

Guillermou

A healthy intestinal microbiota not only has beneficial effects on the activity of the immune system, but also on thyroid function. The microbiome affects the proper functioning of the thyroid gland, and the existence of the gut-thyroid axis is discussed in the context of both thyroid diseases and gut dysbiosis. Thyroid and intestinal diseases predominantly coexist: Hashimoto's thyroiditis (HT) and Graves' disease (GD) are the most common autoimmune thyroid diseases (AITD) and often coexist with celiac disease (CD) and non-celiac wheat sensitivity (NCWS).

This may be explained by damage to the intestinal barrier and consequent increase in intestinal permeability, allowing antigens to pass more easily and activate the immune system or cross-react with extraintestinal tissues, respectively. Dysbiosis has not only been found in AITD. The intestine is a target organ of thyroid hormone (TH) that exerts its action through the nuclear receptor for thyroid hormone 1 (TR1) expressed on intestinal epithelial cells. Disruption of intestinal microbial homeostasis (dysbiosis) is associated with autoimmune thyroid disease (AITD), including Hashimoto's thyroiditis, Graves' disease, and Graves' orbitopathy. The gut microbiota largely regulates the homeostasis and development of immune cells.

It modulates both the innate and adaptive immune systems, including outside the intestine, and is essential in the development of gut-associated lymphatic tissue (GALT), where more than 70% of the entire immune system is located. GALT plays an important role in the development of tolerance to autoantigens by controlling its toll-like receptors (TLRs) in the intestinal mucosa.

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There is a positive correlation between the concentration of short-chain fatty acid butyrate and the number of regulatory T cells (TREG), which are key mediators of immune tolerance, as well as with lower concentrations of proinflammatory Th-17 cells. SCFAs can strengthen intercellular tight junctions along with thyroid hormones. The immune system itself influences the composition of the gastrointestinal microbiota, underscoring the symbiotic relationship. Probiotics have shown beneficial effects in thyroid diseases and may have a positive effect on trace elements such as selenium, zinc and copper.

Additionally, microbes function as a reservoir for T3 and can prevent thyroid hormone fluctuation and therefore may reduce the need for T4 supplementation. The importance of maintaining the intestinal microbiota in a normal state arises from the fact that with increased permeability of the intestine due to dysbiosis, lipopolysaccharides from gram-negative bacteria can enter the bloodstream and contribute to the destruction of the thyroid gland.

It has also been shown that SIBO (small intestinal bacterial overgrowth) is seen more frequently in autoimmune hypothyroidism. There is also a potential role for host-microbiota interference in thyroid cancer. www.mdpi.com/.../1769 (2020).--- www.mdpi.com/.../3609 (2021).--- www.frontiersin.org/journals/immunology/articles/10.3389/fimmu.2023.97.. (2023).--- core.ac.uk/.../580113119.pdf (2023).-- sirpublishers.org/.../548 (2024).-- academic.oup.com/endo/article-abstract/165/1/bqad184/7458951?login=fal.. (2024).--- link.springer.com/.../s12020-023-03538-w (2024).--- www.frontiersin.org/.../full (2024).--

Posted On 05/07/2024

Gui, a House cannot stand without a Good Foundation. Our House -our Body - cannot 'stand' without a Good Foundation. More obvious each day how important Gut Health is for our physical and mental functions. Being if the Gut renews itself within three days it must be in need of constant repair. While for a majority of the population who are consuming highly Processed Foods containing many Gut Offenders of many kinds are attacking our Gut Foundation constantly: Even with better sourced, quality foods with a Food Pyramid so upside down and actual health offenders listed as healthy it's no wonder so many are close to being walking dead.

It stands to reason it is more maintaining a healthy Gut on a daily basis is better than a notion I fixed it and now can forget about it. Broken Guts along with Broken Medical Fixes goes along way explaining why our society is so out of sorts. Especially urban centers with many irritable, angry, mental even. Cheap fast meals sourced from heavily subsidized mono-cropped Chemical Fare fueled by highly profitable med's to hide, disguise the worst of the symptoms caused by substandard Highly Processed Foods, and more fuel on the fire, Seed Oils.

Posted On 05/07/2024

Guillermou

Just, you have perfectly defined the unhealthy habits that harm “Our House our Body”. Regarding a point you make. The microbiota-gut-brain axis is a complex communication network that links the gut, microbiota and brain, influencing various aspects of health and disease. There is a bidirectional communication between the gut microbiota and the gut-brain axis (GBA). The microbiota communicates with the GBA through different mechanisms, viz. direct interaction with enterocytes (enteric message), through immune cells (immunological message) and through contact with neural endings (vagus nerve) (neuronal message) to influence the central nervous system (CNS).

