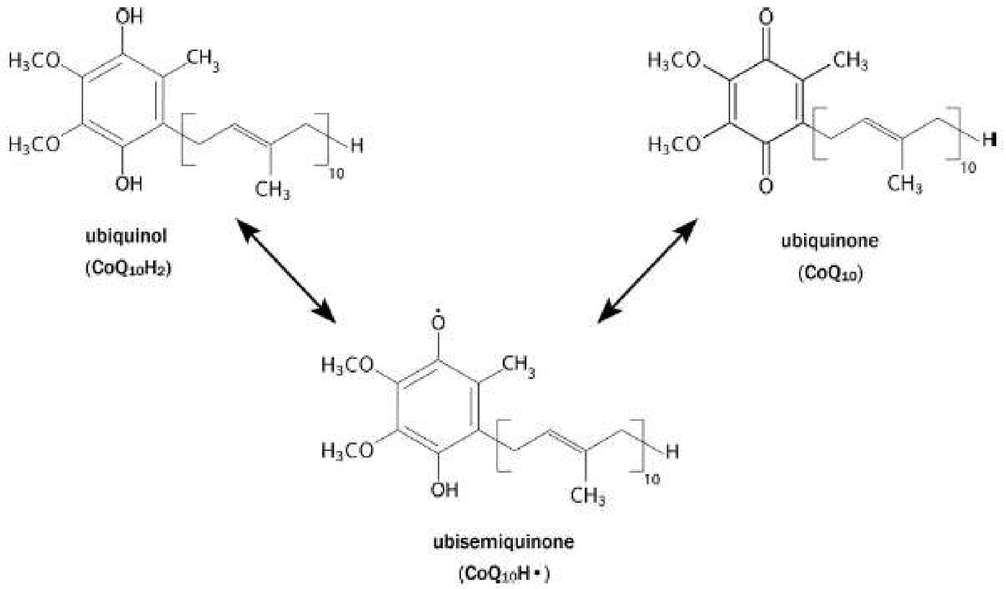


Figure 1.
The three oxidative states of CoQ_{10}: the fully reduced ubiquinol form ($CoQ_{10}H_2$), the radical semiquinone intermediate ($CoQ_{10}H$), and the fully oxidized ubiquinone form (CoQ_{10}).

