



XIV Congresso Brasileiro de
Farmácia Hospitalar

Ecosistemas de inovação
nos processos de cuidado, valor
em saúde & ações sustentáveis

1, 2 e 3
de junho
de 2023



Cuidado Farmacêutico em Pacientes Portadores de Doenças Neurodegenerativas

Gustavo Alves

CRF SP 18316

Declaração de conflitos de interesse

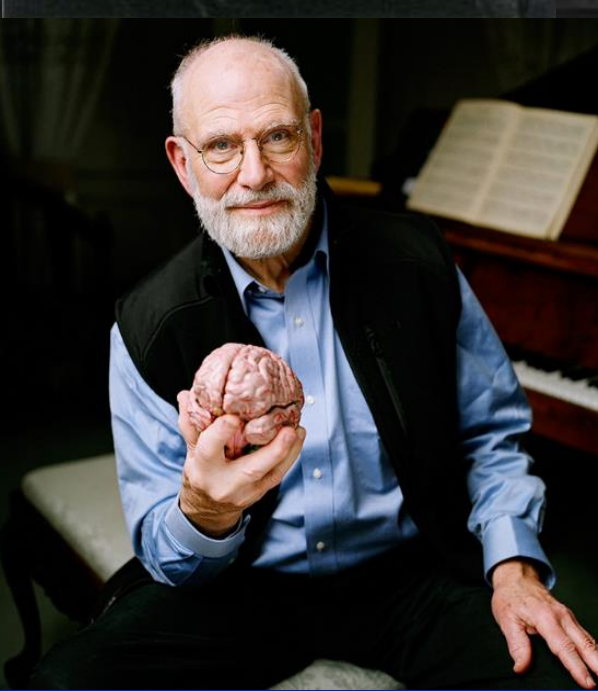
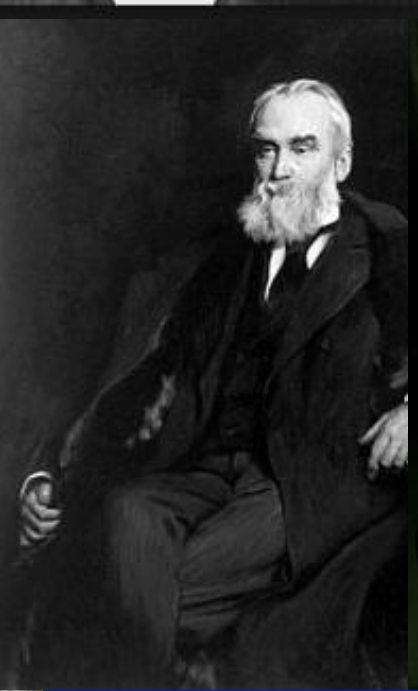
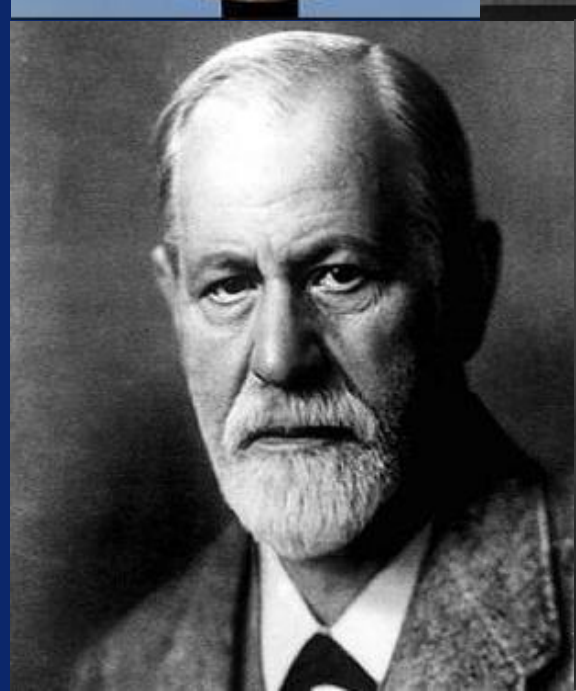
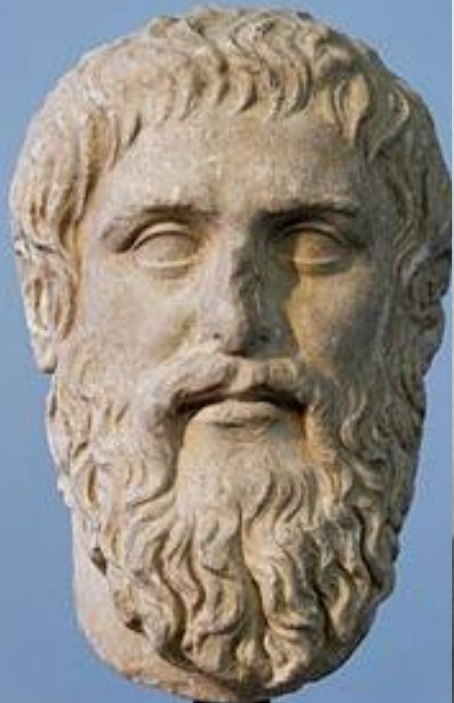
Eu, Gustavo Alves Andrade dos Santos, Cientista/Professor, declaro para os devidos fins, que não possuo conflitos de interesse que possam comprometer minha imparcialidade ou isenção em relação às atividades que desempenho relacionadas ao setor farmacêutico e à saúde.

Declaro ainda que estou ciente das normas regulatórias que tratam sobre conflitos de interesse, em especial a Resolução do Conselho Federal de Farmácia nº 724/2022 e a Resolução da Diretoria Colegiada da ANVISA nº 96/2008, e me comprometo a cumprir todas as disposições legais e éticas relacionadas ao tema.



@gusfarma







Doenças Neurodegenerativas



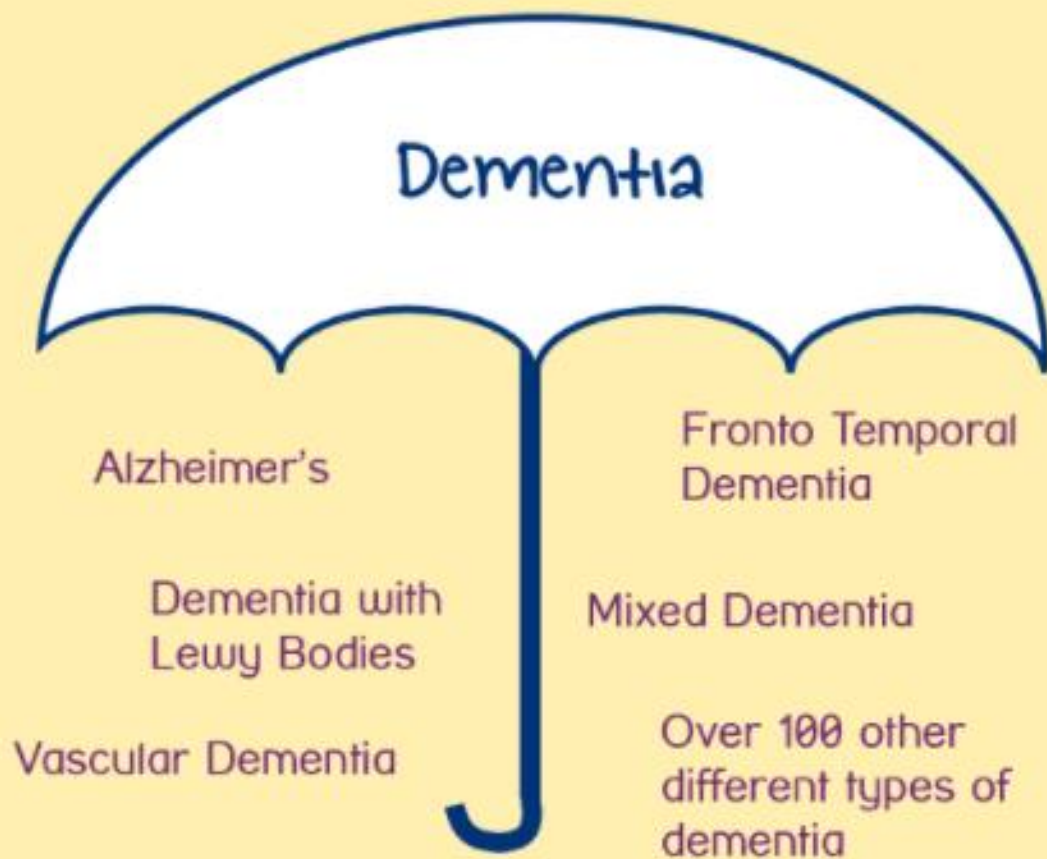
National Institute of Environmental Health Sciences
Your Environment. Your Health.

- **Parkinson's disease**
- **Alzheimer's disease**
- **Huntington's disease**
- **Amyotrophic lateral sclerosis (ALS)**
- **Motor neuron disease**



Demências

There is no difference. Alzheimer's is a type of dementia and the most common. Dementia is the overall term used to describe over 100 different types of dementia – Alzheimer's is just one type of dementia.