Metabolites, neurotransmitters and cytokines access the brain through the bloodstream. The gut microbiota has been linked to memory, learning, anxiety, stress and brain disorders. This review and studies analyzing the neurotropicity of some probiotic strains has led to the emergence of the concept of "psychobiotic" to describe live microorganisms that, when ingested in an adequate amount, produce a health benefit in patients suffering from psychological disorders through "microbiota-gut-brain axis". Psychobiotics, as a special class of probiotics, differ from conventional probiotics in their ability to produce or stimulate the production of neurotransmitters, short-chain fatty acids, enteroendocrine hormones, and anti-inflammatory cytokines.

Psychobiotics have the potential to positively affect mental health by modulating the gut-brain axis. These beneficial bacteria interact with the gut microbiota and generate compounds that can send signals to the brain, potentially improving mood, cognition, and stress response. While studies indicate that psychobiotics could offer therapeutic benefits for conditions such as depression, anxiety, and neurodegenerative diseases such as dementia, the precise mechanisms of action are still under investigation.

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Fructooligosaccharides (FOS) and galactooligosaccharides (GOS), along with polyphenols, inulin, and compounds derived from vegetables, herbs, and plants, are the best-documented prebiotics for treating depression by indirectly improving host health by promoting probiotic growth. Psychobiotics contribute to mental health through the dynamic interaction between the microbiota, the intestine and the brain. Research is reinforcing the concept that gut bacteria participate in the transmission of information between the gut and the brain, involving neuronal, immune and endocrine pathways. Factors such as diet, stress and aging can shape the composition of the microbiota in a process that can also influence the appearance and development of mental illnesses.

There is a link between the microbiota and brain function focusing on clinical and preclinical evidence of the possible application of psychobiotics in the context of cognitive process and performance. It has been shown that psychobiotic-based dietary interventions could be a novel nutritional approach targeting the gut microbiota to manage cognitive performance and prevent memory decline across the lifespan. The DASS is a depression, anxiety and stress scale made up of 42 items that measures these symptoms.

One study reported that participants who did not consume any probiotic yogurt had depression subfactor scores 6.962 times higher than those who consumed probiotic yogurt every day. Also curcumin to influence neurotransmitter levels, inflammatory pathways, excitotoxicity, neuroplasticity, HPA axis disorders, insulin resistance, oxidative and nitrosative stress and the endocannabinoid system related to mental health.

www.sciencedirect.com/science/article/abs/pii/S0963996921007924 (2022).--

www.mdpi.com/.../601 (2024).--- www.mdpi.com/.../510 (2024).-- www.mdpi.com/.../1054 (2024).--

Posted On 05/07/2024

juststeve

And Gui you are perfectly describing why there is so much going on when our Gut is maintained and just as much in the wrong way when it is undermined when we are civilized to death.

Posted On 05/07/2024

stoneharbor

So there's an interesting take away from this article: My take away is that if I've always had no Symptoms of intestinal disbiosis then I can just assume that, in spite of maybe having other signs of low thyroid conditions, It seems my thyroid levels are at least sufficient to let me be very healthy in the all important region of my digestive tract, and thus I should probably not worry about low thyroid. If I always have plenty of energy to do what I wish and I always have no symptoms of digestive or nourishment problems then I should just be happy and focus on some other problema in my life. This really is quite liberating. There is often somebody trying to tell me that if I have low body temperature or I have a loss of body hair, then I have a "low thyroid" condition. They seem intent to worry me that these symptoms are markers of ill health. This article today clears up a lot. Another dose of proof that I am just fine.

Posted On 05/07/2024

juststeve

Always a good place to start - if it ain't broke don't go trying to fix it.

Posted On 05/07/2024

stoneharbor, also it seems that the thyroid-intestinal communication has various degrees of interactions depending on other factors. In subclinical hypothyroidism the manifestations are less significant. Subclinical hypothyroidism is a diagnosis based on tests and does not cause any symptoms. It consists of the finding of a high TSH, with normal thyroid hormones (T3 and T4) in blood tests. The truth is that various microorganisms colonize many places in the human body, including the oral cavity, respiratory tract, skin, gastrointestinal tract and genitourinary tract, and form a complex microecosystem within the human body, among which the most complex is found in the intestinal tract.