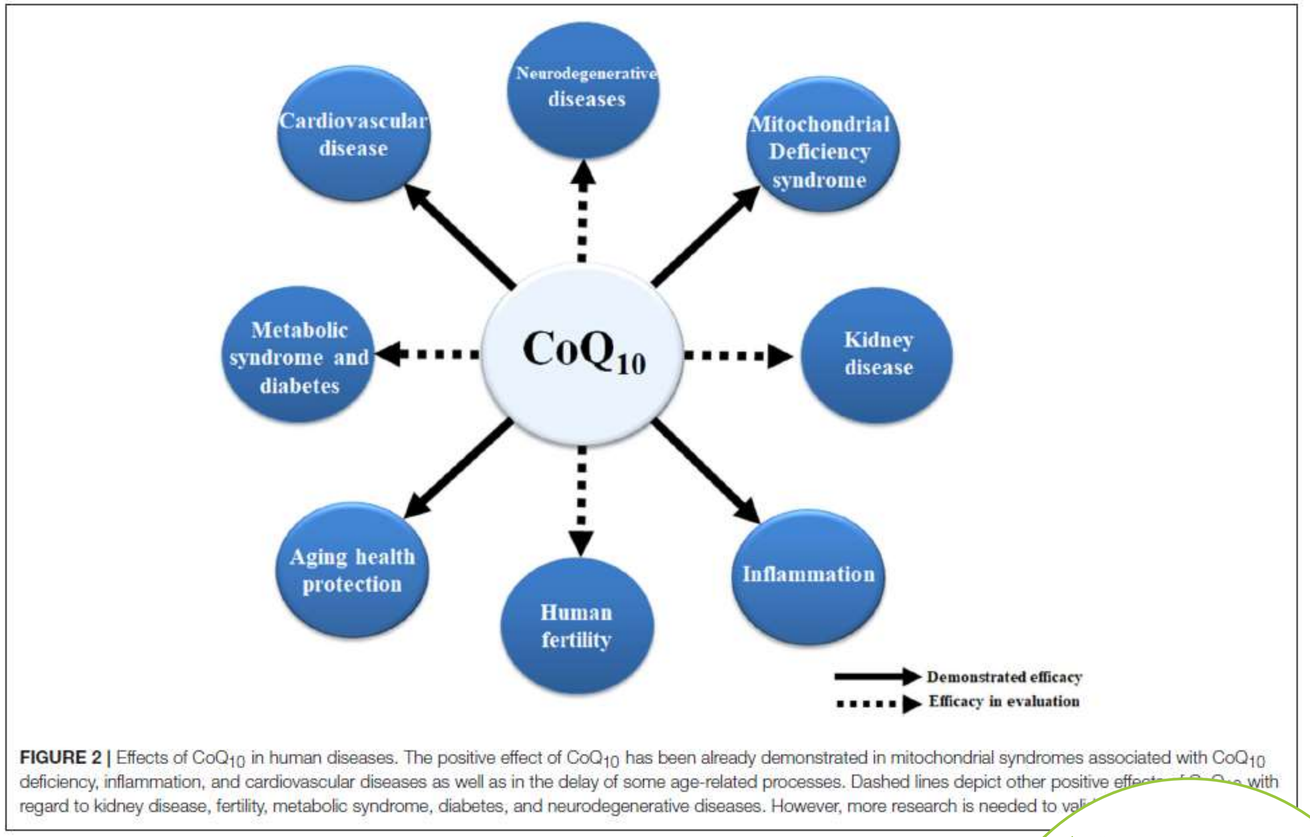


FIGURE 2 | Effects of CoQ_{10} in human diseases. The positive effect of CoQ_{10} has been already demonstrated in mitochondrial syndromes associated with CoQ_{10} deficiency, inflammation, and cardiovascular diseases as well as in the delay of some age-related processes. Dashed lines depict other positive effects of CoQ_{10} with regard to kidney disease, fertility, metabolic syndrome, diabetes, and neurodegenerative diseases. However, more research is needed to vali