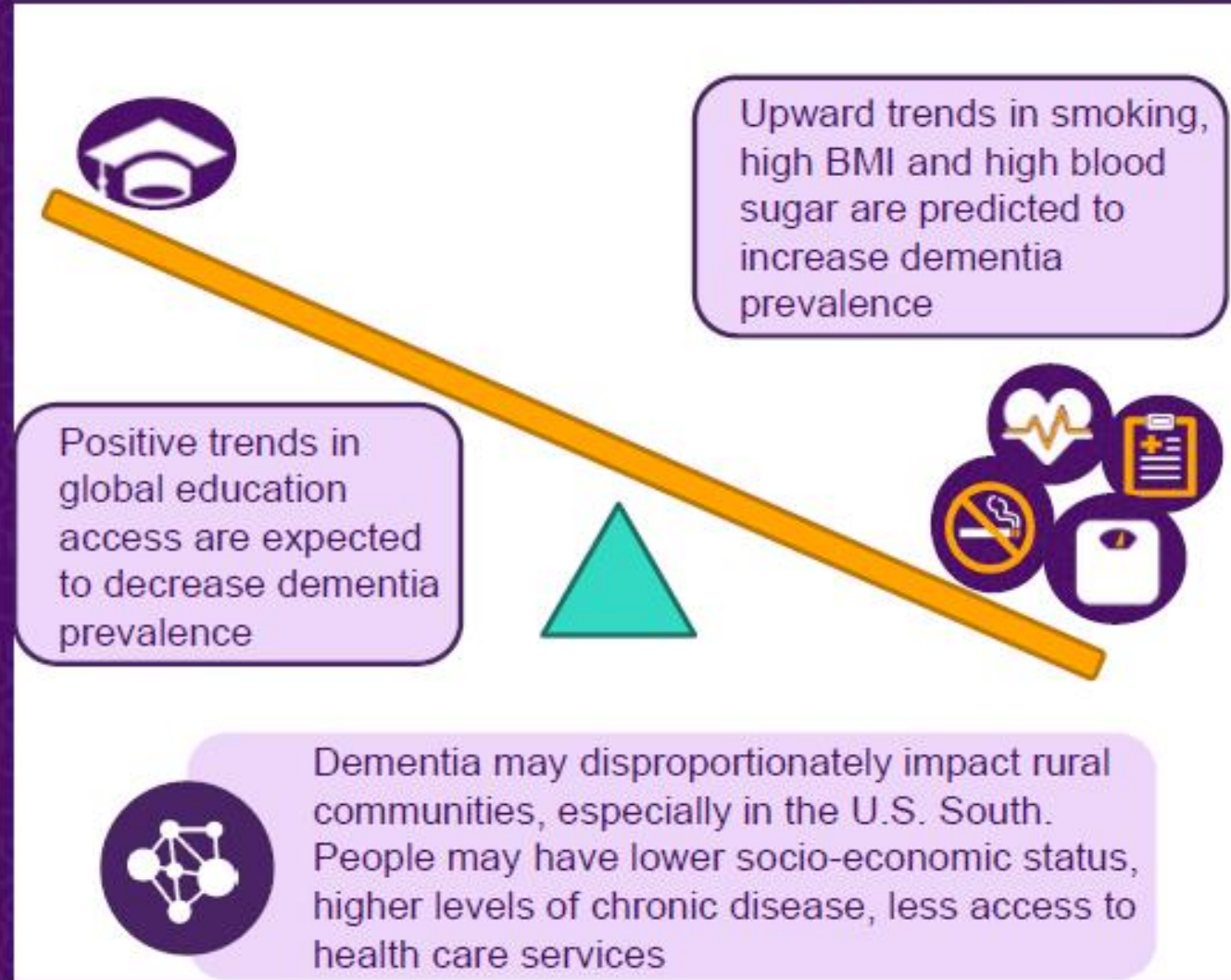


DSM-V: Demência foi renomeada como Transtorno Neurocognitivo Maior, que “reconhece” estágios anteriores de declínio cognitivo como “Transtorno neurocognitivo leve”.

A demência é uma síndrome causada por uma enfermidade no cérebro, geralmente de natureza crônica ou progressiva, que existe uma alteração de múltiplas funções corticais superiores , incluindo a memória, o pensamento , orientação , compreensão , linguagem, capacidade de aprender, executar cálculos e tomada de decisão .

GLOBAL PREVALENCE

Researchers estimate the number of people with dementia globally will nearly triple to more than 152 million by 2050.



INFOGRAPHIC

The global impact of dementia

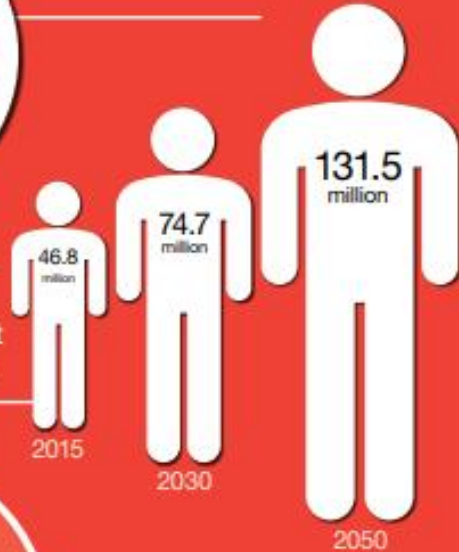


Around the world, there will be 9.9 million new cases of dementia in 2015,

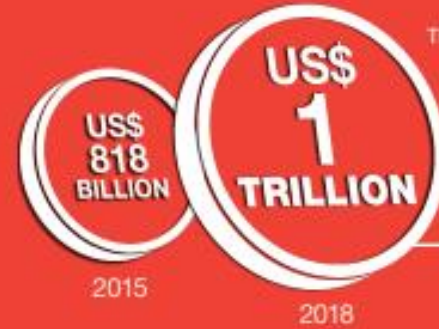
one every 3 seconds

46.8 million people worldwide are living with dementia in 2015.

This number will almost double every 20 years.



Much of the increase will take place in low and middle income countries (LMICs): in 2015, 58% of all people with dementia live in LMICs, rising to 63% in 2030 and 68% in 2050.



The total estimated worldwide cost of dementia in 2015 is US\$ 818 billion.

By 2018, dementia will become a trillion dollar disease, rising to

US\$ 2 trillion by 2030

If global dementia care were a country, it would be the

18th largest economy

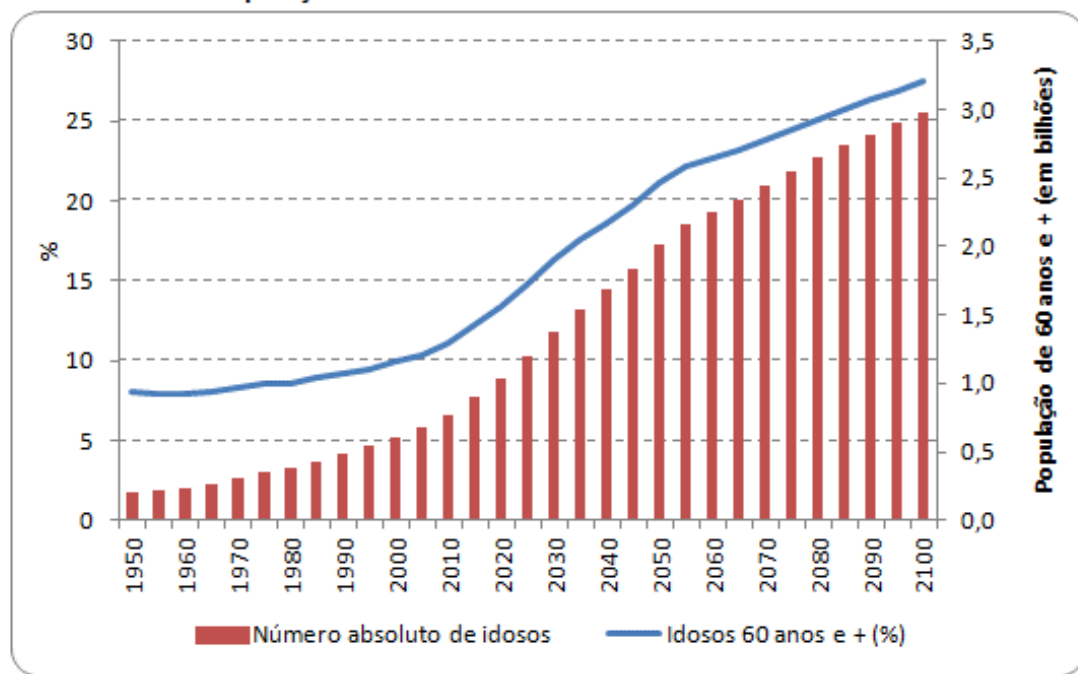
in the world exceeding the market values of companies such as Apple and Google



This map shows the estimated number of people living with dementia in each world region in 2015.

We must now involve more countries and regions in the global action on dementia.

População mundial com 60 anos e + entre 1950 e 2100




World Population Prospects: The 2012 Revision, <http://esa.un.org/unpd/wpp/index.htm>



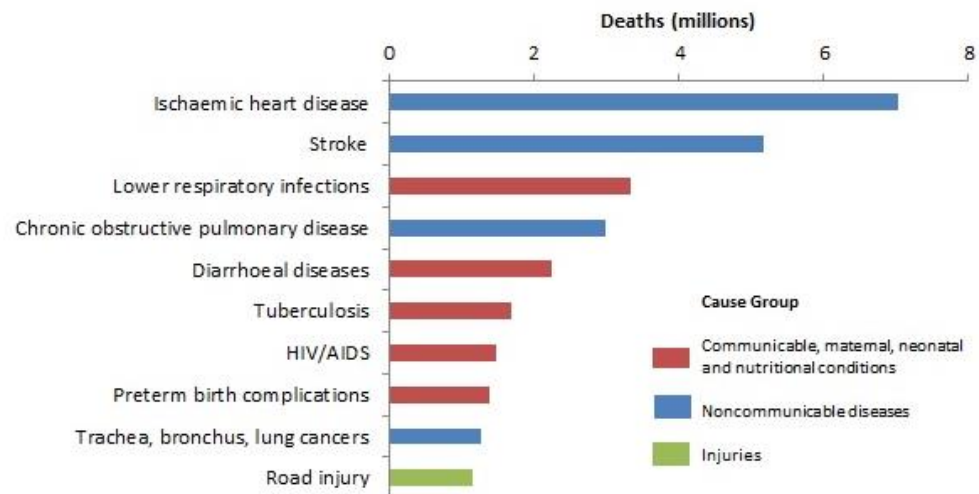
#1 NEW YORK TIMES BESTSELLING
AUTHOR OF SAPIENS

Yuval Noah
Harari



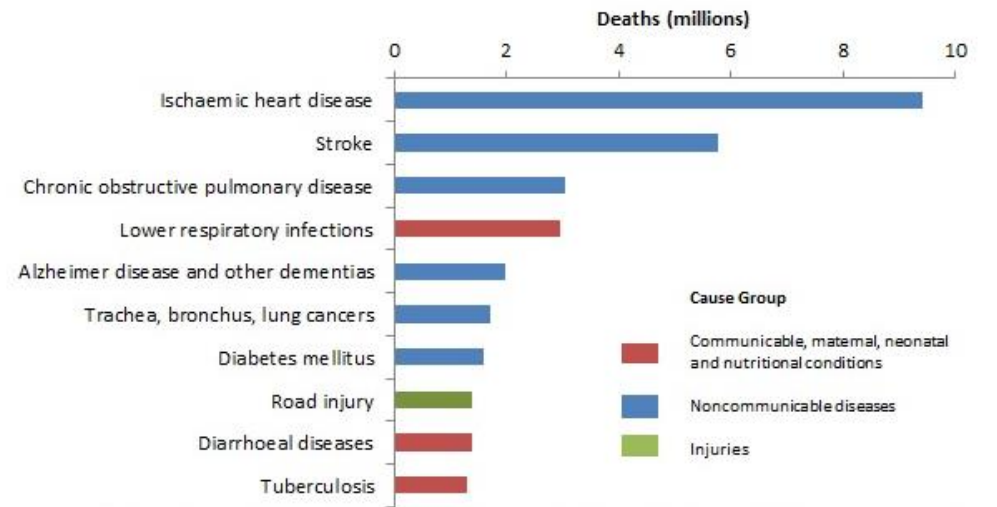
21 Lessons
for the
21st Century

Top 10 global causes of deaths, 2000



Source: Global Health Estimates 2016: Deaths by Cause, Age, Sex, by Country and by Region, 2000-2016. Geneva, World Health Organization; 2018.

