



Deep Sleep May Be the Best Defense Against Alzheimer's

深度睡眠可能是预防老年痴呆的最佳方法

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Shakespeare described sleep as “the main course in life’s feast, and the most nourishing.” New research suggests it may also be a key nutrient in **warding off Alzheimer’s disease**.

莎士比亚形容睡眠是“人生盛宴上主要的滋补品”。新的研究表明，睡眠可能也是预防阿尔茨海默病的关键因素。

Poor sleep has long been linked to Alzheimer’s, but the relationship is **akin to** the chicken-and-egg **conundrum**. It isn’t clear which came first. During deep sleep, the brain produces slow electrical waves and **flushes out neurotoxins** including **amyloid** and tau, two **hallmarks** of the disease.

长期以来，人们一直认为睡眠不足与阿尔茨海默病有关，但这种关系类似于“先有鸡还是先有蛋”的难题。目前尚不清楚二者谁先谁后。在深度睡眠中，大脑会产生慢波，清除淀粉样蛋白和 tau 蛋白等神经毒素，这两种神经毒素是阿尔茨海默病的标志。

Studies have shown that even one night of **lousy** deep sleep can lead to an increase of amyloid. A week of disrupted sleep can raise the amount of tau, which is especially **insidious** because over time it can **strangle** neurons from the inside out.

研究表明，即使是一晚没睡好也会导致淀粉样蛋白增加。睡眠紊乱一周会增加 tau 蛋白的含量，这会造成潜在的危險，因为随着时间的推移，tau 蛋白会对神经元从内到外造成损伤。

A new study in the *Annals of Neurology* found that a sleep aid called suvorexant could reduce amyloid and tau in middle-aged adults with no **cognitive** problems. The two-night **trial** showed that amyloid in **cerebrospinal fluid** dropped 10% to 20%, and a key form of tau 10% to 15% in people who

508 Words

ward off 避开，防止（危險、疾病等） | Many people swear by vitamin C’s ability to ward off colds. 很多人深信维生素 C 能预防感冒。

Alzheimer’s disease 阿尔茨海默病，老年性痴呆病

akin to ... 与某物相似的，与某物类似的 | What he felt was more akin to pity than love. 他感受到的更像怜悯，而不是爱。

conundrum [kəˈnʌndrəm] *n.* 难题，复杂难解的问题；谜语

flush out 把……冲洗干净；把……驱赶出来 | Drinking water helps flush out toxins from the body. 饮水有助于清除体内毒素。

neurotoxin [ˌnʊroʊˈtɔːksɪn] *n.* 神经毒素

amyloid [ˈæmɪˌlɔɪd] *n.* 淀粉样蛋白

hallmark [ˈhɒːlmɑːrk] *n.* 特征，特点；（金、银、铂制品上标明纯度、产地、制造者的）印记 | Police said the explosion bore all the hallmarks of a terrorist attack. 警方称这次爆炸具有恐怖分子袭击的所有特征。

lousy [ˈləʊzi] *adj.* 非常糟的，极坏的，恶劣的 | I’m lousy at tennis. 我网球打得很差。

received a high dose compared to a **placebo** group.

发表在《神经学年报》上的一项新研究发现，一种名为 **suvorexant** 的助眠剂可以减少认知正常的中年人大脑中的淀粉样蛋白和 **tau** 蛋白。为期两周的试验表明，与对照相比，服用大量助眠剂的人脑脊液中的淀粉样蛋白下降了 10% 至 20%，一种关键形式的 **tau** 蛋白下降了 10% 至 15%。

These effects need to be studied over longer periods of time—including in older adults at higher risk of Alzheimer's—so don't **pester** your doctor for a sleeping-pill **prescription**, which can carry **adverse side effects**. But the study suggests that improving sleep quality among middle-aged adults could help **mitigate** the risk of developing Alzheimer's later in life.

这些影响需要得到更长期的研究——包括在患阿尔茨海默病风险较高的老年人中开展实验——所以不要缠着你的医生开安眠药，这可能会带来不良副作用。但研究表明，改善中年人的睡眠质量有助于降低他们晚年患阿尔茨海默病的风险。

“If we can lower amyloid every day, we think the accumulation of amyloid **plaques** in the brain will decrease over time,” said Brendan Lucey, the study's senior author. “I'm hopeful that we will eventually develop drugs that take advantage of the link between sleep and Alzheimer's to prevent cognitive decline.”

该研究的资深作者布兰登·卢西说：“如果我们每天都能减少淀粉样蛋白，我们认为大脑中淀粉样蛋白斑块的积累将随着时间的推移而减少。”“我希望最终能开发出药物，利用睡眠和阿尔茨海默病之间的联系来预防认知能力下降。”

What has **stumped** neurologists, however, is that some people with high levels of amyloid who may appear to have Alzheimer's based on brain scans **nonetheless function normally**. Two people with the same degree of brain **pathology** can demonstrate markedly different levels of cognitive ability. Merely having Alzheimer's markers therefore doesn't mean that