https://doi.org/10.1007/s00210-021-02161-8

REVIEW

Coenzyme Q10 a mitochondrial restorer for various brain disorders

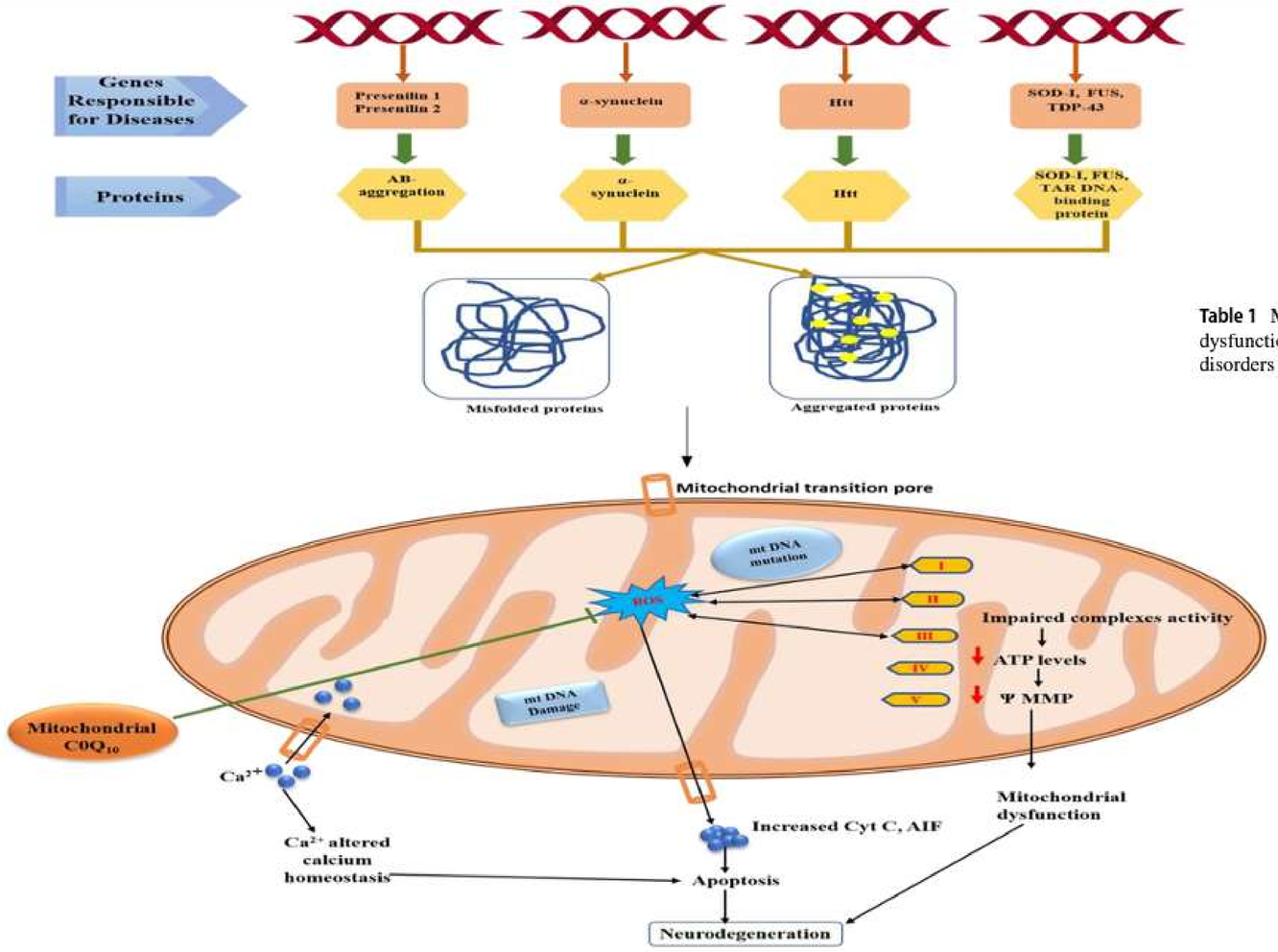
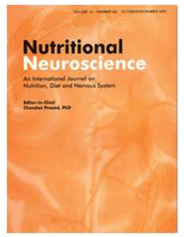


Table 1 Mitochondrial dysfunction in other brain disorders

Disease	Mitochondrial complex abnormalities	Reference
Autism spectrum disorder	Complex I, complex IV, complex V	(89–94)
Epilepsy	Complex I, complex III, complex IV, complex V	(95–100)
Multiple sclerosis	Complex IV	(101, 102)
Depression	Complex I, complex II, complex III	(103–106)
Bipolar disorder	Complex I, complex IV	(103, 107–109)



Nutritional Neuroscience
An International Journal on Nutrition, Diet and Nervous System

ISSN: 1028-415X (Print) 1476-8305 (Online) Journal homepage: https://www.tandfonline.com/loi/ynns20

Coenzyme Q10 as a treatment for fatigue and depression in multiple sclerosis patients: A double blind randomized clinical trial

Estudo clínico duplo-cego, randomizado, placebo

45 pacientes com Esclerose Múltipla

Grupo CoQ10 (n= 22) → Ingestão da espécie de CoQ10 – 500 mg/dia -3 meses

Grupo Placebo (n= 23) por 16 semanas ou de placebo

Avaliação por Scores:
FSS: Severidade da Fadiga
BDI: questionário sobre sintomas da depressão

Table 3 FSS and BDI at baseline and endpoint of study

	CoQ10 group ($n = 22$)				Placebo group($n = 23$)				
	Baseline	Endpoint	Change	P^*	Baseline	Endpoint	Change	P^*	$P^\dagger$
FSS	43.1 ± 10	33 ± 12.6	−10.09	0.001	41.5 ± 15.6	45 ± 13.6	3.4	0.01	0.001
BDI	14.3 ± 8.2	10.27 ± 7.4	−4.09	0.001	17.8 ± 12.2	20.4 ± 11.4	2.5	0.01	0.001

FSS: fatigue severity scale; BDI: Beck depression inventory.
Values are means ± SD.
*Indicates within-group differences (paired-sample *t* test).
†Indicates time-by-treatment interaction differences (repeated measure ANOVA).