Top 10 global causes of deaths, 2016

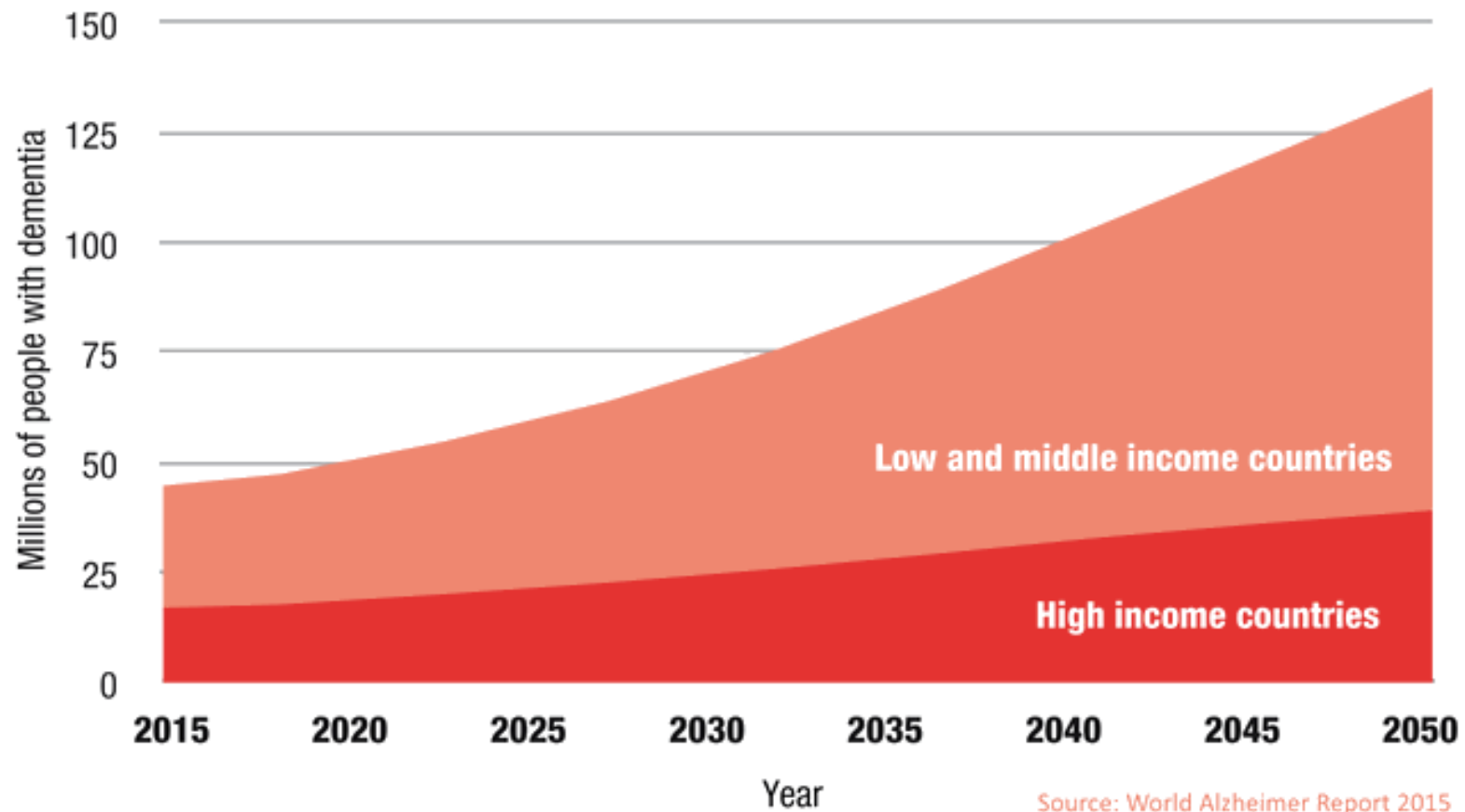


Source: Global Health Estimates 2016: Deaths by Cause, Age, Sex, by Country and by Region, 2000-2016. Geneva, World Health Organization; 2018.

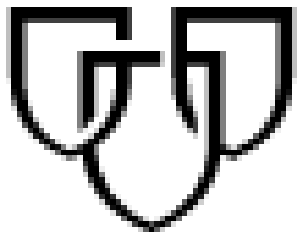
3rd LATINOS & ALZHEIMER'S SYMPOSIUM

April 25 - 26, 2022 | Bonita Springs, FL and Online

Number of people with dementia in low and middle income countries compared to high income countries



MAYO
CLINIC

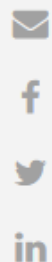


 **ALZHEIMER'S[®]
ASSOCIATION**

Fatores de Risco-CCL

- Envelhecimento
- APOE4 (gene) embora possa não ter o CCL
 - DM
 - Fumo
 - HAS
- Colesterol elevado
 - Obesidade
 - Depressão
- Falta de atividades físicas
- Baixo nível educacional
- Ausência de estímulos mentais ou atividades sociais
- Uso inapropriado de alguns Medicamentos

SHARE October 20, 2020; 95 (16) ARTICLE



Association of anticholinergic medications and AD biomarkers with incidence of MCI among cognitively normal older adults

Alexandra J. Weigand, Mark W. Bondi, Kelsey R. Thomas, Noll L. Campbell, Douglas R. Galasko, David P. Salmon, Daniel Sewell, James B. Brewer, Howard H. Feldman, Lisa Delano-Wood, for the Alzheimer's Disease Neuroimaging Initiative

First published September 2, 2020, DOI: <https://doi.org/10.1212/WNL.0000000000010643>

Conclusões aCH aumentou o risco de MCI incidente e declínio cognitivo, e os efeitos foram significativamente aumentados entre indivíduos com fatores de risco genéticos e marcadores fisiopatológicos de DA baseados no LCR. Os resultados ressaltam o impacto adverso dos medicamentos aCH na cognição e a necessidade de desprescrição, particularmente entre indivíduos com risco elevado de DA

SYSTEMATIC REVIEW article

Front. Psychiatry, 17 September
2020

Sec. Addictive Disorders

<https://doi.org/10.3389/fpsyt.2020.00755>

This article is part of the Research Topic

Neurobiological Biomarkers for Developing Novel Treatments of
Substance and Non-Substance Addiction

[View all 45 Articles >](#)

The Effects of Benzodiazepine Use and Abuse on Cognition in the Elders: A Systematic Review and Meta-Analysis of Comparative Studies

Conclusão: Na população idosa, a velocidade de processamento foi significativamente prejudicada em usuários de BZD; a cognição global foi significativamente prejudicada em abusadores de BZD, mas não em usuários regulares de BZDOs médicos devem ser cautelosos ao prescrever BZD para idosos.

RESEARCH

Open Access

Cognitive impact after short-term exposure to different proton pump inhibitors: assessment using CANTAB software



Sanjida Akter^{1†}, Md. Rajib Hassan^{1†}, Mohammad Shahriar¹, Nahia Akter¹, Md. Golam Abbas² and Mohiuddin Ahmed Bhuiyan^{1*}

Review Article

Proton Pump Inhibitors and Dementia: Physiopathological Mechanisms and Clinical Consequences

Gloria Ortiz-Guerrero,¹ Diana Amador-Muñoz,² Carlos Alberto Calderón-Ospina,³ Daniel López-Fuentes,⁴ and Mauricio Orlando Nava Mesa²

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²Neuroscience (NEUROS) Research Group, School of Medicine and Health Sciences, Universidad del Rosario, Carrera 24 No. 63C-69, Bogotá 111221, Colombia

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⁴Medical Social Service, Hospital de San Francisco, Kra 8 No. 6A-121, Gacheta 251230, Colombia

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Received 14 November 2017; Accepted 14 February 2018; Published 21 March 2018

Estudos mostraram que os inibidores da bomba de prótons (IBPs) aumentam a carga cerebral de beta-amiloide (A β) e também criam deficiência de vitamina B12. Esses dois fenômenos têm efeito deletério na cognição e na doença de Alzheimer (DA). Como o uso de IBPs aumentou tremendamente nos últimos anos, é de grande importância para a saúde pública investigar o impacto cognitivo dos IBPs. Assim, o objetivo deste estudo foi investigar o grau de associação neuropsicológica de cada IBP com diferentes funções cognitivas.

O presente estudo revela pela primeira vez que diferentes IBPs têm graus variados de influência em diferentes domínios cognitivos e têm associações com a DA. Esses achados devem ser considerados ao equilibrar os riscos e benefícios da prescrição desses medicamentos..

É possível que os efeitos cognitivos dos IBPs sejam devidos a interações medicamentosas, especialmente em idosos polimedicados. Por exemplo, omeprazole pode aumentar os níveis sanguíneos de diazepam diminuindo a depuração plasmática (via citocromo P450) e, em seguida, aumentando os efeitos neurológicos.



Canadian
Pharmacists
Association

Association des
pharmaciens
du Canada

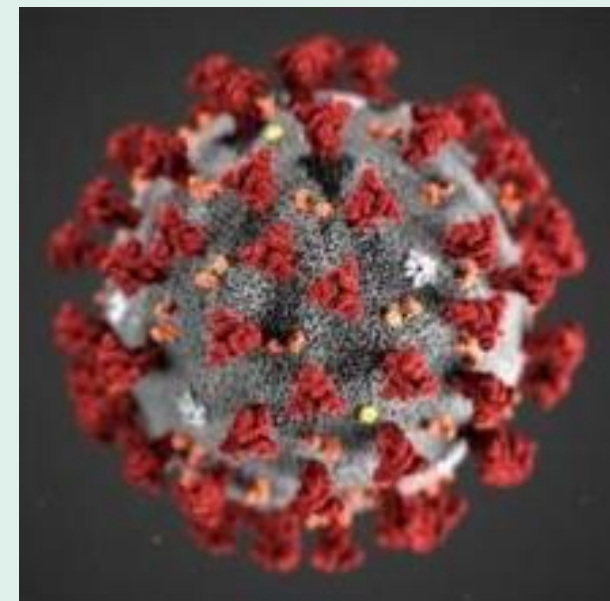
Pharmacists doing more to support patients with dementia, their families and caregivers

March 16, 2016 (Ottawa): When Marc Riachi's mother, Sonia, was diagnosed with frontotemporal dementia, Riachi discovered that she still had much to teach him. As a pharmacist, Riachi became part of her caregiving team. "When you actually have a loved one going through this disease, you learn so much more about its intricacies and develop a better appreciation of the severely limited medical treatments available. It's a humbling and very challenging experience," he says. Riachi, who is also a clinical editor at the Canadian Pharmacists Association, turned his research skills to his mother's care, reading up on treatment guidelines, systematic reviews, and experimental therapies.