Microbiota-derived metabolic enzymes may regulate iodothyronine metabolism to affect thyroid hormone homeostasis, or may interact with host immune cells and cytokines to regulate thyroid immunity. Therefore, this review summarizes the available literature related to the thyroid-gut axis, providing a theoretical basis for future in-depth mechanistic studies and a new perspective to realize microecological treatment strategies for thyroid disease (Table 1, Figure 1).

Overview of potential associations between gut microbiota and thyroid. TSH, thyroid stimulating hormone; Tg, thyroglobulin; TSHR, thyroid-stimulating hormone receptor; TPO, thyroid peroxidase; NIS, sodium/iodide symporter; HDAC, histone deacetylase; TLR-4, toll-like receptor 4; LPS, lipopolysaccharide; NF- κ B, nuclear factor kappa-B; PAX8, paired box 8; T3, triiodothyronine; T4, thyroxine; D1, iodothyronine deiodinase type I; D2, iodothyronine deiodinase type II; Treg: regulatory T cells; Se+, selenium; SCFA, short chain fatty acid.

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The truth is that as research into the gut microecology of thyroid diseases advances, there is increasing evidence that the gut microbiota is an important environmental factor that directly or indirectly influences the progression of thyroid diseases. and that thyroid diseases can exacerbate microbiota alterations. Inducing immunoinflammatory responses, altering iodothyronine metabolism, and affecting the absorption of thyroid-associated micronutrients are potential pathways through which microbiota and metabolites participate in thyroid homeostasis.

www.ncbi.nlm.nih.gov/.../PMC9433865 (2022).--

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TruthST8up

The email advertisement headline read, "This Daily Habit Could Reshape Your Health". Yet, the phrase "daily habit" or keyword "reshape" are nowhere in the article, and the article here is titled differently than the email promo title. Consistency would be good. Also, "STOPPING This Daily Habit Could Reshape Your Life" is actually what was intended. Thanks for the info; good information.

Posted On 05/07/2024

johnsal

Another clue to a troubled gut is loose messy stools, the result of irritants in the ingested food, for instance peanut butter and other lectin rich foods. Aim for a 'clean break', a butt that can be cleaned easily with a couple of wipes of loo paper. :)

Posted On 05/07/2024

TrudyG5

But how? I've had IBS-D since kindergarten and I'm 66 now. Messy, loose, sticky, very hard to clean up after even with a bidet. I eat home-made food, chicken/fish and plenty of vegetables. Tend to low carb and no added sugar. I make my own yogurt following the recipes Dr Nelson mentions in his Super Gut book. I've done a 3 day fast with only water to reset my gut. Nothing has worked. I have no idea what to do to straighten up my gut. I am hypothyroid but wish I'd be more on the constipation side of things. Nothing in this article gives me any hope.

Posted On 05/07/2024

RonaldHL

Regarding insufficient stomach acidity, the hydrochloric acid comes from sodium chloride. The body can't create the element chlorine and it has to come from somewhere. It's that simple. Salt is an important nutrient countered by psychological warfare of fear of killer high blood pressure from public service announcements and mindless acceptance as propagated by "authorities" because "everybody knows." All over the world, for all nations and all of history, Salt was sought after. You can't live without it. Now it is poison? I suppose just like carbon dioxide! www.amazon.com/s?k=salt+book&crd=34KZN57U92P3E&sprefix=salt+b..

Posted On 05/07/2024

Tiptriptrap

I read on, I believe Mercola.com. That berberine helps heal the gut and increase the micro flora.

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Guillermou

This report is very complete. It is said: "The positive effects of berberine in the treatment of most infections that usually cause diarrhea have been known since ancient times. Among them, those caused by *Vibrio cholerae*, *Escherichia coli*, *Salmonella* or *Shigella* stand out. Of all of them, the main danger lies in the loss of water and electrolytes that tend to cause the toxins that these bacteria release into the intestinal lumen. Here, the role of berberine is to prevent its adherence to the intestinal epithelium, with results comparable to antibiotics.

Without a doubt, this constitutes a handicap for the survival of microorganisms. Such a beneficial effect is reinforced once it is known that its action leaves the so-called saprophytic bacteria unharmed. Among them, the following stand out: *Lactobacillus*, Firmicutes and *Bifidobacterium*, common colonizers of the healthy intestine, carrying out vital work and whose population it helps to regulate. microlip.es/wp-content/uploads/2020/03/16-Berberina-completo-2019.pdf

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Included in these investigations is a review that aimed to summarize and rate the available evidence on the association between berberine consumption and health-related outcomes. A total of 11 meta-analyses were identified. The results revealed that berberine significantly affects blood glucose levels, insulin resistance, blood lipids, body parameters and composition, markers of inflammation, colorectal adenomas, and *Helicobacter pylori* infections. Berberine (BBR) has multiple clinical applications, diabetes, cardiovascular, intestinal, autoimmune diseases, liver diseases, hypertension, antiarrhythmics, hyperlipidemia, bacterial and viral infections, ischemic brain lesions, and gastrointestinal disorders, osteoporosis, mental illnesses, Alzheimer's, cancer.