Conclusion

Overall, CoQ10 supplementation (500 mg/day) can improve depression and fatigue in multiple sclerosis patients. The antioxidant and anti-inflammation activity may be considered as one of the main factors responsible for the anti-fatigue and anti-depression effects of CoQ10. Larger and long-term follow-up studies would be necessary to confirm protective effects of CoQ10 against fatigue and depression.

FlorienTech
Pesquisa e conhecimento magistral

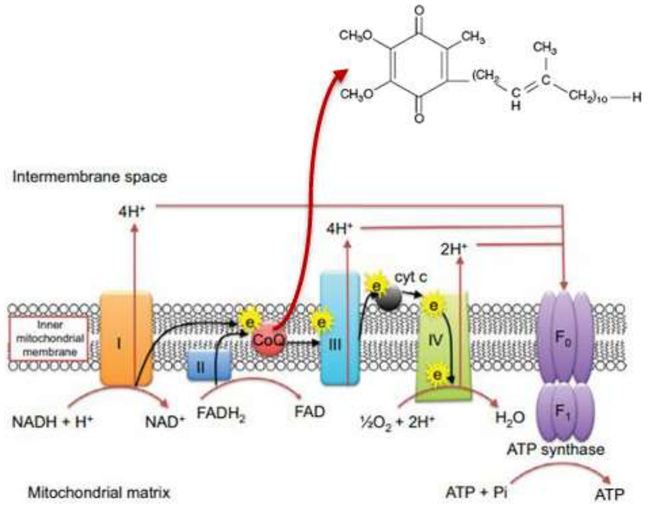
Coenzima Q10 (Ubiqsome Phytosome)

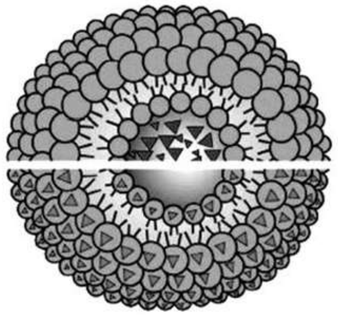
Coenzima Q10 – Ubiquinona

Substância Lipossolúvel → Difícil solubilidade

Encontrado nas mitocôndrias – essencial a produção de ATP

Inovação tecnológica: incorporada a tecnologia Phytosome para aumentar a biodisponibilidade





Coenzima Q10 (Ubiqsome Phytosome)

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759

Current Drug Delivery, 2019, *16*, 759-767

RESEARCH ARTICLE

BENTHAM SCIENCE

A New Food-Grade Coenzyme Q10 Formulation Improves Bioavailability: Single and Repeated Pharmacokinetic Studies in Healthy Volunteers

Giovanna Petrangolini[1], Massimo Ronchi[1], Elisabetta Frattini[1], Eric De Combarieu[1], Pietro Allegrini[1] and Antonella Riva[1,*]

Coenzima Q10 – Ubiquinona

Maior solubilidade no fluido gástrico e intestinal (estudo *in vitro*)

Maior concentração plasmática (estudo *in vivo*)

