



Turkey Is Not Only a Safe Protein, but May Help in Maintaining Remission for MC Patients

by Wayne Persky

Many of us can recall hearing (usually while sitting in the living room relaxing as we wait for Thanksgiving dinner to be served) comments regarding how a big Thanksgiving dinner tends to make most people sleepy.

Why does turkey make us sleepy?

Animal-based sources of protein (meat, poultry, fish, eggs, and milk), and a few plant-based proteins, (quinoa, soy, and buckwheat) are "complete" foods, in that they contain all nine essential amino acids needed to sustain life. Our bodies can produce all the other "nonessential" amino acids, as needed. Note that wheat, for example, while considered by many to be a healthy food, contains only two thirds of the essential amino acids (wheat is deficient in lysine, threonine, and methionine).

One of those essential amino acids is tryptophan. Certain other foods (such as nuts and seeds) contain high levels of tryptophan, although they do not contain all nine essential amino acids. Our bodies convert tryptophan into niacin (vitamin B3), and niacin helps our bodies to produce serotonin, which is associated with the production of melatonin. The hormone melatonin regulates our sleep and wake cycles. So this appears to be the reason why people assume that eating turkey tends to make us sleepy.

But in reality, turkey is not a particularly good source of tryptophan.

Actually, there's no more tryptophan in turkey than in any other common meat. According to an article in the New York Times, the common myth that makes the rounds during the Thanksgiving holiday suggesting that the turkey we eat is loaded with tryptophan, which makes us drowsy, has

little basis in fact. They disputed this claim by citing several independent sources, including Nicolaas Deutz, a nutrition expert at Texas A&M University, "Turkey is not special in relation to the other meats," he said. "You just eat a lot of meat, but if you would eat a steak, you would feel as satisfied as with the turkey." (Victor, 2015, November 25)¹



Our drowsiness is probably due to all the carbs in our Thanksgiving meal.

Most authorities believe that our drowsiness after a big Thanksgiving meal is due to all the carbohydrates in the side dishes, rather than the turkey. In other words, the large size of the entire meal makes us feel contented, and sleepy. It's unlikely that turkey is solely responsible for our drowsiness, in most cases.

But drowsiness is not the only possible side effect of tryptophan.

According to recently published research, although tryptophan may not be beneficial if used when trying to control a flare due to an IBD, it may be very helpful for maintaining the stability of remission (in other words, preventing a flare) (Van, et al., 2023).² Of course as usual, this research focused on ulcerative colitis (UC), not microscopic colitis (MC). But there's no reason to suspect that it shouldn't be applicable for maintaining remission from MC.

Another caveat pertains to the fact that this research used mice as subjects, rather than humans, but historically, the digestive systems of mice have been shown to behave very similarly to the digestive systems of humans, in regard to IBD and IBD treatments. Obviously, laboratory mice were used because a trial of this nature would be unethical if carried out with human subjects. Additional research will be needed to verify that humans respond similarly (for maintaining remission by using tryptophan supplements).

The researchers found that tryptophan can increase T reg cells in the colon.

In an article featured in a ScienceDaily webpage, Doctor Sangwon Kim described how the research focused on T-regulatory (T-reg) cells, because T-reg cells are capable of breaking the cycle of inflammation. (Thomas Jefferson University, 2023, November 21)³ The researchers found that a certain G protein coupled receptor 15 (GPR15) on the surface of T reg cells attracts T reg cells to the colon, and they discovered that a metabolite of tryptophan increases the number of GPR15 receptors. Therefore, they realized that if they could stimulate a significant increase in GPR15 receptors, they should be able to attract more T reg cells to the colon, to provide an enhanced protective effect against inflammation.

To test their theory, they fed mice a diet that included supplemental tryptophan for two weeks, after which they discovered that the number of T reg cells in the colons of the mice had doubled. And the increase lasted for at least a week, meaning that in humans, the protective effect of the additional T reg cells might last for a month.



Cigarette smoking has a similar effect to tryptophan.

Interestingly, during the course of this research, the team discovered that smoke from cigarettes, and barbecue grills, for example, can also increase the presence of GPR15 receptors on T reg cells, thereby providing medical evidence to validate the well-known observation that cigarette smokers have a lower risk of developing ulcerative colitis than the general public. Of course, Doctor Kim suggests that tryptophan should be a much safer choice than smoking, for preventing colitis.