The cellular and molecular mechanisms of BBR therapeutic features include anti-apoptotic, anti-inflammatory, autophagy-promoting, and antioxidant activities. Another meta-analysis showed an advantageous effect of berberine supplementation on the concentrations of interleukin 6 (IL-6), tumor necrosis factor (TNF-), and serum C-reactive protein (CRP). Analysis of the literature shows that berberine affects many biochemical and pharmacological pathways that theoretically produce a positive effect on health and disease.

A possible hypothesis would be the modulation of the intestinal microbiome. Preliminary studies have shown positive anti-aging effects onlinelibrary.wiley.com/.../ptr.7806 (2023).----
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-- www.ingentaconnect.com/content/ben/cmc/2024/00000031/00000010/art00003 (2024)

Posted On 05/07/2024

cdberk

This article appears to have a lot of potentially important information with a notable exception. The author makes the case that thyroid health is important for gut health, and states "Hypothyroidism affects the entire gastrointestinal system and causes hypomotility." So I would then infer that one step in healing the gut would be to address any hypothyroidism, if present, that is causing this hypomotility. Typically this would be done by thyroid hormone supplementation, such as T3. But the author also states "Thyroid hormones are known to influence gut motility...essentially down regulating the motor activity of the digestive system." So thyroid hormones slow the digestive process? If hypothyroidism causes hypomotility and thyroid hormones do as well, what is the answer for healing the thyroid?

Posted On 05/08/2024

jim3627

Are there any foods or herbs that can improve hypothyroidism?

Posted On 05/07/2024

Guillermou

In this systematic review of randomized controlled trials, some herbal remedies, including *Nigella sativa* L., ashwagandha and *Mentha x Piperita* L., can improve the signs and symptoms of primary hypothyroidism, but using a more extensive and advanced methodology will provide better results. complete www.ingentaconnect.com/content/ben/cddt/2023/00000020/00000005/art0000.. (2023).-
- In these articles, the beneficial effects obtained by treatment with selenomethionine and inositol in patients affected by hypothyroidism are reported. Choline is also frequently combined with inositol for insomnia, anxiety, depression, Polycystic Ovarian Syndrome, and insulin resistance.

Also inositol and selenium improve Hashimoto's disease drhedberg.com/inositol-selenium-improve-hashimotos-disease In these articles, the beneficial effects obtained by treatment with selenomethionine and inositol in patients affected by hypothyroidism are reported.
www.boostthyroid.com/blog/2018/4/13/how-myo-inositol-strengthens-thyro.. (2018)
www.hindawi.com/.../424163 (2013) link.springer.com/.../s11154-018-9477-9 (2018)
www.europeanreview.org/wp/wp-content/uploads/036-042-Myo-inositol-and-.. (2017)

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5 NATURAL REMEDIES FOR HYPOTHYROIDISM www.healthline.com/health/hypothyroidism/five-natural-remedies-for-hyp.. .--- Inflammation and associated factors is an important root of autoimmune hypothyroidism. The potential anti-inflammatory effect of photobiomodulation with red light therapy may benefit the thyroid. Red light therapy can effectively treat chronic autoimmune hypothyroidism and subclinical hypothyroidism. Conclusions were based on levothyroxine dose reduction in patients with low-level laser therapy. Thyroid hormone is a key component in stimulating energy production, you can see how a lack of it in the gland cells further decreases thyroid hormone production, a classic vicious cycle.

Low thyroid -> low energy -> low thyroid -> etc. The main and generally accepted theory of the direct impact of light therapy involves cellular energy production. The effects are supposedly exerted primarily by photodissociating nitric oxide (NO) from mitochondrial enzymes (cytochrome c oxidase, etc.), allowing your cells' mitochondria to function properly by relieving the buffering effects of stress. redlightman.com/blog/red-light-therapy-shown-to-cure-hypothyroidism/ .----
www.ncbi.nlm.nih.gov/pmc/articles/PMC6247385/?_ga=2.262350732.12270024.. (2018)

Posted On 05/07/2024

pea7228

jim3628, iodine (I like Lugol's) is very important for thyroid health; also selenium and Ashwaganda. Using these and a few others, plus homeopathy, my TSH has decreased from 90.8 to 28.5 in the last three months—without prescribed thyroid hormone!

