

Whole In The Wall

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Natural Insights for Well Being®

August

Good Sleep

Nutrients help rebalance and improve sleep

What are sleep disorders? There are many, but the four most common are insomnia, a temporary halt to breathing, irregular sleep-wake cycles, and restless leg syndrome. Doctors also consider a sleep disorder regularly getting more than nine or less than seven hours of sleep a night.

Omega-6:3 ratio may predict disturbed sleep

In this large study, doctors measured the ratio of omega-6 to omega-3 fatty acids in the diets of 39,463 men and women. Overall, those who consumed high amounts of omega-6s, and who had greater omega-6:3 ratios were more likely to report sleep disorders and abnormally short sleep duration.

In men, those who consumed higher amounts of omega-3s were more likely to report normal sleep duration, and were less likely to have short or long sleep periods.

Compared to those without sleep disorders, those with sleep disorders tended to be older, be smokers, have depressive symptoms, be diabetic, and consume more alcohol and caffeine.

Melatonin reduced sleep disorders

In this study, doctors reviewed 23



random placebo-controlled clinical trials of melatonin on those with sleep disorders, including some who also reported respiratory diseases or metabolic disorders.

For those reporting sleep disorders only, compared to placebo, those taking melatonin saw a 3.2 percent improvement in sleep-quality scores. For those who also reported respiratory diseases, the melatonin group saw a 10.5 percent improvement in sleep-quality scores. And for those reporting metabolic disorders, such as diabetes, those taking melatonin saw a 13 percent improvement in sleep-quality scores.

Getting good sleep

Discussing the sleep process, doctors said many factors, including aging, can reduce sleep efficiency, delay the onset of sleep at bedtime, and reduce the amount of the most restful deep sleep—known as slow-wave sleep. In this non-rapid-eye-movement (n-REM) phase, slow delta brain waves promote the release of hormones that help restore and rebalance bodily functions.

Reference: *Nutrients*; 2021, Vol. 13, No. 5, 1475.

AUGUST'S

Healthy Insight Live with Omega-3

Many studies have found omega-3 health benefits, but this is among the first on lifespan. The largest to date, doctors combined data from 17 long-term studies following 42,466 people an average of 16 years.

Using the new Omega-3 Index, doctors found those in the 90th omega-3 percentile—about 7.6 percent in circulation compared to 3.5 percent in the 10th percentile—were on average about 13 percent less likely to have died from heart or circulatory diseases, cancer, or from all other causes combined.

The Omega-3 Index is a more precise measure of omega-3 levels than “diet record” studies that can only estimate EPA and DHA.

Reference: *Nature Communications*; 2021, Vol. 12, Article No. 2329, Published Online

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More Good Sleep

Vitamin D and melatonin improve sleep in children and adults

Vitamin D key to daytime wakefulness

Children who are often sleepy during the day may have excessive daytime sleepiness (EDS), and vitamin D and exercise can help. Earlier studies found a link between low levels of vitamin D and EDS. In this study of 618 school children, aged 10 to 12, doctors found 18 percent had EDS.

When vitamin D levels fell below 20 nanograms per milliliter of blood and levels of HDL, the “good” cholesterol, fell below 40 milligrams per deciliter of blood, kids were 73 percent more likely to develop EDS.

Girls with EDS tended to reach puberty earlier, and all kids with EDS were more likely to have chronic cough, and skin and nasal allergy. Of all factors

with links to EDS, low levels of vitamin D, lack of exercise, and high body mass index scores were the most important.

Melatonin improves sleep in cancer

Sleep helps the body heal, so is especially important in cancer. In adults, during sleep is the only time the body produces human growth hormone (HGH), which helps cells repair and reproduce, promoting overall healing. Also, sleep boosts the immune system, helping to restore immune function that may be impaired by chemotherapy medicines.

Here, doctors reviewed six melatonin studies on cancer patients, who took doses ranging from 3 to 20 mg, usually at night before bedtime,

over 10 days to four months. Four of the studies found melatonin improved sleep quality and reduced insomnia. In two other studies, melatonin shortened the time it took to go to sleep, or to fall back to sleep.

Reference: *Sleep Medicine*; 2021, Vol. 77, 51-7



Skin

Pycnogenol and collagen improved skin

Pycnogenol protected skin outdoors

The skin has several layers that keep water moisture from evaporating, but environmental factors like pollution can



damage this “barrier” function. In this study, 76 adult outdoor workers took a placebo or 50 mg of Pycnogenol® twice per day, for 24 weeks during spring and autumn.

During the dry season, the Pycnogenol group saw a 14 percent improvement in barrier function—less water evaporation—and a 3.3 percent decrease in moisture compared to 4.5 percent and 14 percent, respectively, for placebo. During the wet season, skin elasticity and firmness improved 7 percent each for Pycnogenol compared to 0.1 and 0.3 percent for placebo.