The researchers will soon test this finding on human subjects to verify that it works as well as it does for mice. Doctor Kim notes that a tryptophan dose of 100 mg per day should be sufficient to see an effect in humans, and 100 mg should be a safe dose.

This brings up an interesting observation.

If we look at the epidemiological evidence that can be found in the archives of old posts made years ago, by members of our MC Discussion and Support Forum, when many people developed MC soon after they attempted to stop a long-term smoking habit, it's rather obvious that this discovery clearly applies to MC patients. Therefore, there is a very good chance that the tryptophan discovery will also apply to MC patients.

References

1. Victor, D. (2015, November 25). No, the Tryptophan in Turkey Won't Make You Sleepy. The New York Times, retrieved from <https://www.nytimes.com/2015/11/26/science/>
2. Van, N. T., Zhang, K., Wigmore, R. M., Kennedy, A. I., DaSilva, C. R., Huang, J., . . . Kim, S. V. (2023). Dietary L-Tryptophan consumption determines the number of colonic regulatory T cells and susceptibility to colitis via GPR15. *Nature Communications*, 14, 7363. Retrieved from <https://www.nature.com/articles/s41467-023-43211-4>
3. Thomas Jefferson University. (2023, November 21). Could Eating Turkey Ease Colitis? ScienceDaily, Retrieved from <https://www.sciencedaily.com/releases/2023/11/231121175209.htm>

Insomnia Is a Common Symptom of MC and Other IBDs by Wayne Persky



When our microscopic colitis (MC) symptoms begin, most of us find that getting to sleep, and staying asleep, becomes more difficult. We tend to wake up during the night, and have difficulty getting back to sleep. Although the disease itself is associated with fatigue (because of the fact that it overworks our immune system by causing it to waste a large percentage of our energy attempting to deal with the inflammation in our digestive system), the chronic sleep problems associated with the disease tend to add to the fatigue problem.

A research group in Australia surveyed 670 IBD patients, and found that more than a third of them had trouble sleeping, due to abdominal pain, anxiety, and depression, when their IBD was active (McNamara, 2023, March 16)¹. And they found that generally more severe insomnia, that is, more trouble falling asleep, and staying asleep, was associated with more severe IBD symptoms, and that tends to match the findings of other, similar studies. The researchers speculated that this characteristic may be a learned behavior pattern. That is to say, the sleep problems associated with IBD flares may carry over to influence sleep patterns for some patients, even when their IBD is in remission.

This can be a major problem for IBD patients.

Another study analyzed 205 IBD patients to discover whether sleep quality (SQ) was predictive of disease severity (Leal, et al., 2021)². like most IBD studies, this one excluded MC patients, so it primarily focused on patients who had Crohn's disease or ulcerative colitis. Accordingly, various factors that reflect the severity, or the progression of the disease, such as inflammation level, hospitalization, surgery, steroid use, or immunosuppressant use, for example, with and without poor SQ, were considered. The study found that 45% of those in the study experienced poor SQ, and poor SQ was predictive of worse disease prognosis six months later.



The circadian clock seems to be associated with IBD-related sleep problems.

Researchers have noted that disrupting the circadian rhythm of animal models can significantly worsen the development of colitis. Although the size of a study cohort was rather limited (only 42 IBD patients, and 10 healthy controls), researchers were able to investigate how interrupted circadian rhythms might influence IBD severity (Swanson, et al., 2021)³. The IBD patients selected for the study were biopsy-proven, and their disease was currently inactive.

The researchers found that increased fragmentation of rest patterns caused an increase in both intestinal permeability, and TNF- α levels. Additionally, a decrease in the total amount of rest was associated with an increase in stool calprotectin levels. They also found that disrupted rest cycles were associated with an increase in proinflammatory bacteria in the intestinal microbiota, resulting in a decrease of the protective effects of butyrate production, a well-known predictor of IBD flares. The researchers also noted that they had previously shown that night shift workers with disrupted circadian rhythm patterns had low serum butyrate, and that condition correlated with increased colonic mucosal permeability (leaky gut).

Smart watches could be used to predict a flare.

The researchers determined that monitoring wrist activity provided a simple, noninvasive way to measure circadian activity, and they found that this can be used to predict IBD associated inflammation levels. Perhaps in the near future, smart watches that are capable of estimating or predicting IBD inflammation levels, based on circadian rhythm patterns, will be available. IBD patients may be able to use these to predict when (or if) a flare is eminent.

How important is sleep quality, for IBD patients?

