



# Natural Insights for Well Being®

January 2021

## Cognition

Nutrients protect brain, support cognitive health

### Omega-3s and air pollution

Earlier studies found omega-3s reduced brain damage due to lead and mercury, but there are no studies on omega-3s and air pollution. Fine particle matter, 2.5 microns in size—30 times smaller than the width of a hair—can directly enter the bloodstream through the respiratory tract, damaging body systems including the brain. Maintaining brain volume, or size, is essential for healthy cognition later in life.

In this study, doctors compared omega-3 index scores in 1,315 dementia-free women, average age 70, who had a brain structure MRI in the tenth year of the study. All the women lived in areas with high air pollution.

Compared to women with the lowest omega-3 index scores, women with the highest scores had a greater volume of white matter in the frontal, parietal, and temporal brain lobes. Volume in the hippocampus—the area of the brain involved in short- and long-term memory, and in spatial memory that enables navigation—was also larger for women with higher omega-3 index scores.

### Astaxanthin, tocotrienols, and cognition

A new, objective, digitized test can measure and monitor brain



performance, and reliably detect mild or subtle cognitive deficits compared to healthy individuals. In this study, 44 men and women, average age 55, healthy but complaining of memory loss, took a placebo or 9 mg of astaxanthin plus 50 mg of tocotrienols, daily before or after breakfast.

After 12 weeks, those taking the astaxanthin/tocotrienols combination showed significant improvements in tests of short-term, long-term, and verbal memory. In addition to the objective tests, participants reported better memory of names of people and things, compared to placebo.

The new test, called Cognitrax®, also measures motor performance—how the body responds to brain signals; attention, and neural processing speed. Doctors said astaxanthin and tocotrienols safely improved memory performance.

REFERENCE: NEUROLOGY; AUGUST, 2020, VOL. 95, NO. 8, WNL 10074

JANUARY'S

## Healthy Insight Ashwagandha for Sleep

Ashwagandha improved sleep quality and mental alertness in those with and without insomnia. In this study, 40 insomniacs and 40 non-insomniacs took a placebo or 600 mg of ashwagandha per day.

After eight weeks, compared to placebo, both groups saw improvements in sleep efficiency—how quickly sleep came at bedtime, and how long it continued uninterrupted—total sleep time, and mental alertness on rising. Participants also had improved anxiety scores on a standard mood scale.

Although both groups benefited, those with insomnia benefited most. Ashwagandha was safe for all participants, with none reporting side effects, regardless of health condition or age.

REFERENCE: JOURNAL OF ETHNOPHARMACOLOGY; 2021, VOL. 264, 113276

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# Covid Update

## Zinc, vitamin D, linked to better outcomes

### Zinc and hospitalizations

Between March 15, 2020, and April 30, 2020, doctors measured fasting levels of zinc in 249 Covid patients admitted to a university hospital in Barcelona, Spain. Zinc levels averaged



61 micrograms per deciliter of blood (mcg/dL), and among those who later died in the hospital, average zinc levels were 43 mcg/dL.

Overall, those whose zinc levels fell below 50 mcg/dL were 2.3 times more likely to die in the hospital than those with levels at or higher than 50. While the infection was active, those with better zinc levels also had lower levels of interleukin-6, the proteins that signal systemic inflammation.

The findings led doctors to conclude lower zinc levels at admission were linked to higher inflammation and poorer outcomes in those with Covid-19.

### Vitamin D and infection rates

New research from Quest Diagnostics and Boston University

reveals those whose vitamin D levels fell below 20 nanograms per milliliter of blood (ng/ml), or 50 nanomoles per liter (nmol/L), were 54 percent more likely to test positive for Covid-19.

Doctors took the measurements from mid-March to Mid-June, 2020, covering 191,779 people from all 50 states, and matching with their vitamin D levels during the preceding 12 months.

There was a direct link between vitamin D levels and testing positive: a 12.5 percent rate for those with less than 20 ng/ml; an 8.1 percent rate for those with 30 to 34 ng/ml, and a 5.9 percent rate for those with vitamin D levels of at least 55 ng/ml.

**REFERENCE:** ESCMID CONFERENCE ON CORONAVIRUS DISEASE (ECCVID); SEPTEMBER 23, 2020, REPORTS

# Brain

## Omega-3 and CBD beneficial for brain function

### Omega-3 and Alzheimer's disease

People with a gene mutation known as APOE4 (E4) are four times more likely to develop Alzheimer's disease (AD). Doctors thought those with E4 would need larger doses of the omega-3 DHA—one of the most prevalent fatty acids in the brain—to have adequate levels in their brain matter.

In this six-month study, 33 men and women, 15 with E4, at least age 55, with a family history of AD, but without the disease themselves, took a placebo or 2,152 mg of DHA per day, which included 0.1 percent EPA. Both groups restricted other polyunsaturated fatty acids, and took B complex vitamins including 1 mg of vitamin B12, 100 mg of B6, and 800 mcg of folic acid per day. B-vitamins help the body process omega-3s.

Discussing the findings, doctors said, "E4 carriers, despite having the same dose, had less omega-3s in the brain." E4 carriers also had one-third the increase of EPA in spinal fluid compared to non-E4 participants.