Posted On 05/07/2024

bke4424

What would be an appropriate dose for Berberine to combat diarrhea? One to two hours after eating I have diarrhea, very rarely not. I have an appointment to see an allergist, not sure if that will help.

Posted On 05/09/2024

m231231

Nothing I write matters, I know that, but re using the bathroom, I always chuckle at the clip on YT, when heartthrob (not mine, wrong gender) Paul Newman arrives just in time for the card game in The Sting. I've seen that clip so many times, I may have it memorized.

Posted On 05/08/2024

Malanka

Lots of good information. I have radiation colitis--almost constant diarrhea; comes without warning. What helps me the most is acupuncture and Moxa --then my stool is formed but thin like a pencil. My bowel was burnt although I did not have bowel cancer. I had metastized cancer from a lesion on my face a dermatologist removed without reading the lab report. Cancer travelled to my anus and groin lymph nodes and I have been suffering ever since. Tremendous scar tissue --difficult to have a BM although BM is very soft. Have a good diet, eat organic veggies, fruits, beef, chicken, turkey, wild fish and take lots of supplements. In constant pain from mega scar tissue everywhere. So is this my gut or is it just damage caused from treatment? Any suggestions please.

Posted On 05/07/2024

sunshinedaydream

I had a round of Covid that messed up my gut. I happened onto an article about Butyrate and tried it. The company I buy from is BodyBio. Truly gut changing! bodybio.com/.../butyrate

Posted On 05/07/2024

pecanroll

There are healthy guts and messy guts filled with roundworms and protozoans. Bacterial infections out of control. Learned this with LYME DISEASE, you gotta get the parasite load down and follow up with cleansings at least quarterly. Hopefully many can get to herbs to keep it in check with a healthy diet.

Posted On 05/07/2024

Smudge2

I wish for SIBO. No cures yet, only management. Maybe FMT which I think you've had articles on before about it. All low FODMAP. Sigh. Staying healthy in spite of it.

Posted On 05/07/2024

Martix

There is a cure for SIBO, its called L-Rutheri and L-Gasseri

Posted On 05/07/2024

Having had my thyroid ablated (RAI) due to Graves' disease in 2016, I suffered terribly on Synthroid as a thyroid replacement afterwards (turns out I didn't convert T4 into enough T3 to give me optimal metabolism and to feel good). Nobody cared because my thyroid labs were "within normal range" (the ranges are very wide). I also had a total hysterectomy at the same time - losing two major hormonal control centers in my body at once! Mainstream docs were terrible. After much researching, I learned of the importance of having ALL thyroid hormones optimal in order to make your metabolism work perfectly, especially having your Free T3 level high enough. I read many articles about how having enough T3 basically has significantly improved chronic fatigue syndrome (CFS) and fibromyalgia!

Also having optimal sex hormone levels is very important too - I'm on bioidentical hormones (best decision ever)! Thyroid, sex hormones and adrenals all work together, like a three-legged chair. If one is off, the others will be affected too. Getting all of these perfect, was my key to recovering my overall health and return to a wonderful quality of life. I healed my gut also (I had many food sensitivities and watch what I eat - sporadic gluten, dairy and eggs are okay now), and my overall metabolic health is very good. I agree with this article that gut motility is a sign of good health this comes from thyroid metabolism that is working properly, with enough T3!

The thyroid is your major control center in your body and if you have your thyroid levels "optimal", you will have good gut motility, i.e. pooping 2-3x/day, which I do. I'm 60, and I also have perfect bone density. The gut/brain connection is very important, but I believe the real key is having ALL your hormones in their optimal levels for you. A functional medicine doctor who goes by both optimal blood levels and how you feel is the most crucial part to regaining your health in my opinion and personal experience.

Posted On 05/07/2024

extrucker3@gmail.com

My go to daily routine involves having a drink of Apple Cider Vinegar and Honey in a glass of water at least half an hour before breakfast then I chew on a raw clove of fermented garlic, a probiotic just before breakfast which usually consists of either bran Flakes or Oats. I can honestly say I have no issues with gut problems.

Posted On 05/07/2024

LongTallTexan

the focus should always be on improving metabolic rate ok & what is the best way to do that

Posted On 05/07/2024

mjm4677

Great food for thought!

Posted On 05/07/2024
