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DOCTOR'S NOTE

Monthly Newsletter for Woodlands' CCM Program

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WOODLANDS MEDICAL SPECIALISTS

I am becoming more forgetful - what can I do to prevent dementia?

BY MARK M RYAN, MD

Researchers from the Agency for Healthcare Research and Quality conducted a systematic review of 263 studies that assessed the effectiveness of different types of interventions aimed at preventing or delaying the onset of age-related cognitive decline, mild cognitive impairment, or Alzheimer's-type dementia.

Cognitive training: training your brain improves performance… but only in the areas that are being trained. In practice, I tell patients to work on puzzles AND increase their socialization to engage in daily conversation and debate.

Physical activity: no clear and consistent benefit of resistance nor aerobic activity in preventing cognitive decline were observed; however, there was a trend among all activities toward preserving cognition…stay active.

Diet: researchers found limited data with high risk of bias and therefore did not make any conclusions on any specific diet's impact on preventing cognitive decline.

Vitamins: vitamin B12 plus folic acid improves cognitive test performance and memory. Vitamin E, C, and vitamin D did not prevent cognitive decline. In practice, I tell patients to take a B-complex vitamin that includes both B12 and folic acid together.

Nutraceuticals: omega-3 fatty acids, ginko bilboa, and reservatrol did not prevent cognitive decline.

Anti-inflammatory medications: low-dose aspirin and other anti-inflammatory medications do not improve cognitive function or memory.

Antidementia treatments: antidementia drugs (Aricept or Namenda) do not reduce the risk of developing cognitive impairment or Alzheimer-type dementia.

A small decline in cognitive function with age is considered normal. Supplementing your dietary intake of vitamin B12 and folic acid, engaging in cognitively challenging activities, and moderate physical activity are ways to prevent further decline in cognitive function.

HEALTH TIPS

Woodlands uses HealthArc to improve primary care services

- Woodlands began using the software program, HealthArc, to improve patient access and engagement while reducing the administrative burden for our nurses
- Patients can now send text messages, make video calls, or email their nurse via the HealthArc app
- Providers can remotely monitor patients' blood pressure, blood sugar, and weight with HealthArc

This newsletter is brought to you by the Woodlands Primary Care Department:

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New biomarker shows that some aspects of the aging process are reversible

Biological age undergoes rapid fluctuations in mice and humans. Severe stress induces an increase in biological age that can be reversed upon recovery. The use of DNA methylation clocks (DNAm) allows scientists to quantify biological age and will not allow researchers to discover what factors improve biological age recovery rate thus opening up a new field of anti-aging therapies referred to as "gerotherapeutics".

Aging is classically conceptualized as an ever-increasing trajectory of damage accumulation and loss of function, leading to increases in morbidity and, ultimately, death. With the use of DNA methylation clocks (DNAm) researchers have proven that aging can be reversible. In a now classic experiment monitoring the aging process in mice, researchers surgically connected the blood vessels of young mice to the blood vessels of old mice for 3 months, and then disconnected them. Exposure to the blood of old mice caused the organs of young mice to age dramatically. When the joined blood supplies were disconnected, however, the organs of the young mice became biologically younger. Investigators from Harvard Medical School's Division of Genetics more recently published[1] their findings showing several scenarios in human beings in which exposure to severe stress resulted in an increase of the biological age of affected humans that reversed upon recovery. One example was in survivors of severe COVID-19 infection admitted to a hospital. These patients had a marked acceleration in biological age according to their DNAm clocks during their acute illness that returned to baseline following their discharge home.

Another example was of people who suffered a traumatic hip fracture that required emergency surgery within twenty-four hours of the trauma. These patients had a dramatic increase in aging according to their DNAm clocks that returned to their baseline one week later. Interestingly, people who underwent elective non trauma-related surgery suffered acceleration of biological aging that did not return to baseline in the post-operative

1 Poganik JR et al. Biological age is increased by stress and restored upon recovery. Cell Metab 2023 May 2; 35:807.

CALL US FIRST

I twisted my knee walking on the beach and it is swollen - do I need to go to the emergency room?

A knee injury is no fun, but an emergency room visit can certainly make it worse. We are on-call 24 hours seven days a week and want to help you make the best decision for your health. Call 850-696-4000 and ask the operator for the Woodlands primary care physician on-call.