In a recent study in the journal *Carcinogenesis* by the Department of Chemical Biology at the Ernest Mario School of Pharmacy, Rutgers University, stilbenes, which are phytochemicals present in grapes and berries, were shown to potentially help prevent colon cancer.*

While widely studied stilbenoids like resveratrol have shown antioxidant, anti-inflammatory, chemopreventive, and anti-aging effects in a number of biological systems, the purpose of this study was to identify the chemopreventive potential of pterostilbene with colonic tumor formation as an end point, and to further evaluate how pterostilbene affect colon carcinogenesis.

The researchers evaluated rats over a 45-week period that were given either a control or 40 ppm pterostilbene. Overall analysis indicated that pterostilbene reduced colon tumor multiplicity of non-invasive adenocarcinomas, lowered proliferating cell nuclear antigen, and downregulated the expression of beta-catenin and cyclin D1.

—Jon Finkel

Reference

*Carcinogenesis. 2010 Jan. 8.*

**Antioxidant-rich Fruits and Vegetables May Cut Lymphoma Risk**

In a recent study done at the Mayo Clinic College of Medicine in Rochester, Minnesota, researchers evaluated the results of increased dietary intakes of specific antioxidant nutrients, like vitamin C, alpha-carotene, and proanthocyanidins in order to determine their effectiveness in reducing the risk of cancer.*

The study, led by James Cerhan, analyzed the dietary intakes for 35,159 Iowa women aged between 55 and 69. A total of 415 cases of non-Hodgkin’s lymphoma were documented during the study.

Dietary vitamin C intakes were associated with a 22% reduction in lymphoma risk, while alpha-carotene, proanthocyanidins, and manganese were associated with 29, 30, and 38% reductions in risk. In addition, increased intakes of fruits and vegetables were associated with a 31% reduction in risk, while yellow/orange and cruciferous vegetables were linked to a 28 and 18% reduction.

—Jon Finkel

Reference


**Blueberry Juice May Boost Memory**

A new study done by researchers at the University of Cincinnati Academic Health Center showed that drinking wild blueberry juice every day improved the memory of aging adults with memory problems.*

Blueberries contain polyphenol compounds, the most prominent of which are anthocyanins. Anthocyanins have antioxidant and anti-inflammatory effects and have also been associated with increased neuronal signaling in brain centers, which mediates memory function as well as improved glucose disposal. These benefits would be expected to mitigate neurodegeneration.

The researchers measured the effects of daily consumption of wild blueberry juice in a sample of nine older adults over a 12-week period. The findings of this preliminary study suggest that moderate-term blueberry supplementation may confer neurocognitive benefits and establish a basis for more comprehensive human trials to study preventive potential and neuronal mechanisms.

Editor’s note: Blueberry extracts are available in a number of dietary supplements.
Higher Omega-3 Fatty Acid Levels Correlated with Reduced Telomere Shortening Rate

Researchers at the University of California reveal in a recent issue of the Journal of the American Medical Association that heart disease patients who have higher levels of omega-3 fatty acids experience a lower rate of reduction in telomere length over time.* Telomeres, which are protective DNA sequences at the ends of chromosomes, shorten with the age of the cell, and their length is a marker of biological aging.

The investigation enrolled 608 men and women recruited from the Heart and Soul Study. Patients whose levels of EPA and DHA were among the top 25% of participants had the slowest rate of telomere shortening over the 5-year follow-up period, while those whose levels were lowest had rates that were the fastest.

“These findings raise the possibility that omega-3 fatty acids may protect against cellular aging in patients with coronary heart disease,” the authors conclude.

Editor’s note: Daily fish oil capsules are a convenient and safe way to ensure optimal omega-3 fatty acid intake.

—Dayna Dye

Reference


Jogging Builds Brain Cells

Scientists reporting in the Proceedings of the National Academy of Sciences have recently concluded that running has a positive impact on the hippocampus, which is the section of the brain responsible for learning and memory. Their findings are based on studies that show that adult mice that voluntarily used running wheels increased the number of their brain cells and performed better at spatial learning tests than non-exercising mice.*

Until recently, neuroscientists were under the impression that we do not grow new brain cells after birth. However, recent mice experiments have repeatedly shown that running boosts the number of new brain cells in the hippocampus. In this particular study, two groups of mice, one of which had unlimited access to a running wheel throughout, were put through post-exercise memory tests. After training sessions, the mice in the exercising group scored almost twice as high as the other mice in a repeated memory test for a sugar reward. The sedentary mice got steadily worse at the test.

This evidence confirms what other studies have begun to show, which is that exercise triggers significant physiological and structural changes in the brain that can improve cognitive function and help prevent mental decline.

—Jon Finkel

Reference


Calcium and Vitamin D Supplementation Reduces Fracture Risk Regardless of Age, Gender