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A step in the right direction

HOW WALKING CAN BOOST YOUR BRAIN. BY

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WALKING more than 5,000 steps every day may help slow down cognitive decline and the build-up of a protein linked to Alzheimer's dementia. That's what new research from Harvard University in America suggests, after analysis of data from 294 people aged 50-90 who had proteins called amyloid and tau – which have been strongly linked to Alzheimer's – present in their brains but were not displaying symptoms of dementia. All the participants were taking part in the Harvard Aging Brain Study, where they wore pedometers to measure their steps and underwent brain scans and annual cognitive assessments for up to 14 years. The study, which was published in the journal Nature Medicine, found that higher levels of activity was linked to a slower decline in thinking and memory skills related to amyloid proteins in the brain. Even modest activity (3,001-5,000 steps per day) was linked with a notable slowing of tau accumulation and cognitive decline, experts said, yet



5,001 to 7,500 steps per day appeared more beneficial.

Here, Dr Steven Allder, consultant neurologist at Re: Cognition Health, highlights several other key ways walking can give our brains a boost...

When we walk, our heart rate rises and the vascular system becomes more efficient Dr Allder

BOOSTS BLOOD FLOW AND OXYGEN SUPPLY TO THE BRAIN

"Walking increases both blood flow and oxygen delivery to the brain, which is essential for maintaining optimal neurological function," explains Dr Allder. "When we walk, our heart rate rises and the vascular system becomes more efficient at circulating oxygen-rich blood throughout the body, including to the brain. "This enhanced circulation improves the delivery of nutrients and the removal of metabolic waste, supporting healthy neurons and synapses. Increased oxygen also helps stimulate the release of neurotransmitters such as dopamine and serotonin, improving alertness, mood and focus." Consistent walking can also strengthen cerebral blood vessels, promoting long-term brain health and reducing the risk of cognitive decline and vascular-related conditions such as stroke or dementia.

ENHANCES COGNITIVE ABILITIES

“Walking, particularly at a brisk pace, has been shown to boost several cognitive functions, including memory, attention and executive control,” highlights Dr Allder. “The mechanism lies in the increased production of brain-derived neurotrophic factor (BDNF), a protein that supports the growth and survival of neurons, and enhances communication between brain cells. This neurochemical improvement contributes to better learning capacity, sharper recall and more flexible thinking.” Walking in nature in particular is beneficial, adds the neurologist. “The combination of movement, fresh air, and natural scenery engages both hemispheres of the brain, promoting innovative and divergent thinking,” explains Dr Allder. “Walking also improves sleep quality by regulating hormones and reducing restlessness, which in turn enhances concentration and memory consolidation.” “The rhythmic, repetitive motion of walking encourages relaxation by lowering cortisol levels and stimulating the parasympathetic nervous system [our natural calming mechanism],” explains Dr Allder. “Regular walking also triggers the release of endorphins and serotonin, creating a natural ‘feel-good’ effect that can alleviate symptoms of anxiety and depression. Walking outdoors also enhances these benefits further. “Exposure to natural light and greenery helps regulate circadian rhythms and promotes the release of dopamine, improving motivation and overall emotional balance.”

A solo stroll can also help promote mindfulness, which is a researchbacked stress reliever.

HELPS SUPPORT NEUROPLASTICITY

daily stroll could also strengthen the neural pathways in your brain. “Walking plays an important role in supporting neuroplasticity,” says Dr Allder. “Aerobic activity stimulates the release of BDNF and other growth factors that promote the formation of new synapses and strengthen existing ones. This process is vital for learning, adaptation and recovery from injury. “By promoting vascular health, reducing inflammation and maintaining optimal glucose metabolism, walking creates the ideal environment for neuroplastic change.”

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BOOSTS MOOD AND REDUCES STRESS