- recognizing problems that may be caused by medication side effects
- "de-prescribing" (stopping) medications that are no longer contributing to quality of life or are worsening cognitive symptoms
- changing dosages or switching medications if needed
- finding medication formulations (such as suppositories, injections, and nasal sprays) that the patient can take, and ensuring the packaging can be easily read and opened
- recognizing health problems that may be unrelated to dementia
- making suggestions to improve quality of life
- acting as a "one-stop shop" for information on other health services such as physiotherapy and support services such as the local Alzheimer Society

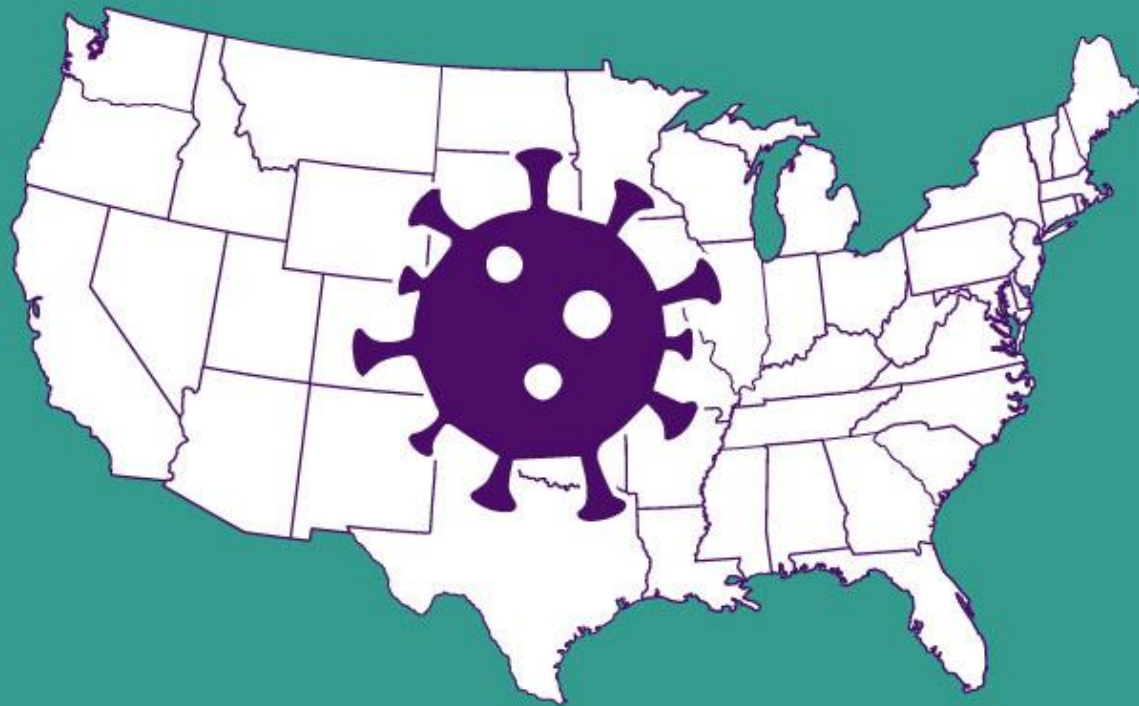
Alzheimer

Uma epidemia?



IN THE UNITED STATES,

ALZHEIMER'S AND
DEMENTIA DEATHS
HAVE INCREASED 16%
DURING THE
COVID-19 PANDEMIC.



alzheimer's  association®

2021 ALZHEIMER'S DISEASE FACTS AND FIGURES



In 2021, Alzheimer's and other dementias will cost the nation

\$355 BILLION

By 2050, these costs could rise to more than

\$1.1 TRILLION

OVER 11 MILLION

Americans provide unpaid care for people with Alzheimer's or other dementias



1 IN 3

seniors dies with Alzheimer's or another dementia



MORE THAN

6

MILLION

Americans are living with Alzheimer's

Alzheimer's and dementia deaths have increased

16%

during the COVID-19 pandemic



These caregivers provided an estimated 15.3 billion hours valued at nearly

\$257 BILLION

~~Mad~~ ~~de~~ Alzheimer

*"That's what
Alzheimer's
does: it's a thief
in the night,
stealing precious
pictures from
our lives while
we sleep"*

Wendy Mitchell



Dementia UK



32 milhões

1,2 milhões (2016)

2 milhões (2023)

World Alzheimer Reports

The World Alzheimer Reports are a comprehensive source of global socioeconomic information on dementia. Each World Alzheimer Report is on a different topic, so the previous reports remain important sources of information with global relevance.

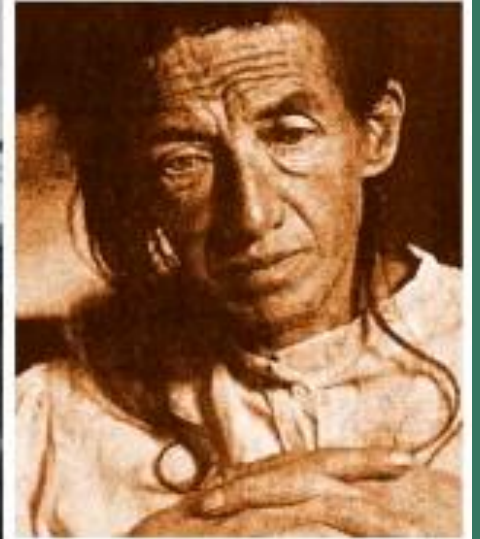
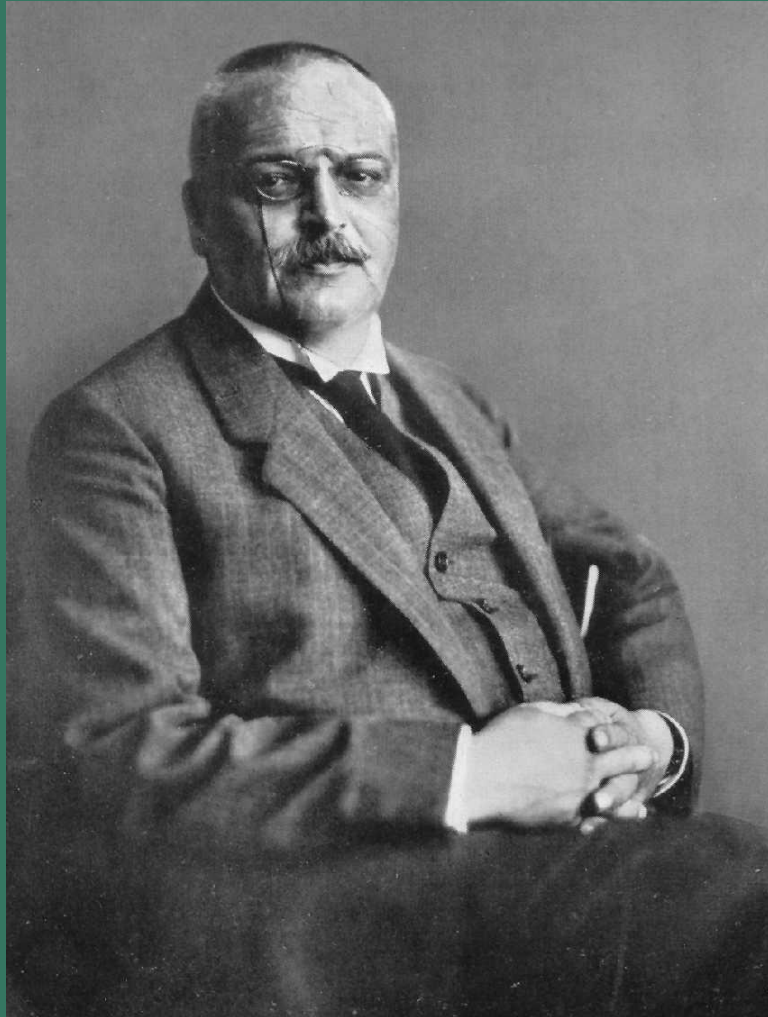


Relatório Mundial sobre o Alzheimer

Davos Alzheimer's Collaborative (DAC)

O DAC está focado em três projetos específicos, interligados e ambiciosos:

- 90% dos dados genômicos vêm de pessoas de origem da Europa Ocidental, embora esse grupo represente apenas 10% da população global.
- É necessária a criação de uma Plataforma, pois os ensaios clínicos são longos e muito caros.
- Desigualdade diagnóstica, terapêutica e a necessidade de diagnóstico precoce.

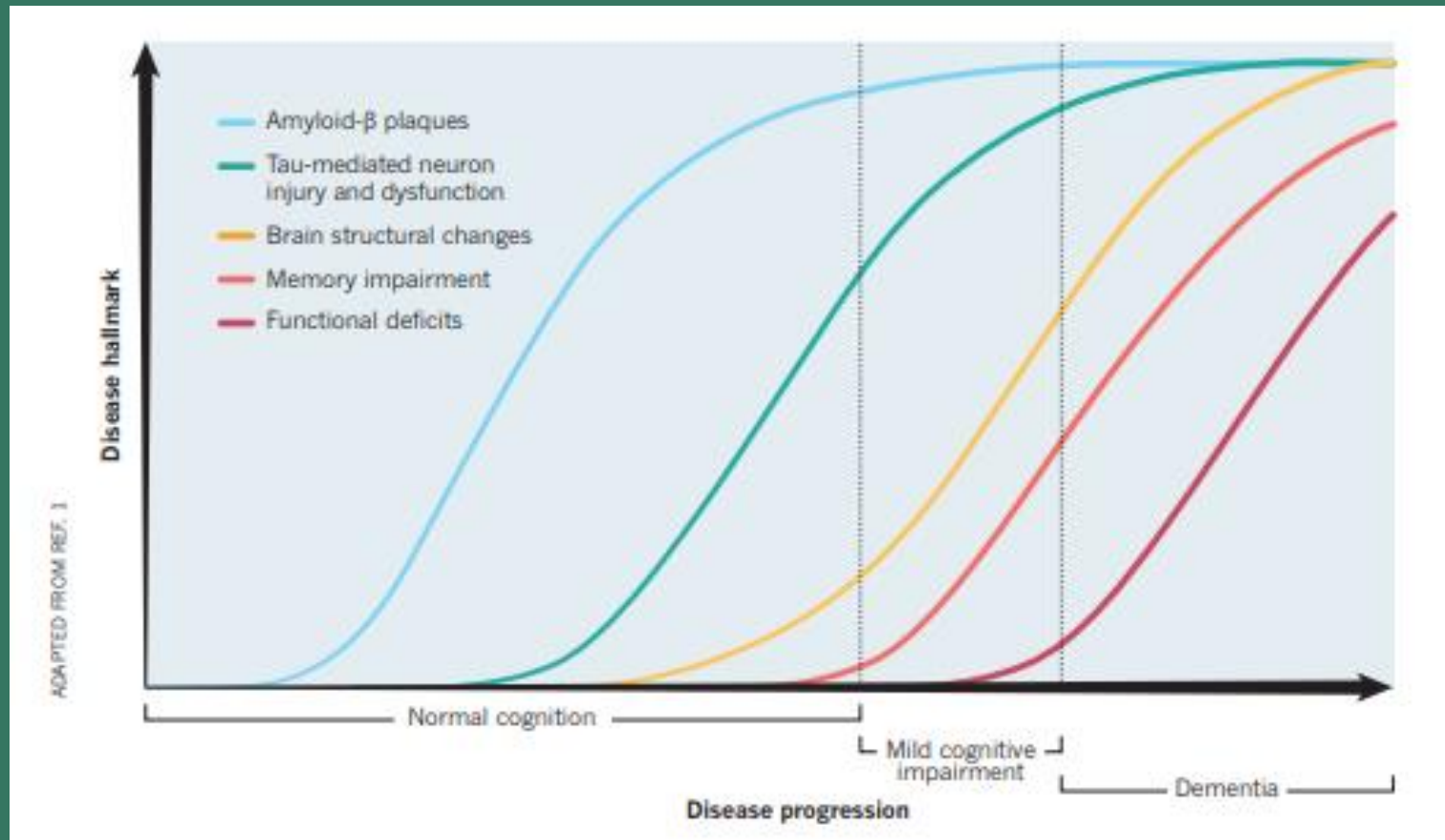


Left: Alois Alzheimer (seated on far left) and co-workers at the psychiatric clinic of the University of Munich in 1904–05. Right: Auguste Deter, the first patient known to be diagnosed with the disease, died in 1906.