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insidious [ɪnˈsɪdiəs] *adj.* 暗中为害的，潜在的 | the insidious effects of polluted water supplies 供水系统污染的潜在恶果

strangle [ˈstræŋɡl] *v.* 压制，扼杀；勒死，掐死 | The current monetary policy is strangling the economy. 现行货币政策抑制了经济的发展。

cognitive [ˈkɑːɡnətɪv] *adj.* 感知的，认识的

trial [ˈtraɪəl] *n.* 试验，试用；审理，审判；预赛 | The new drug is undergoing clinical trials. 这种新药正在进行临床试验。

cerebrospinal fluid 脑脊液

placebo [pləˈsiːboʊ] *n.* (试验药物用的) 无效对照剂；安慰剂

pester [ˈpestər] *v.* 打扰，纠缠，烦扰 | Journalists pestered neighbours for information. 记者缠着邻居打听消息。

prescription [prɪˈskɪpʃn] *n.* 处方，药方；处方药；解决方法

adverse [ədˈvɜːrs] *adj.* 不利的，有害的 | The improper use of medicine could lead to severe adverse reactions. 用药不当会引起严重的不良反应。

side effect (药物的) 副作用；意外的连带后果

mitigate [ˈmɪtɪɡeɪt] *v.* 减轻，缓和 | Only international co-operation can mitigate environmental damage. 只有开展国际合作才能减轻对环境的破坏。

someone will develop the disease.

然而，让神经学家感到困惑的是，有些人淀粉样蛋白水平很高，从脑部扫描来看可能患有阿尔茨海默病，但他们的大脑功能却很正常。两个脑部病理程度相同的人表现出的认知能力水平可能完全不同。因此，仅仅有阿尔茨海默病的标志并不意味着某人会患上这种疾病。

Neurologists **posit** that this is because some people have higher levels of “cognitive reserve,” which enables them to function normally despite neurological damage. Physical activity, education and intellectually demanding jobs been found to boost this reserve. These are protective factors that improve the brain’s **resilience** to damage. But there’s another **X** factor, which scientists have struggled to identify. A new study suggests it may be sleep, and in particular deep sleep.

神经学家认为，这是因为有些人的“认知储备”更高，这使他们的大脑在神经损伤的情况下仍能正常运转。研究发现，体育活动、教育和对智力要求高的工作都能提高这种认知储备。这些都是保护因素，可以让大脑从损伤中更好地恢复过来。但还有另一个未知因素，科学家们一直在努力探索。一项新的研究表明，这个未知因素可能就是睡眠，尤其是深度睡眠。

In their study, researchers from the University of California, Berkeley, examine how deep sleep affected memory in cognitively normal seniors. What they found is that more deep sleep significantly improved performance on memory tests in patients with higher levels of amyloid and who were therefore at higher risk for Alzheimer’s.

加州大学伯克利分校的研究人员研究了深度睡眠如何影响认知正常的老年人的记忆。他们发现，长时间的深度睡眠能显著改善淀粉样蛋白水平较高（患阿尔茨海默病的风险较大）的患者在记忆测试中的表现。

“Think of deep sleep almost like a **life raft** that keeps memory **afloat**, rather than memory getting **dragged down** by the weight of Alzheimer’s disease pathology,” says Matthew Walker, a neuroscience professor at UC Berkeley. It’s why you should never feel guilty about **feasting on** sleep.

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plaque [plæk] *n.* 牌匾，匾额；斑，牙菌斑

stump [stʌmp] *v.* 把……难住，难倒；迈着沉重的步子走 *n.* 树桩；残余部分 | John is stumped by an unexpected question. 一个意想不到的问题把约翰难住了

nonetheless [ˌnʌnðəˈles] *adv.* 然而，不过，尽管如此 | The paintings are complex, but have plenty of appeal nonetheless. 这些画复杂难懂，不过还是不乏吸引力。

function [ˈfʌŋkʃn] *v.* 起作用，正常工作 *n.* 作用，功能 | Despite the power cuts, the hospital continued to function normally. 尽管供电中断，医院继续照常运作。

pathology [pəˈθɔːlədʒi] *n.* 病理，病状；病理学

posit [ˈpəːzɪt] *v.* 假设，认定 | Most religions posit the existence of life after death. 大多数宗教都假定人死后生命仍存在。

resilience [rɪˈzɪliəns] *n.* 快速恢复的能力，适应力；弹性

X *n.* 未知的人（或数、影响等）

life raft 救生筏，充气救生艇

afloat [əˈfloʊt] *adj.* （在水上）漂浮；经济上周转得开的，不欠债的 | The Treasury borrowed £40 billion, just to stay afloat. 财政部借了 400 亿英镑，才勉强维持下去。

drag ... down 把……拖下水，使……堕落；使下降；使感到不愉快 | Declining prices for aluminium

该校神经科学教授马修·沃克说：“深度睡眠就像一艘救生筏，让记忆漂浮在水面上，而不会被阿尔茨海默病的病症拖下水。”这就是为什么你应该尽情享受睡眠而无需内疚。

have dragged down the company's earnings. 铝材价格下跌使这家公司的利润下降了。

feast on 尽情享用某物，饱餐某物 | We feasted on chicken and roast potatoes. 我们饱餐了一顿鸡肉和烤土豆。

► 脉络梳理

Para. 1 引出话题：睡眠对预防阿尔兹海默病至关重要

Para. 2-9 引用实验研究证明深度睡眠有助于清除神经毒素，改善记忆，从而预防阿尔兹海默病

Para. 10 总结全文并提出建议，强调应保持充足的睡眠

► 长难句拆解

What has stumped neurologists, however, is that ...

从句主语 后置定语，修饰 people 定语从句，修饰 some people with ... amyloid

表语从句: that some people with high levels of amyloid who may appear to have Alzheimer's based

从句谓语

on brain scans nonetheless function normally.