The
Liker Health Report

Keeping People Focused on Staying Fit & Healthy

Winter 2020

New Year – "New" Brain

Taking Better Care of Your Gut Can Improve Brain Health

As scientists learn more about the gut microbiome and its impact on brain health (the gut-brain axis), there may be new hope for people who suffer from mood disorders such as anxiety and depression. Improvements in gut health may even benefit individuals with the occasional emotional downturn. Gut bacteria are capable of producing B-vitamins and nearly every neurotransmitter in the brain, the same brain chemicals necessary for balanced mental health. Furthermore, the vagus nerve which connects the gut to the brain, serves as the conduit for these neurotransmitters to directly affect the brain.

Research involving "germ-free" mice – which means the mice essentially have no gut bacteria – shows that they are prone to human-like anxiety and depression behavior. Yet when the mice are fed certain bacteria strains, their symptoms improve. Because rodent research is applicable to humans, the same strategy can be utilized in human mood disorders, hence the use of probiotics. Eating probiotic-rich yogurt or probiotic supplements has been shown in several studies to reduce feelings of anxiety, panic, worry, and negative mood. Current research is focused on identifying which specific bacteria strains are responsible for this effect, and this effort has led to the new field of *psychobiotics*. Psychobiotics target the gut, rather than treating the brain with synthetic medications.

There is still much to be learned before specific psychobiotic treatments are viable on a large scale; however greater microbial diversity in the gut microbiome appears to be related to better mental health, and this is something that individuals can address on their own. According to gut expert Megan Rossi, a research fellow at King's College London, people who include 30 different plant-based foods in their weekly diet have better mental health. These foods contain probiotics as well as prebiotics which feed the probiotics and help them thrive.

Neuroprotective Nutrients

Anthocyanins (in blueberries): protect against oxidative stress; improve memory and cognitive performance in older adults; improve mood and cognition in young adults & children.

Phosphatidylserine: a component of the myelin sheath which protects brain and nerve cells; preserves cognitive function; may prevent age-related deterioration of nervous system tissue.

Sage: this herb helps prevent cognitive deficits by reducing inflammation and reversing age-related acetylcholine decline; increases proteins that repair damaged brain cells & generate new ones.

Ashwagandha ("Indian ginseng"): an Indian herb with neuroprotective effects; helps improve cognition and mood; improves memory, attention, and decision making in mildly impaired patients.

RESEARCH PEARLS:

Hypertension & Mild Cognitive Impairment

Hypertension is a primary risk factor for small vessel damage within the brain and is linked to cognitive impairment. To study the effects of hypertension on accelerated aging, 345 individuals with high blood pressure were followed for four years. Researchers used MRIs to detect and measure physical changes in the brain and determine cognitive function by utilizing the Dementia Rating Scale.

Individuals who experienced significant increases in the lesions within the brain's white matter tissue, had a six-fold increase in mild cognitive impairment as well as a decrease in overall cognition. This study, as many other studies, underscores the importance of maintaining ideal blood pressure levels throughout one's lifespan. It also showed the damaging effect of hypertension in a short period of time (4 years).

Hypertension. 2019 Feb;73(2):342-349.

Antibiotics: Overuse/Misuse

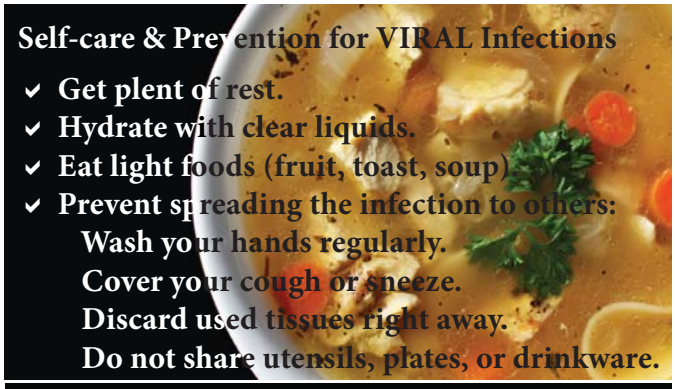
Why *These "Wonder Drugs" aren't Always "Wonderful"*

A 2019 survey of 2,250 American adults aged 50 to 80 revealed that as many as 1 in 5 (20%) admitted to taking leftover antibiotics without checking with their physician first. Two in 5 (40%) expect their physician to prescribe antibiotics even if they only have a viral infection (i.e., colds, flu). Just a reminder... antibiotics have no effect on viral infections, only bacterial infections. In fact, taking antibiotics unnecessarily for a viral infection is almost guaranteed to lead to antibiotic-resistance in the future.

Antibiotics are in fact, "wonder drugs" but only for the bacterial infections that they are designed to treat. Antibiotic-resistance is a serious and imminent health problem around the world today. Both overuse and misuse during the past few decades have caused some bacterium to adapt themselves so that they are either (1) no longer subject to destruction by an antibiotic drug or (2) able to neutralize the drug itself. In either case, it means that serious infections can become difficult, if not impossible to treat. Because bacteria are geared towards survival, they pass along their ability to outsmart antibiotics to their offspring.

Furthermore, if you take an antibiotic for a viral infection, the antibiotic will destroy bacteria living in your microbiome – both the beneficial bacteria and other non-beneficial bacteria which is just minding its own business (i.e., not making you sick). This may initiate a cascade of antibiotic-resistance and an overgrowth of non-beneficial bacteria, which when it multiplies too greatly, it becomes pathogenic itself.

Thus, the goal of physicians and patients alike is the responsible use of antibiotics. Do not insist on an antibiotic prescription if you are diagnosed with a viral infection; never take a leftover antibiotic or use another person's prescription; practice good hygiene to avoid infections; and take any/all medications as prescribed.



Learning never exhausts the mind.

Leonardo da Vinci

Dear Dr. Liker...

Are chewable 'gummy' vitamins nutritionally helpful for people who have difficulty swallowing pills and capsules?

Gummy vitamins, which have recently become popular with kids and people of all ages, are probably one of the worst so-called nutritional products ever developed. They're loaded with sugar or artificial sweeteners and a very minuscule amount of the vitamin or nutrient they're advertised to contain. Because the these nutrients (i.e., omega-3) generally do not taste good alone, sugar is added to make them palatable. The problem is that quite a bit of cheap sugar (empty calories) is added to make them edible tasting; and rather, they become more like candy than nutritional supplements.

Essentially, consumers are paying a high financial cost as well as high health cost for a supplement with low potency. You might think that taking the recommended serving size is adequate to provide the ideal amount of the desired nutrient, but that's likely not the case. Read gummy vitamin labels carefully if you do choose to take them for swallowing reasons. Better yet, aim to eat more fresh organic vegetables and fruits which are naturally loaded with vitamins, minerals, and other nutrients.

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LIKER CONSULTING, INC.

The Center for Executive & Corporate Health

Harley R. Liker, M.D., M.B.A.

CEO

9675 Brighton Way, Suite 350
Beverly Hills, CA 90210

E-mail: hliker@likerconsulting.com
www.likerhealthreport.com

Publisher and Editor-in-Chief -- Harley Liker, M.D., M.B.A.
Senior Editor -- Karen Edwards, M.S.