Photos: Science Source

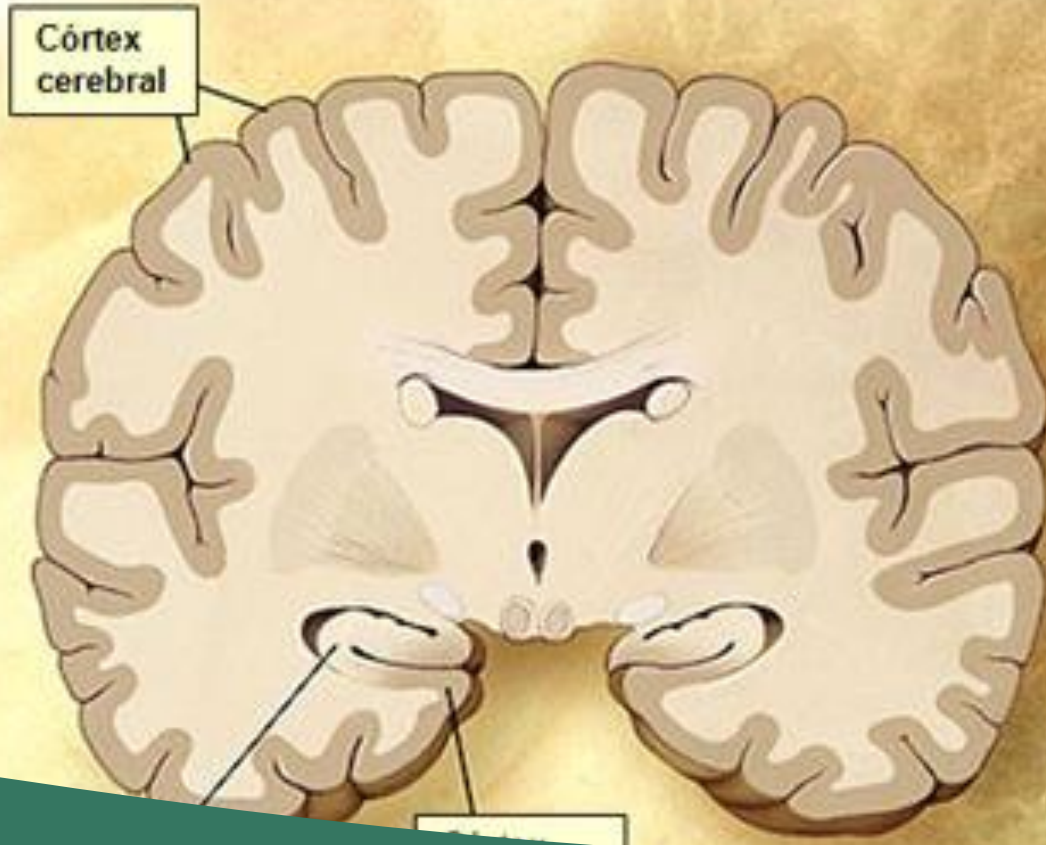
Progressão da Doença de Alzheimer

Início na fase Prodromal.

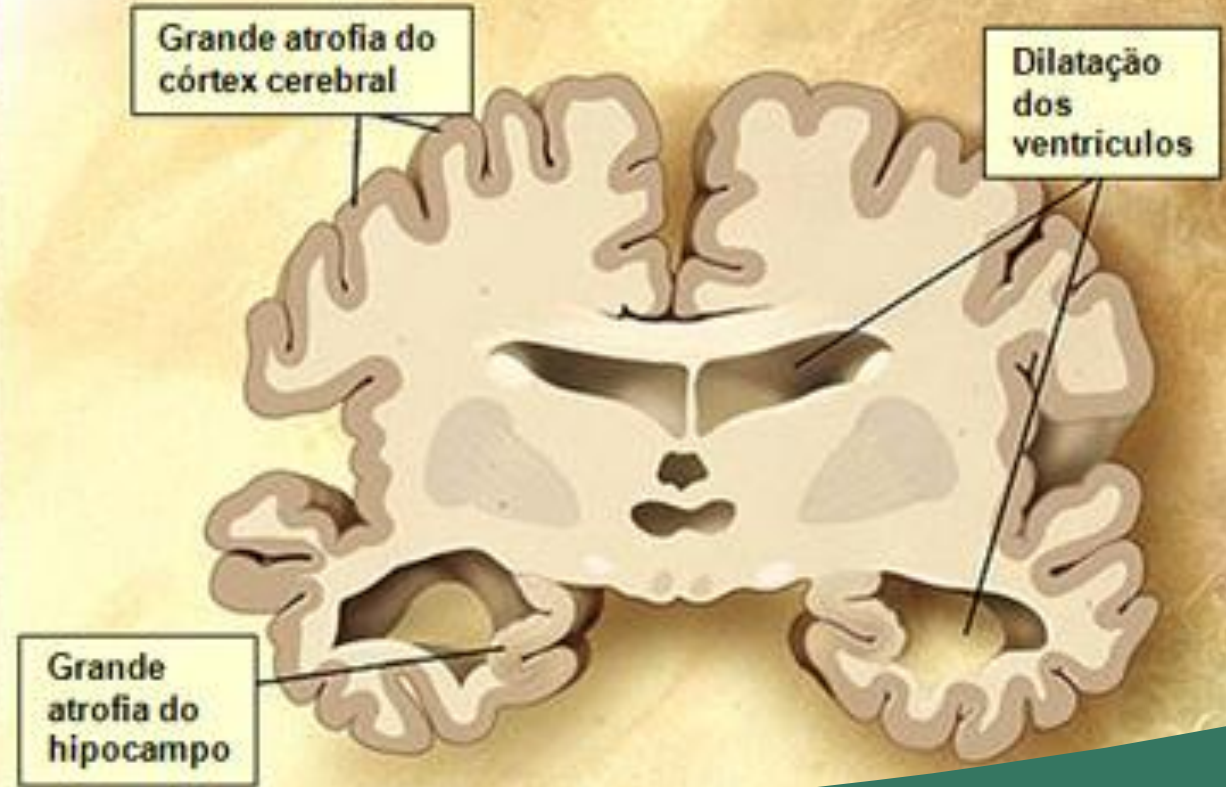


Sources: 1. Jack, C. R. Jr et al. *Lancet Neurol* **12**, 207–216 (2013); 2. Alzheimer's Disease International. *World Alzheimer Report 2015: The Global Impact of Dementia* (Alzheimer's Disease International, 2015); 3. Matthews, F. E. et al. *Lancet* **382**, 1405–1412 (2013); 4. Chêne, G. et al. *Alzheimers Dement* **11**, 310–320 (2015); 5. L. Mucke. *Nature* **461**, 895–897 (2009).

Cérebro normal



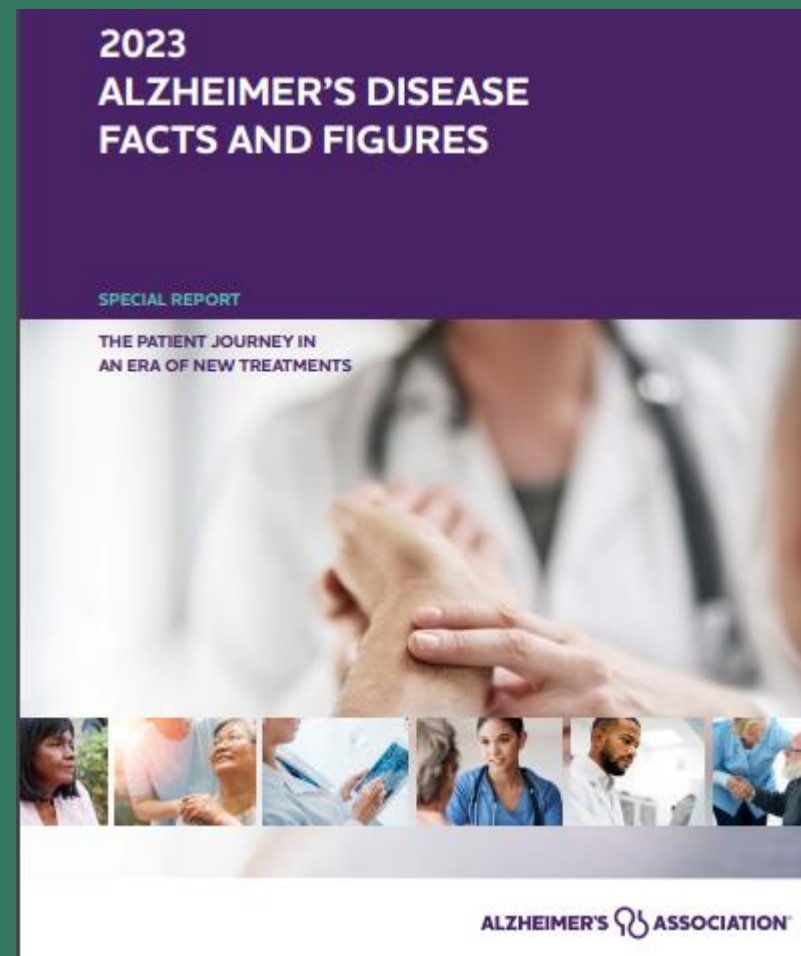
Cérebro na Doença de Alzheimer



*O que é a Doença de Alzheimer?
Quais são as alterações provocadas pela DA?*

Fatores de risco para a Doença de Alzheimer?