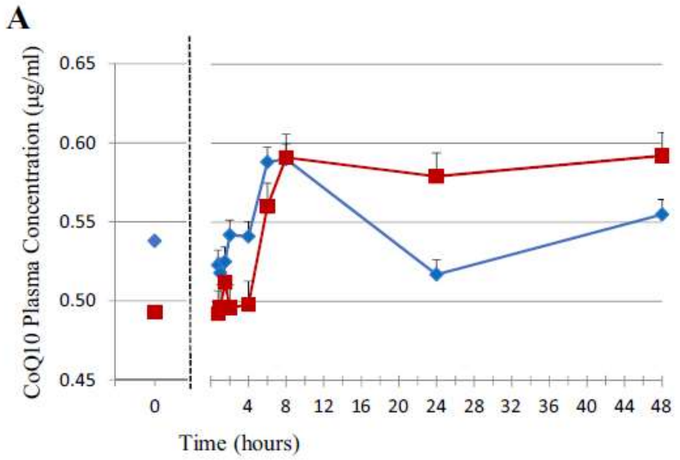
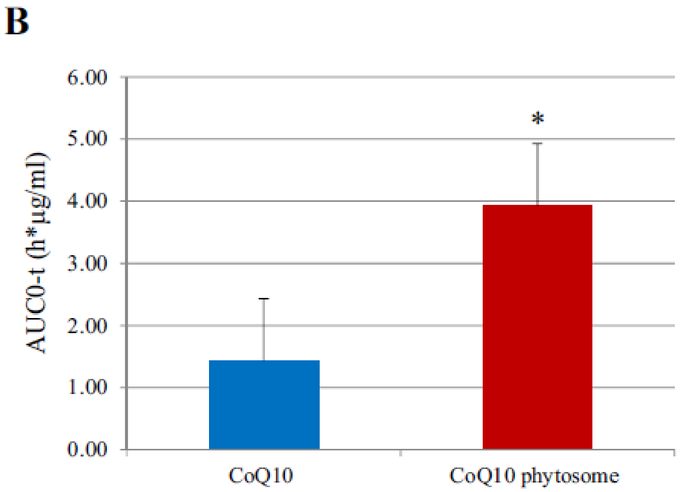


Table 1. Solubility studies in different simulated fluids.

Material	CoQ10 (mg/ml)		
	FaSSIF[a] pH 6.5	FeSSIF[b] pH 5.0	FaSSGF[c] pH 1.6
CoQ10	0.012	0.023	<LOD[d]
Physical mixture[e]	0.022	0.038	<LOD[d]
CoQ10 phytosome	0.170	0.061	0.020

Solubility data in several simulated fluids;
[a] FaSSIF: fasted state simulated intestinal fluid;
[b] FeSSIF: fed state simulated intestinal fluid;
[c] FaSSGF: fasted state simulated gastric fluid.
[d] LOD: Limit Of Detection
[e] the physical mixture had the same quali-quantitative composition of CoQ10 phytosome.



Como prescrever?

Melatonina Vegetal (Herbatonin®)
Extrato seco de *Oryza sativa, Medicago sativa* e *Chlorella vulgaris*
→ Doses: Mínimo 30 mg/dia adulto
Máximo: 100 mg/dia adulto

Manjericão- santo Tulsi (*Ocimum tenuiflorum*)
OciBest®
→ Dose: 300 mg, duas a quatro vezes ao dia

Hericium erinaceus (Neurozen®)
Extrato seco padronizado em 35% polissacarídeos e 0,55% de triterpenos
→ Dose: 250 mg, 2 x ao dia

Scutellaria lateriflora L. (Ansiless ®)
Extrato seco padronizado em 5% escutelarina
→ Dose: 250 mg, 2 x ao dia

Rhodiola rosea
Extrato padronizado 3% de Salidroside
Doses: 200 a 600 mg ao dia

Bacopa monnieri
Extrato padronizado em 30% de Basicosídeos
Doses: 250 mg, 2x ao dia

Whitania somnifera (Ashwagandha)
(Extrato padronizado à 3% de withanolídeos
Doses: 80 mg três vezes ao dia

CoQ10 (Ubiqsome Phytosome®)
100 mg, 1 x ao dia

FlorienTech
Pesquisa e conhecimento magistral

Considerações finais

A fitoterapia nos transtornos de ordem leve ou moderada pode ser a primeira escolha de tratamento para os pacientes:

- tem mecanismo e efeito similar aos medicamentos convencionais
- com menos efeitos colaterais e menor custo

É importante se atentar a alimentação do paciente:

- anti-inflamatória (normo ou hipocalórica, baixo em açúcares, carboidratos refinados e gorduras saturadas)
- Saúde Intestinal: promover uma microbiota saudável para melhor absorção e redução do leaky-gut
- Atenção aos níveis de vitaminas do complexo B, principalmente B6, 9 e 12, D, Magnésio e EPA e DHA.

FlorienTech
Pesquisa e conhecimento magistral

Muito Obrigada!

fer.drummond

fernanda.drummond@ufop.edu.br

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