### CBD increases brain blood flow

CBD may improve medical conditions relating to memory processing, but doctors don't know how it works. In this study, 15 healthy adults with little or no history of cannabis took a placebo or 600 mg of oral CBD, after which doctors measured blood flow to the hippocampus, the area of the brain involved in memory.

Compared to placebo, those taking CBD saw blood flow to the hippocampus increase significantly. Blood flow also increased in the orbitofrontal cortex, the area of the

brain involved in decision-making.

Doctors said CBD changes how the brain processes emotional memories, which may help explain its benefit in PTSD and other psychiatric disorders.

**REFERENCE:** THE LANCET; 2020, PIIS2352-3964(20)30258-9



# Longevity

## Vitamins D and K increase survival

### Vitamins D and K extend life

This is the first study to test for a link between levels of vitamins D and K and life expectancy in the general population. A total of 4,742 men and women, average age 53, enrolled in this 14-year study during which doctors measured blood levels of vitamins D and K, and tracked all causes of death.

Twenty percent of study participants were low in both vitamins D and K, and were 22 percent more likely to have died from any cause compared to 7 percent for participants with high levels of vitamins D and K. Those who were low in both vitamins were also more likely to have heart and circulatory events.

Doctors considered levels of vitamin D below 20 nanograms per milliliter of

blood (ng/ml), or 50 nanomoles per liter (nmol/L), to be low. Because doctors can't measure vitamin K directly, they used matrix Gla protein—which is high when vitamin K levels are low; and which doctors flagged as high when above 361 picomoles per liter.

### More vitamin K2?

Doctors can't directly measure vitamin K in the body, and instead use matrix Gla protein—levels of which are high when vitamin K is low—as a marker for vitamin K. In this study, doctors evaluated vitamin K by measuring matrix Gla protein levels in 491 men and women, aged 19 to 71.

They found a direct link: as levels of matrix Gla protein increased,

participants were more likely to have arterial stiffness, high blood pressure, obesity, and a history of heart and circulatory events.

REFERENCE: EUROPEAN JOURNAL OF NUTRITION; 2020, S00394-020-02352-8



# Circulatory System

## Nutrients improved blood flow and lipids

### Anthocyanin-bromelain improved circulation

This is the first study to measure changes in circulation by combining naturally occurring anthocyanins in tart cherry and hawthorn with bromelain. In the study, 18 healthy adults, average age 24, took 480 mg of tart cherry, 465 mg of hawthorn extract, and 400 mg of bromelain, alternating with placebo in two separate phases.

While there were no significant changes during the placebo phases, during the anthocyanin-bromelain

phases, participants had more flexible arteries, lower systolic blood pressure, significant increases in total antioxidant capacity, and more highly oxygenated red blood cells. Participants enjoyed the improvements while at rest and during exercise.

Discussing the findings, doctors said, "Our results revealed for the first time that an antioxidant-rich combination of anthocyanins and bromelain showed acute improvements in circulation, blood pressure, antioxidant capacity, and skeletal muscle oxygen transport, at rest or during exercise."

### Ubiquinol rebalanced lipids

When lipids are out of balance, chances increase for poor circulation and hardening of the arteries. This study followed 48 men and postmenopausal

women, aged 35 to 65, with LDL cholesterol levels between 130 and 200 mg/dL, moderate hardening of the arteries, and body mass index scores between 18.5 and 29.9. None were taking statins or other lipid-lowering treatments.

Participants took a placebo, 100 mg, or 200 mg of ubiquinol per day. After eight weeks, both ubiquinol groups saw better circulation and more flexible arteries, and less oxidation of LDL. Levels of nitric oxide—a molecule that helps blood vessels relax and dilate—increased significantly as the dose of ubiquinol increased.

Doctors said the results showed ubiquinol significantly improved blood vessel function by increasing nitric oxide levels.

REFERENCE: CAMBRIDGE UNIVERSITY PRESS; JULY, 2020, S0007114520002548





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## Better Vision

### Nutrients slow progression to late-stage AMD

#### Vitamins, minerals, carotenoids and omega-3s beneficial

In age-related macular degeneration (AMD) people gradually develop blind spots in the center field of vision. In this study, doctors analyzed findings from two large clinical trials that photographed the interior surfaces of 14,135 eyes annually for over 10 years.

Doctors periodically measured the diets of study participants and found several nutrients appeared to significantly decrease chances of progressing to late-stage AMD. These included vitamins A and B6, beta-carotene, copper, lutein/zeaxanthin, magnesium, the omega-3 fatty acid DHA, and alcohol.

The nutrients slowed progress in two

areas: late-stage AMD, where cells in the retina deteriorate and die; and drusen, pinhead-sized protein/fat deposits under the retina that can distort vision if too many develop or become too large.

Doctors said certain vitamins, minerals, carotenoids, and fatty acids appear to slow the progression from early to late-stage AMD, and fortifying the diet with these readily available natural nutrients may be an effective preventative.

**REFERENCE:** OPHTHALMOLOGY, 2020, S0161-6420(20)30836-8



## Your Good News!®

We're dedicated to discovering the benefits of good nutrition and healthy lifestyle, and hope this issue of Natural Insights for Well Being® informs and inspires you to take an active role in your health. Please ask us to assist you with any natural products you would like to know more about.

These articles provide nutritional information only and do not replace professional medical advice.

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