- **Idade avançada: 1 a 6 % das pessoas até 65 anos de idade; 50 % até os 85 anos;**
- **Mulheres (++++), Homens (++++);**
- **DM**
- **Cardiovasculares, HAS**
- **Obesidade**
- **Distúrbios do colesterol**
- **Ausência de Redes sociais**
- **Não praticar atividades físicas**
- **Traumas cranianos;**
- **Maus hábitos de vida: alcoolismo, tabagismo.**
- **Baixo nível educacional**
- **Depressão**
- **Genética: cromossomos 14,19 e 21.**

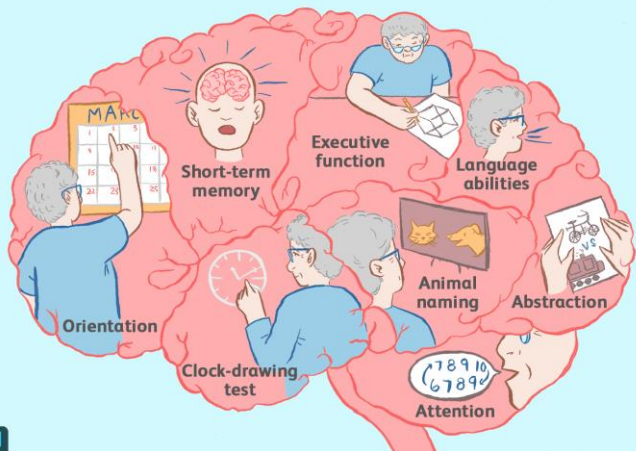




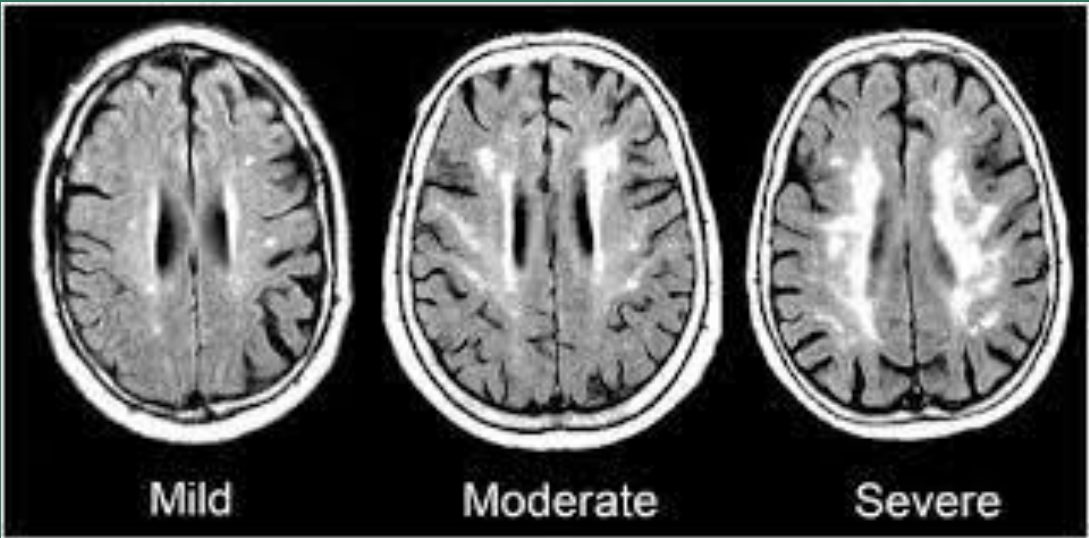
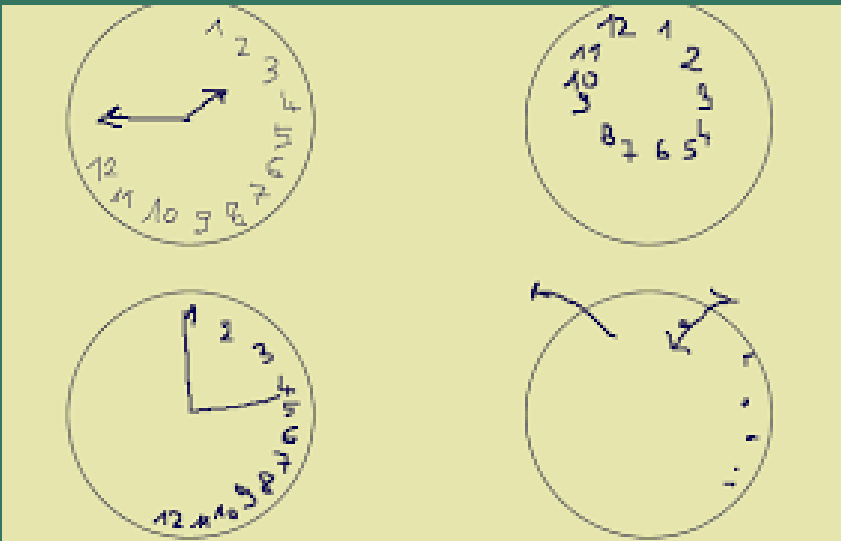
Diagnóstico

What Does the Montreal Cognitive Assessment Evaluate?


The MoCA assesses cognitive abilities, including:



verywell



Quadro 1 – Miniexame do estado mental (MEEM)

Orientação temporal (5 pontos)	Qual a hora aproximada?
	Em que dia da semana estamos?
	Que dia do mês é hoje?
	Em que mês estamos?
	Em que ano estamos?
Orientação espacial (5 pontos)	Em que local estamos?
	Que local é este aqui?
	Em que bairro nós estamos ou qual é o endereço daqui?
	Em que cidade nós estamos?
Em que estado nós estamos?	
Registro (3 pontos)	Repetir: CARRO, VASO, TIJOLO
Atenção e cálculo (5 pontos)	Subtrair: $100-7 = 93-7 = 86-7 = 79-7 = 72-7 = 65$
Memória de evocação (3 pontos)	Quais os três objetos perguntados anteriormente?
Nomear 2 objetos (2 pontos)	Relógio e caneta
REPETIR (1 ponto)	“Nem aqui, nem ali, nem lá”
Comando de estágios (3 pontos)	Apanhe esta folha de papel com a mão direita, dobre-a ao meio e coloque-a no chão
Escrever uma frase completa (1 ponto)	Escrever uma frase que tenha sentido
Ler e executar (1 ponto)	Feche seus olhos
Copiar diagrama (1 ponto)	Copiar dois pentágonos com interseção 

MONTREAL COGNITIVE ASSESSMENT (MOCA)

NAME : _____
 Education : _____ Date of birth : _____
 Sex : _____ DATE : _____

VISUOSPATIAL / EXECUTIVE		Copy cube	Draw CLOCK (Ten past eleven) (3 points)	POINTS																	
		[]	[] [] [] Contour Numbers Hands	___/5																	
NAMING																					
			[] [] [] ___/3																		
MEMORY	Read list of words, subject must repeat them. Do 2 trials. Do a recall after 5 minutes.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center;">FACE</td> <td style="text-align: center;">VELVET</td> <td style="text-align: center;">CHURCH</td> <td style="text-align: center;">DAISY</td> <td style="text-align: center;">RED</td> </tr> <tr> <td style="text-align: center;">1st trial</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">2nd trial</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		FACE	VELVET	CHURCH	DAISY	RED	1st trial						2nd trial						No points
	FACE	VELVET	CHURCH	DAISY	RED																
1st trial																					
2nd trial																					
ATTENTION	Read list of digits (1 digit/ sec). Subject has to repeat them in the forward order [] 2 1 8 5 4 Subject has to repeat them in the backward order [] 7 4 2	Read list of letters. The subject must tap with his hand at each letter A. No points if ≥ 2 errors [] FBACMNAAJKLBFAFAKDEAAAJAMOFAB			___/2 ___/1																
Serial 7 subtraction starting at 100 [] 93 [] 86 [] 79 [] 72 [] 65 4 or 5 correct subtractions: 3 pts, 2 or 3 correct: 2 pts, 1 correct: 1 pt, 0 correct: 0 pt		___/3																			
LANGUAGE	Repeat : I only know that John is the one to help today. [] The cat always hid under the couch when dogs were in the room. []				___/2																
Fluency / Name maximum number of words in one minute that begin with the letter F [] ____ (N ≥ 11 words)		___/1																			
ABSTRACTION	Similarity between e.g. banana - orange = fruit [] train - bicycle [] watch - ruler				___/2																
DELAYED RECALL	Has to recall words WITH NO CUE	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">FACE</td> <td style="text-align: center;">VELVET</td> <td style="text-align: center;">CHURCH</td> <td style="text-align: center;">DAISY</td> <td style="text-align: center;">RED</td> </tr> <tr> <td style="text-align: center;">[]</td> <td style="text-align: center;">[]</td> <td style="text-align: center;">[]</td> <td style="text-align: center;">[]</td> <td style="text-align: center;">[]</td> </tr> </table>	FACE	VELVET	CHURCH	DAISY	RED	[]	[]	[]	[]	[]	Points for UNCUED recall only	___/5							
FACE	VELVET	CHURCH	DAISY	RED																	
[]	[]	[]	[]	[]																	
Optional Category cue Multiple choice cue		[] [] [] [] []																			
ORIENTATION	[] Date [] Month [] Year [] Day [] Place [] City				___/6																
© Z.Nasreddine MD Version November 7, 2004 www.mocatest.org		Normal ≥ 26 / 30	TOTAL ___/30 Add 1 point if ≤ 12 yr edu																		