Collagen boosts skin moisture

The outermost layer of the skin, the stratum corneum, has three major functions: maintaining skin plasticity,

shedding dead skin cells, and preventing pathogens in the environment from entering the skin, which is known as its “barrier” function. To achieve these goals, the skin must maintain adequate hydration, which it does through its natural moisturizing factor (NMF): highly efficient substances in skin cells, called humectants, that attract and bind with water from the atmosphere.

In this study, 99 healthy women, aged 35 to 50, took a placebo, or 1 or 5 grams of collagen peptides per day. After 12 weeks, both collagen groups saw increases in the water content of the stratum corneum, and increased levels of NMF, compared to placebo and to the start of the study. The collagen group also saw less water evaporation.

Reference: *Skin Pharmacology and Physiology*; 2021, Vol. 34, No. 3, 135-45

Gut

Curcumin and vitamin A linked to better gut health

Curcumin reduced gut complaints

Studies are beginning to find digestive benefits for curcumin. In this study, 77 adults with digestive complaints who also reported on mood, anxiety, and quality of life, took a



placebo or 500 mg of curcumin per day.

After eight weeks, while there were no differences in the gut microbiome between the curcumin and placebo groups, those taking curcumin saw a 28 percent improvement in gut symptom scores including reflux, abdominal pain, indigestion, diarrhea, and constipation, compared to 18 percent for placebo. The curcumin group also reported 52 percent less anxiety vs. 16 percent less for placebo.

Vitamin A and gut effects in autism

Many people with autism spectrum disorder (ASD) also report gut symptoms. In this study, doctors compared 323 children with ASD to 180 kids without.

Children with ASD and gut

symptoms had lower levels of vitamin A compared to kids with ASD but no gut symptoms. In children with both ASD and gut impairments, core ASD symptoms were more serious than in kids without gut complaints, including relating to people, emotional response, body use, adaptation to change, listening responses, taste, smell, and touch response, and verbal and non-verbal communication.

Discussing the findings, doctors said kids with autism may tend to develop gastrointestinal symptoms due to eating only a few foods, preferring highly processed foods, and eating fewer fruits, vegetables, and whole grains. Kids with ASD may therefore have nutritionally poor diets, raising chances for vitamin A deficiency.

Reference: BMC Complementary Medicine and Therapies; 2021, Vol. 21, Article No. 40

AUGUST'S

Ahead of the Curve

Early-Stage Discoveries: EGCG, Resveratrol, and CBD

Good results in the lab can lead to larger human trials. Here are some of the most promising recent findings.

EGCG boosts anti-cancer protein

A natural anti-cancer protein in the body, p53, appears to interact directly with the green tea polyphenol, epigallocatechingallate (EGCG). "Mutations in p53 are found in over 50 percent of human cancer," doctors said. After the body produces it, p53 quickly degrades when it comes into contact with another protein, MDM2, keeping levels low. Doctors found EGCG binds at the same place—the N-terminal domain—on p53, competing with MDM2 and increasing levels of p53. Because of its anti-cancer functions, doctors said "p53 is arguably the most important protein in human cancer."

Resveratrol reduces endometriosis

Endometriosis is a disease of the lining normally inside the uterus that begins growing outside of the uterus. During menstruation, cells and tissue inside and outside the uterus bleed. Resveratrol is a phytochemical with anti-blood-vessel-forming properties. In the lab, doctors exposed human endometriosis tissue to resveratrol, which significantly reduced the expression of the two main growth factors in developing endometriosis: VEGF and MMP-9. This is the first study to assess the effect of resveratrol cells cultured from women with endometriosis.

Cannabidiol helped reduce amyloid plaque in AD

In Alzheimer's disease (AD), beta-amyloid plaques build up in brain tissue, impairing nerve signaling and cognition. In the lab, mice taking high-dose cannabidiol (CBD) for two weeks had higher levels of two proteins that decline in AD; TREM2 and IL-33, and that enable brain immune cells to consume dead cells and debris like beta-amyloid plaque. CBD increased and normalized these two protein levels, improved cognition, and reduced levels of a highly inflammatory protein, IL-6, which is closely linked to AD.

Reference: Nature Communications; 2021, Vol. 12, Article No. 986

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Tuesday: 10 a.m. - 6 p.m.
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Better Vision

Bilberry reduces video-screen eye fatigue

Healthy pupil constriction and dilation

Reading on a video screen is more taxing than reading printed text due to screen glare, poor lighting or posture, or viewing at the wrong distance or angle, among other reasons. People on computers tend to blink less than while reading print, drying the eyes and contributing to strain.

In this study, 32 healthy adults with video screen eye fatigue took a placebo or 120 mg of anthocyanin-rich bilberry extract powder per day. After six weeks, compared to placebo, those taking bilberry had smoother constriction and dilation of the pupils, clearer vision, less watery eyes, and less eye fatigue.

Discussing the findings, doctors said one of the symptoms of video-screen eye strain is a decrease in pupil constriction and dilation. "Pupillary constriction increases the depth of focus and contributes to the expansion of the clear vision region," doctors said, meaning smooth constriction increases the range of distance people can clearly see.

Reference: Functional Foods in Health and Disease; 2021; Vol. 11, No. 3, 116-46



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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