

NEWSLETTER #10

VITAMIN D NEWS

VITAMIN D AND INSOMNIA

Sleep disorders have become epidemic throughout the world over the last 40 years, and while conventional science does not seem to have a handle on why that is, they do know that sleep deprivation is also linked to a wide range of other ailments, including chronic pain, depression, diabetes, heart disease, hypertension, obesity, and stroke.

Since this is the first time in history that we have a large portion of the human population spending the majority of their lives indoors, along with the widespread use of sunscreen, we also have a worldwide epidemic of vitamin D deficiency.

In 2012 a group of scientists hypothesized that because “vitamin D plays an important role in the brainstem control of sleep, the epidemic of vitamin D deficiency is the cause of the current epidemic of sleep disorders.” Their thesis was supported by the fact that there are vitamin D receptors in many parts of the brain, including in “areas that are considered to play a role in the initiation and maintenance of sleep.”

These researchers performed a 2 year study, supplementing vitamin D to 1500 patients with neurological complaints, who also had sleep disorders. And, the results were that most of the patients “had improvement in neurologic symptoms and sleep but only through maintaining a narrow range of 25(OH) vitamin D3 blood levels of 60–80 ng/ml.”

What surprised them, and what is important for us to note, is that there was a specific window of effectiveness: blood levels of 60 -80ng/ml. Now, I have elsewhere (in my blogs and in our free Vitamin D E-Book) mentioned that the ideal blood levels of vitamin D is about 50ng/ml, this being based on information from The Vitamin D Council, and from the foremost vitamin D expert, Dr. Michael Holick.

Yet, here they discovered “that the sleep difficulties produced by vitamin D levels below 50ng/ml return, in the same form, as the level goes over 80ng/ml suggesting a narrower range of “normal” vitamin D levels for sleep than those published for bone health.”

Another interesting discovery was that vitamin D2 (ergocalciferol; found in prescription vitamin D products, some supplements, and fortifying some foods), prevented normal sleep in most patients. This does not surprise me as I have already covered the counterproductive nature of vitamin D2 in my blogs, and in the free Vitamin D E-Book.

“The world epidemic of sleep disorders is linked to vitamin D deficiency.” S.C. Gominak, W.E. Stumpf; East Texas Medical Center, Neurologic Institute, Tyler; March 2012.

<http://www.gwern.net/docs/zeo/2012-gominak.pdf>

Vitamin D and the Gut Microbiome

Since we here at Nutristart have launched a new variety of probiotic (Lactospore), and I wrote two large blogs on the subject of probiotics and the microbiome, it is a nice surprise to discover that one of our most popular products, our Quick D, also can contribute to a healthy mix of good bacteria in the gut.

This study was designed to investigate the effects of oral vitamin D3 supplementation on the human gut microbiome in healthy subjects. (The human microbiome, is the collection of trillions of microbes living in and on the human body.)

In this study, 16 subjects (mixed gender) “were endoscopically examined to access a total of 7 sites. We sampled stomach, small bowel, colon, and stools before and after 8 weeks of vitamin D3 supplementation.”

What they discovered was that vitamin D3 supplementation changed the gut microbiome in the upper GI tract, causing a reduction in harmful bacteria (*Pseudomonas* spp. and *Escherichia/Shigella* spp.), and an increase in protective bacteria.

The study concluded that: “Vitamin D3 modulates the gut microbiome of the upper GI tract which might explain its positive influence on gastrointestinal diseases, such as inflammatory bowel disease or bacterial infections. The local effects of vitamin D demonstrate pronounced regional differences in the response of the GI microbiome to external factors, which should be considered in future studies investigating the human microbiome.”

European Journal of Nutrition; June 2016, Volume 55, Issue 4, pp 1479–1489; “Effects of high doses of vitamin D3 on mucosa-associated gut microbiome vary between regions of the human gastrointestinal tract.” Mina Bashir, et al. <http://link.springer.com/article/10.1007/s00394-015-0966-2>

HEALTH NEWS

PLACEBO EFFECT GROWING STRONGER

Over the last 2 decades clinical trials seem to be indicating that the placebo effect appears to be growing stronger. Recently, a study published in the journal *Pain* discovered that in 1990 pain-relieving drugs worked 27% better than the placebo, but by 2013 that gap had narrowed to 9%.

Here is what that study had to say: “Recent failures of clinical trials of novel analgesics designed to treat neuropathic pain have led to much speculation about the underlying reasons. One often discussed possibility is that the placebo response in these trials has increased in recent years, leading to lower separation between the drug and placebo arms. Here, we extracted data from published randomized controlled trials (RCTs) of drugs for the treatment of chronic neuropathic pain over the years 1990 to 2013. We find that placebo responses have increased considerably over this period, but drug responses have remained stable, leading to diminished treatment advantage. This trend has been driven by studies conducted in the United States. Consideration of participant and study characteristics revealed that in the United States but not elsewhere.”

Pain. 2015 Dec;156(12):2616-26. "Increasing placebo responses over time in U.S. clinical trials of neuropathic pain." Tuttle AH, et al. <http://www.ncbi.nlm.nih.gov/pubmed/26307858>

Two things are of interest here: first, these studies, showing increased placebo effect, revolve around drugs for treating pain. Now, according to the website "Quartz": "It's not that drugs are getting weaker," said George Lewith, professor of health research at the University of Southampton, "It's that we are finally learning that most pain drugs don't work."

Secondly, this effect was only observed in the US, and is one reason why, in the last 10 years, nearly 90% of potential drugs for treating neuropathic and cancer pain have failed to gain FDA approval.

For an analysis of possible reasons for this shift in the placebo effect with regards to pain medications, have a read of the full article on the Quartz website: <http://qz.com/525995/why-the-placebo-effect-is-getting-stronger/>

VIEWING

For a quick visual summary (less than 4 minutes) of the basics of the placebo effect, why it works, and its recent increase, check out: Stuff They Don't Want You to Know: The Placebo Effect https://www.youtube.com/watch?v=v_feOG94IAAs

READING

"Heal Yourself! How to Harness Placebo Power" (Mar 4 2014) by Beverly A. Potter and Mark James Estren

"We can heal ourselves through the mysterious "Placebo Effect" by believing in the "treatment", which stimulates innate healing mechanisms in the body. Similarly, we can sicken ourselves when we believe bad things will happen - the "Nocebo Effect". Doctors think they heal with drugs, but only living cells can heal. When something is out of balance, your cells move to correct it because bodies want to be well. HEAL YOURSELF shows how to tap into this mysterious process to get well and stay well by harnessing your body's natural healing power- the power of placebo.

HEAL YOURSELF explains how the Stress Response creates an environment that promotes physiological breakdown, while the Relaxation Response creates a healing environment. HEAL YOURSELF offers specific things you can do to turn on your body's innate healing mechanisms, including meditation, prayer, laughter, listening to music and rocking, Qi Gong, gratitude and forgiveness, and more." https://www.amazon.ca/Heal-Yourself-Harness-Placebo-Power/dp/1579511732/ref=sr_1_fkmr0_1?s=books&ie=UTF8&qid=1468353368&sr=1-1-fkmr0&keywords=How+to+heal+yourself+with+the+placebo+effect