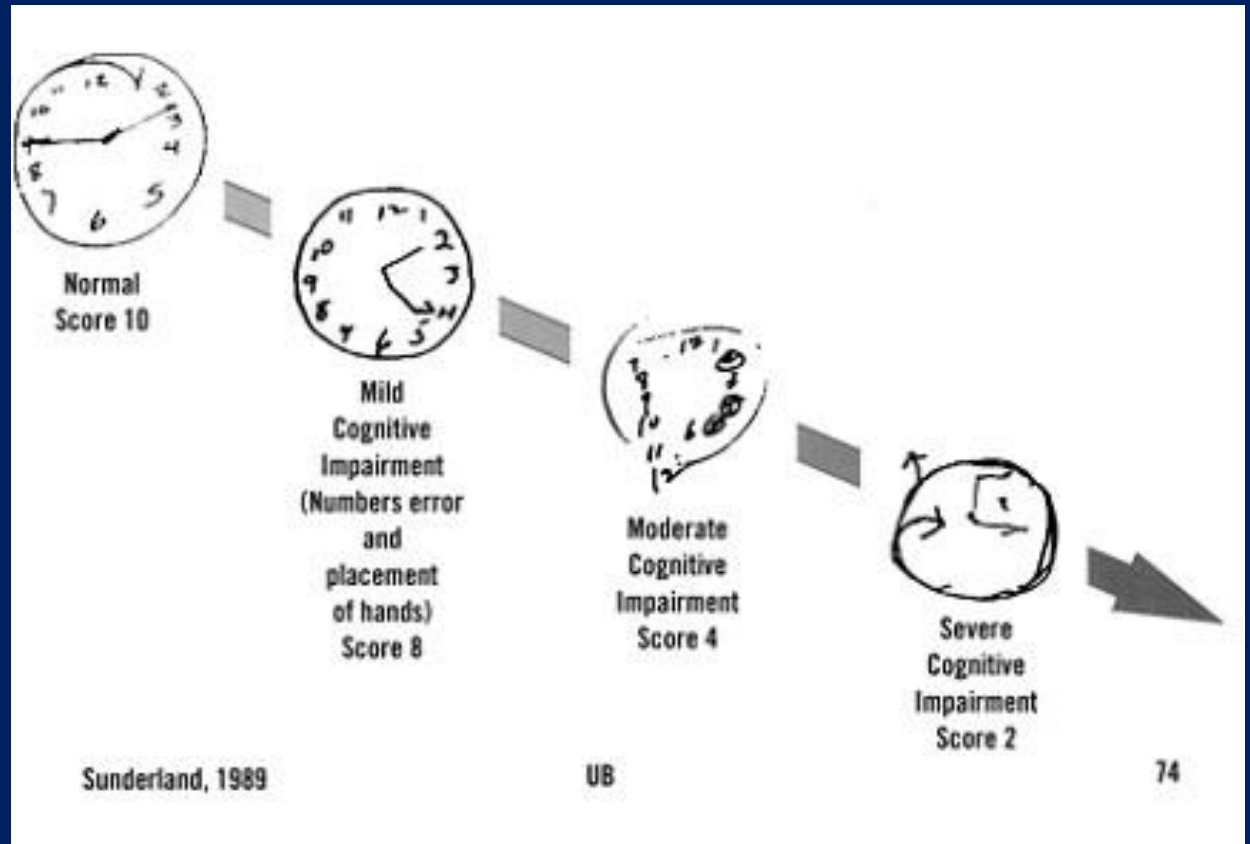
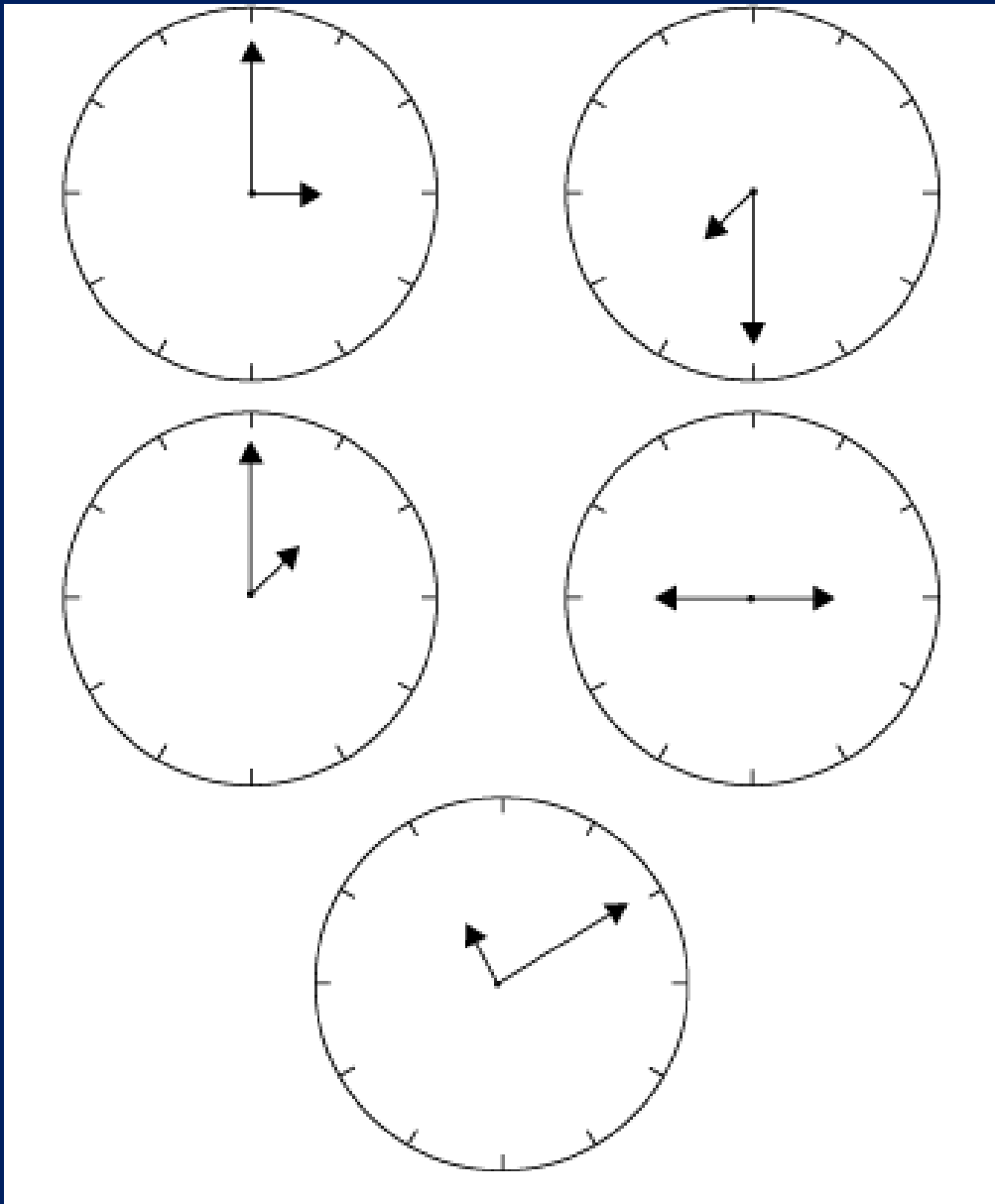


Figura 3. Modelo do subteste leitura das horas.

Sunderland T, Hill JL, Mellow AM, Lawlor BA, Gundersheimer J, Newhouse PA, Grafman JH. Clock drawing in Alzheimer's disease. A novel measure of dementia severity. *J Am Geriatr Soc.* 1989 Aug;37(8):725-9. doi: 10.1111/j.1532-5415.1989.tb02233.x. PMID: 2754157.



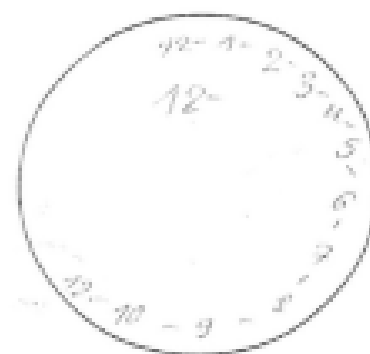
Score 1



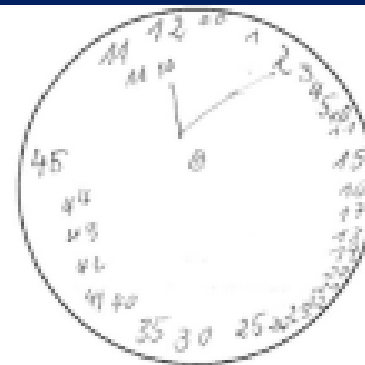
Score 2



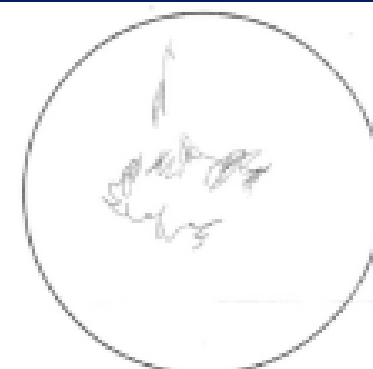
Score 3



Score 4



Score 5

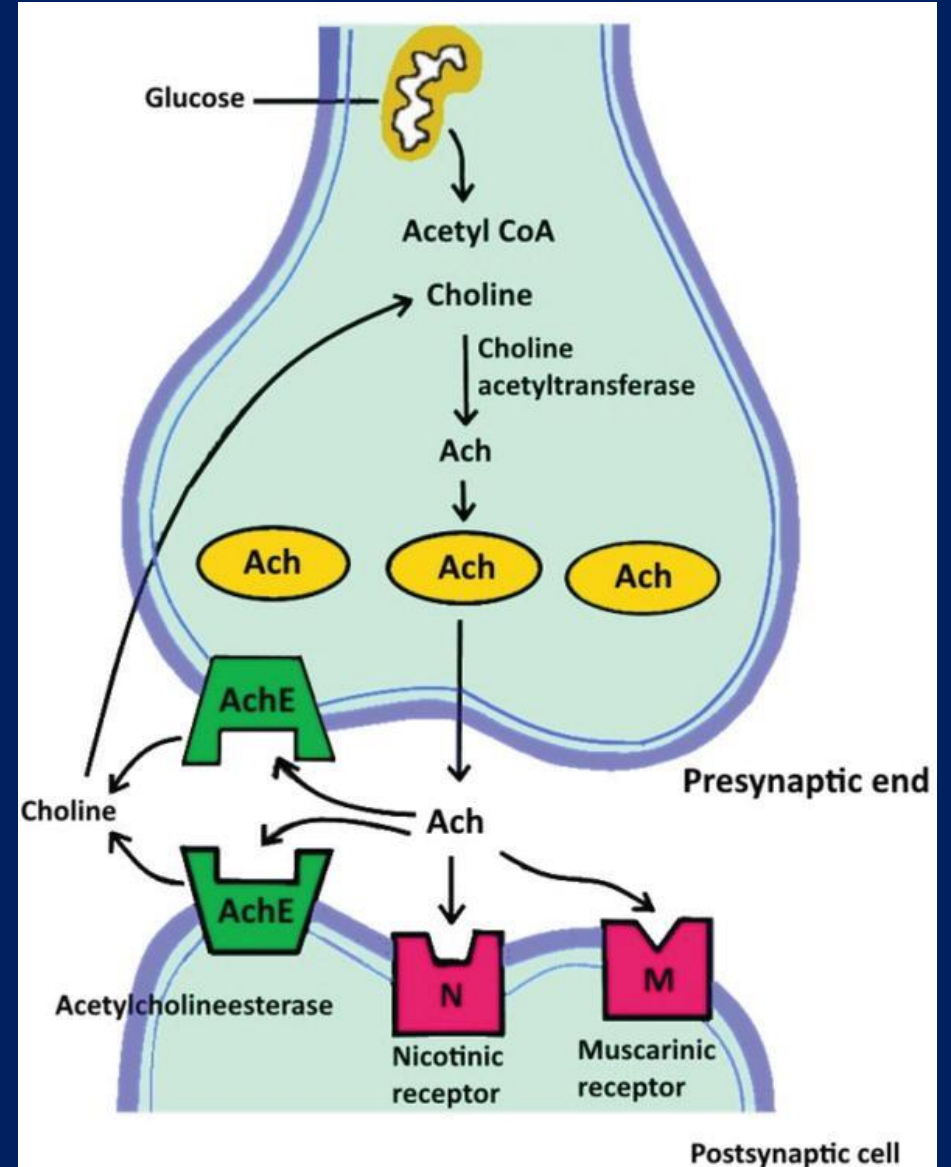


Score 6

Pass

Fail

Sunderland T, Hill JL, Mellow AM, Lawlor BA, Gundersheimer J, Newhouse PA, Grafman JH. Clock drawing in Alzheimer's disease. A novel measure of dementia severity. *J Am Geriatr Soc.* 1989 Aug;37(8):725-9. doi: 10.1111/j.1532-5415.1989.tb02233.x. PMID: 2754157.



