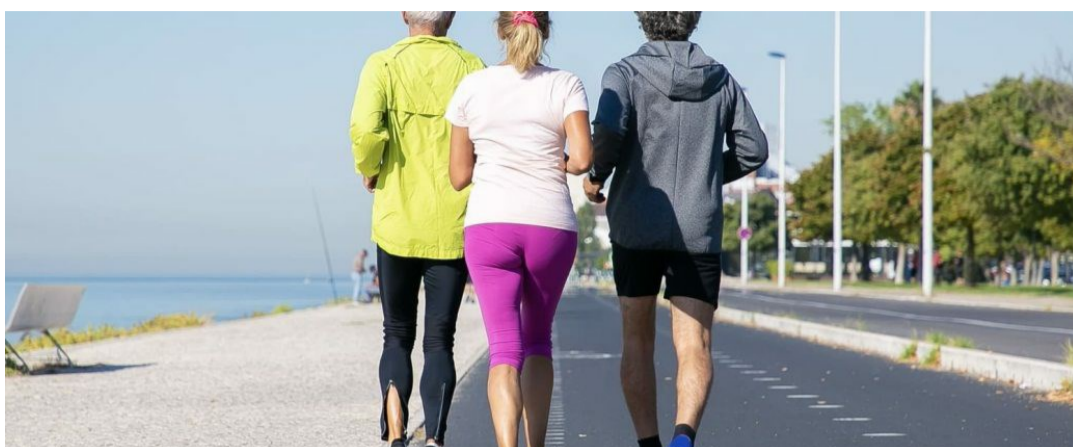


# Lack of physical activity causes a case of dementia every 45 seconds worldwide

Oberdan Rodrigo Schumann / 12 de setembro de 2024 / In English, Uncategorized



## Health | Study from UFRGS' Graduate Program in Epidemiology points out the importance of a regular practice of physical exercises in the prevention of neurodegenerative illnesses

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The alerts concerning lack of physical activities are getting more frequent nowadays. The ever-growing sedentary lifestyle adopted by modern society, allied to the rise of new technologies, got to its peak in the covid-19 pandemic. We already know about the importance of physical activities in the prevention of obesity, diabetes, hypertension, and heart diseases, but the benefits of movement are also proven to be essential for brain health (whether it is related to psychiatric diseases, like depression, or neurodegenerative ones, like Alzheimer's disease).

The article "Systematic review and meta-analysis on population attributable fraction for physical inactivity to dementia", published in the periodic Alzheimer's & Dementia, indicates that at least 6,6% of worldwide cases of dementia are caused by lack of physical activity. Natan Feter, PhD researcher in the Graduate Program Graduate Program in Epidemiology (PPGEP/UFRGS) points out that "common sense might make it appear a low percentage, but we are talking about 99 billions of dollars that are assigned to solely one of the risk factors". He addresses the study, made in collaboration with other researchers from UFRGS, from the Federal University of Pelotas (UFPe), from the University of Illinois and from the Harvard Medical School.

This percentage means that a sedentary lifestyle causes a case of dementia every 45 seconds around the world. According to Feter, it is getting more and more important to talk about prevention. He also points out that "dementia is a very predictable illness, just like diabetes. It is not unavoidable in the process of getting older."

"The message has to be concise, consistent and clear: the promotion of a continuous exercising lifestyle is fundamental to preserve the cognitive function and reduce the risk of dementia in advanced ages"

— Natan Feter

### The research method

The main objective of the study was to quantify the impacts of sedentarism on cases of dementia. In order to do that, we utilized worldwide research results for the same cause-effect risk, allied to data acquired through reports about lack of physical activity by the World Health Organization (WHO). Based on the prevalence of physical activity and dementia in analyzed territories, researchers estimated how many cases could be prevented through exercising.

On a global average, according to research findings, at least 6,6% of cases of dementia are correlated to lack of activity. As stated by Natan, this estimation was the safest one, taking a group of factors into account. He explains: "There is an inconsistency in literature about the best way to calculate this number. We've reached an approximate number, with all the possible adjustments, and we got to 6,6%. This percentage can be higher". The percentages can vary depending on the country: in the same estimation, for example, Brazil got to 11% of cases.

The researcher states that, besides the scientific importance, this type of study is important to promote discussion about the matter. According to him "we need to state that we can prevent it. Not just in September, the month raising awareness about Alzheimer and other dementia illnesses".

### How can physical activity help to maintain a healthy brain

Whether it's a regular walk in the city park or an intense weightlifting session at the gym — any movement contributes to brain health. Until recently, aerobic exercise used to be considered more beneficial, especially for its cardiovascular benefits: improving blood flow, optimizing nutrient delivery to the brain, and, consequently, cognitive function.

In 2019, researchers from UFRJ demonstrated that muscle contraction (which occurs during physical activity) produces a protein called irisin. This substance signals to the brain the time to synthesize another protein called brain-derived neurotrophic factor (BDNF), which promotes the production of new neurons and maintenance of existing connections, protecting cells against neurodegenerative processes. This discovery was a milestone in dementia prevention studies, especially for Alzheimer's disease.

"However, this doesn't negate aerobic exercise, because this form of exercise also releases BDNF. These are different mechanisms, as physical activity involves various organic systems of the human body. There is no ideal exercise," explains the researcher. The recommendation is that physical activity should be regular and, if possible, done for leisure, a factor that also helps prevent mental illnesses such as depression.

"Do what you enjoy doing. Try not to rely on activities that you do out of obligation, unlike work, commuting, or household chores. It's hard to ask someone to double their exercise load when they already come home tired, but that's the message we're trying to convey."

— Natan Feter

According to Feter, in addition to prevention, physical exercise is also important for cases already diagnosed with dementia: it improves cognitive and functional capacity, enhances the patient's quality of life, alleviates neuropsychiatric symptoms, and reduces the caregiver burden. He emphasizes: "There is a significant stigma when it is assumed that a person with dementia cannot engage in physical exercise. We already have robust evidence of the benefits of physical activity both in preventing and treating the disease".

Translated into English by **Artur Vásquez de Mello**, undergraduate student enrolled in the course "Supervised Translation Training I (English)" of the Undergraduate Program in Language and Literature, under the supervision and translation revision of Professor Elizamari R. Becker (P.h.D.) – IU/UFRGS.

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