Tratamento Farmacológico DA

- **Pode ser definido em 4 níveis :**
(Forlenza, 2005)
- **1-Terapêutica específica, visa reverter o processo fisiopatológico.**
- **2- Abordagem profilática.**
- **3- Tratamento Sintomático: visa restaurar de forma parcial ou provisória as capacidades cognitivas, habilidades funcionais e o comportamento dos portadores de demência.**
- **4- Terapêutica Complementar: manifestações não-cognitivas da demência.**

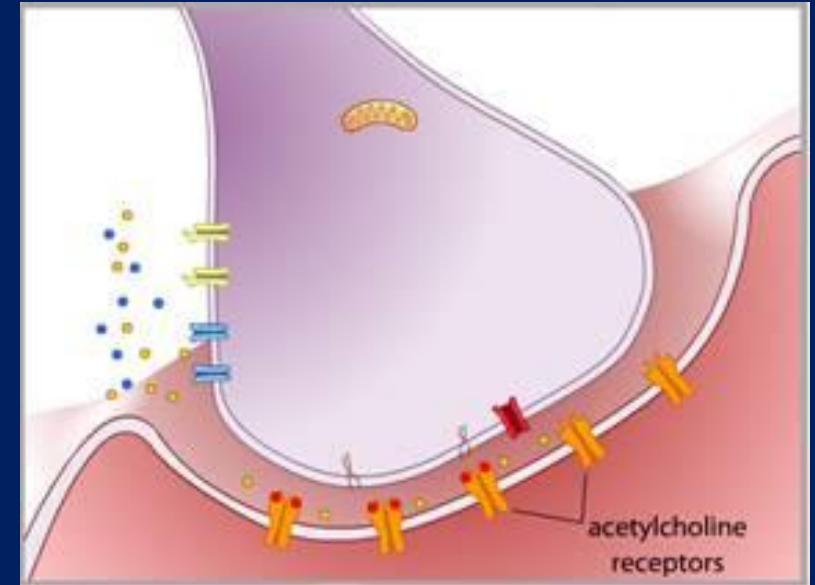


Tabela 1. Características gerais dos inibidores das colinesterases.

	Tacrina	Donepezil	Rivastigmina	Galantamina
Disponível no ano	1993	1997	1998	2000
Classe química	Acridina	Piperidina	Carbamato	Alcalóide fenantreno
Seletividade cerebral	Não	Sim	Sim	Sim
Tipo de inibição da colinesterase	Reversível	Reversível	Pseudo-irreversível	Reversível
Modulação alostérica de receptor nicotínico	Não	Não	Não	Sim
Enzimas inibidas ¹	AChE BuChE	AChE	AChE BuChE	AChE

1 AChE: acetil-colinesterase; BuChE: butiril-colinesterase.

Tabela 2. Farmacologia dos inibidores das colinesterases.

Droga	Dosagem (mg/dia)	Meia-vida de eliminação	Posologia diária	Metabolização e eliminação
Tacrina	40-160	curta (3-4 h)	4 tomadas	Hepática (CYP 1A2) risco de hepatotoxicidade
Donepezil	5-10	Intermediária (7 h)	dose única	Hepática (CYP 2D6 e 3A4) Excreção renal (droga intacta)
Rivastigmina	6-12	curta* (1-2 h)	2 tomadas	Sináptica + excreção renal (baixo risco de interações)
Galantamina	12-24	longa (70 h)	2 tomadas	Hepática (CYP 2D6 e 3A4)

*CYP: isoenzima do citocromo P450. *No caso da rivastigmina, ocorre dissociação entre a meia-vida de eliminação e a meia-vida de inibição, em torno de 10 horas.*

Cognitive enhancers approved for Alzheimer disease

Drug	Proprietary name (date approved)	Indications	Formulations
Cholinesterase inhibitors			
Donepezil	Aricept (1996), generics available	Mild to moderate disease (5–10 mg), moderate to severe disease (10–23 mg)	Tablets, disintegrating tablets
Rivastigmine	Exelon (2000), generics available	Mild to moderate disease	Tablets, oral solution, transdermal patch
Galantamine	Razadyne (2001), generics available	Mild to moderate disease	Immediate-release tablets, oral solution, extended-release tablets
N-methyl-D-aspartate receptor antagonist			
Memantine	Namenda (2003), generics available	Moderate to severe disease	Tablets, oral solution
Combination drug			
Donepezil + memantine	Namzaric (2014), generics available	Moderate to severe disease	Extended-release capsules

Wang J, Yu JT, Wang HF, et al. Pharmacological treatment of neuropsychiatric symptoms in Alzheimer's disease: a systematic review and meta-analysis. *J Neurol Neurosurg Psychiatry* 2015; 86:101–109.

Adverse effects of cognitive enhancers: Percent of patients affected

	Cholinesterase inhibitors			NMDA receptor antagonist	
	Donepezil	Galantamine	Rivastigmine	Rivastigmine transdermal	Memantine
Nausea	3%–19% ^a	21%	17%–47%	2%–4%	Not available
Diarrhea	5%–15% ^a	7%	5%–19%	≤ 7%	5%
Constipation					3%–5%
Anorexia	2%–8%	7% (decreased appetite)	≥ 17% 3%–26% (weight loss)	≤ 3%	< 1% 3% (weight gain) (extended-release formulation)
Vomiting	3%–9% ^a	11%	13%–31%	3%–9%	2%–3%
Insomnia	2%–14%	Not available	1%–9%	Not available	Not available
Headache	3%–10%	7%	4%–17%	≤ 4%	6%
Dizziness	2%–8%	8%	6%–21%	≤ 6%	5%–7%
Fatigue	1%–8%	4%	4%–9%	2%–4%	2%
Syncope	2%	1%	3% (falling) 6%–12%	Not available	Not available
Bradycardia	≥ 1%	1%	< 1%	< 1%	< 1%
Infection	11%	< 1%	1%–10% (urinary tract infections)	Not available	4% (influenza)

Tariot PN, Farlow MR, Grossberg GT, et al. Memantine treatment in patients with moderate to severe Alzheimer's disease already receiving donepezil: a randomized controlled trial. JAMA 2004; 291:317–324

End of life care for a person with dementia



1. End of life care for a person with dementia

2. How to know when a person with dementia is nearing the end of their life

3. End of life care: communication and physical needs

4. Making decisions about end of life care

5. Coping with the death of a person with dementia

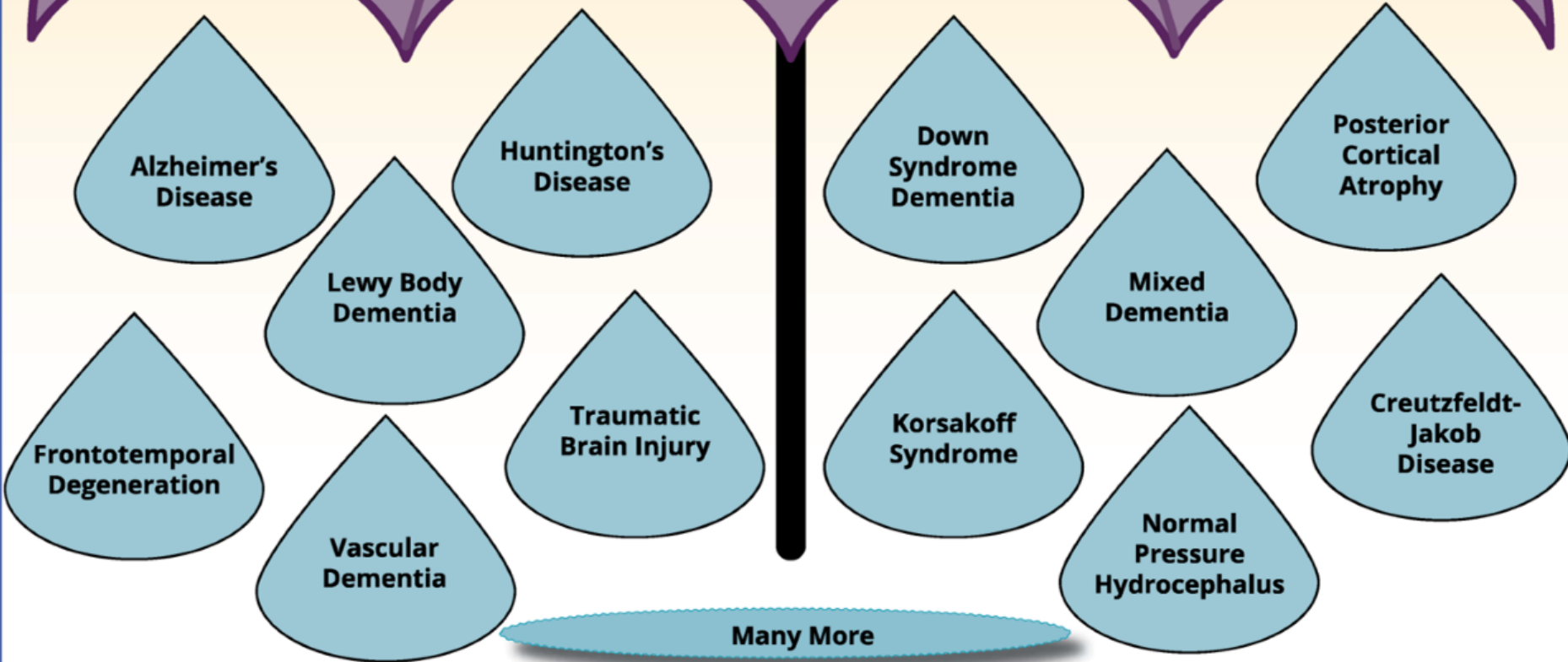
6. End of life care - useful organisations



Utah Department of
Health & Human
Services

DEMENTIA

An UMBRELLA term used to group different conditions and symptoms



Fonte: Utah
Commission
on Aging

Case

Um homem afro-americano de 78 anos, médico aposentado, foi examinado e avaliado na clínica geriátrica. Ele se queixa de dificuldade frequente de memória nos últimos dois anos. Contudo, sua esposa, que é uma advogada atuante e 15 anos mais jovem do que ele, relata que seu marido ainda consegue conduzir suas atividades diárias de forma independente e joga golfe uma vez por semana. Após uma avaliação detalhada, o clínico confirmou o diagnóstico de déficit cognitivo leve amnésico. Tanto o paciente como a sua esposa estavam muito ansiosos para obter a receita de um fármaco capaz de impedir a piora de sua memória no futuro. Qual das afirmações a seguir é a mais precisa a respeito desse paciente?

- a. A Memantina pode impedir a evolução do DCL.
- b. A Donepezila é boa para queixas de memória.
- c. Além de apresentar custo mais baixo, a Galantamina é indicada para este caso.
- d. Nenhum fármaco é indicado.



Pharmacological Treatment of Alzheimer's Disease: Scientific and Clinical Aspects 1st ed. 2022 Edition

by [Gustavo Alves Andrade dos Santos](#) (Editor)

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Alzheimer's disease is the most prevalent form of dementia. Although it was discovered about a century ago, the first drugs applied in treatment were only introduced in therapy in the last 30 years.

This book focuses on the clinical pharmacology of drugs that aim to delay the progression of Alzheimer's disease, such as anticholinesterases and glutamate receptor antagonists, as well as treatment for the behavioral changes caused by the progression of the disease: antidepressants, antipsychotics, anxiolytics, and mood stabilizers.

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Salivary tau as a probable diagnostic method for Alzheimer's disease

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