The research is still ongoing, but according to a recent issue of *Gastroenterology & Endoscopic News*, researchers believe that circadian rhythm, and sleep quality, in general, should have a much bigger role in the treatment of IBD (Wild, 2022, June 23)⁴. And most patients seem to agree that their doctors should consider sleep patterns when discussing treatments. The article discusses current research studies that might shed some light on the possible use of chronobiotics (circadian-regulated therapies), in the treatment of IBD, in the future.

Crohn's and Colitis 360 recommends specific therapy for IBD sleep problems.

The therapy, based on extensive research, is known as Cognitive Behavioral Therapy for Insomnia (CBT-I). And it consists of (according to the article), “4–8 visits with a sleep psychologist or similarly trained provider, board certified Behavioral Sleep Medicine. Standard components include sleep restriction therapy, stimulus control, relaxation training, cognitive therapy, and sleep hygiene education.” (Salwen-Deremer, and Siegel, 2020)⁵. An app for mobile devices, based on CBT-I can be downloaded free of charge (for either veterans or civilians) from a government Veterans Affairs website at the following link:

https://www.ptsd.va.gov/appvid/mobile/cbticoach_app_public.asp

An Internet search shows that there are other options available for insomnia treatment. The prices of such courses range from free, to relatively expensive.

Insomnia drives stress, and stress drives insomnia.

We're all well aware of the adverse effects of stress on our MC symptoms. And conversely, we're all familiar with the rapid rise of our anxiety and stress levels, whenever we realize that we may be in the early stages of a flare, or worse yet, a relapse. And most of us have experienced the increased insomnia problems that can arise from either increased stress, or worsened MC symptoms.

It's apparent that insomnia should be added to the already long list of symptoms associated with MC. And to add insult to injury, the combination of MC symptoms in general, insomnia in particular, and the chronic stress that can be caused by either one, can combine to create a self-perpetuating problem, as one drives the others to increasingly higher levels.

Dietary habits can interfere with sleep quality.

Most of us are well aware that we should eat our last major meal of the day at least a couple of hours before bedtime, and stimulants with effects that last longer than a couple of hours, such as caffeine (which includes coffee, tea, and energy drinks) should be avoided for an appropriate period before bedtime. Obviously, we sleep better when our digestive system is in cruising

mode, rather than working hard.



For some of us, histamine may be a problem.

Published research shows that the histaminergic system is located in the hypothalamus, and it projects to almost all parts of the central nervous system. Histamine is used to activate H1 and/or H2 receptors (in the hypothalamus) to regulate our state of wakefulness (or sleepiness) (Thakkar, 2010)⁶. In other words, if histamine activates the receptors, we remain awake, but if histamine access to the receptors is limited, or blocked, we become sleepy. This implies that those of us who have histamine problems, may have associated sleep problems, since histamine sensitivity is caused by excess amounts of histamine in circulation in the blood.

Chronic lack of sleep may be associated with depression.

Research shows that continuing sleep problems can lead to depression (University College London, 2023, October 19)⁷. And, of course, since active MC itself is frequently associated with depression, this combination can easily become self-perpetuating, once it's initiated.

Notice how this may explain why MC is most prevalent among older women.

Menopause is marked by hot flashes, night sweats, and sleep problems. Some women, especially, have trouble staying asleep (Baker, Lampio, Saaresranta, and Polo-Kantola, 2018)⁸. For many women, sleep problems may be the most, or one of the most troublesome symptoms of menopause (Lee, Han, Cho, and Kim, 2019)⁹.



And unfortunately, sleep medications do not provide better sleep.

According to research done at Brigham and Women's Hospital in Boston, common remedies such as alcoholic drinks, marijuana, sleeping pills, or melatonin, don't actually help to provide good sleep — they merely provide sedation, giving the illusion that we are experiencing quality

rest (Moulton, 2023, October 3)¹⁰. Sleep quality, in terms of restorative, healing, beneficial sleep, is actually relatively low for anyone who is sedated. For those of us who find ourselves still tossing or turning after trying to sleep for 30 or 40 minutes or so, research shows that it's better to get up and read for a while, listen to music, use meditation apps, or do something similar (not including looking at a phone or TV). In other words, we have to prepare our bodies to sleep, because there are no magic pills.

Many have used Benadryl as a sleep aid.

But diphenhydramine (Benadryl) has some skeletons in its closet. Benadryl provides sedation by acting as both an antihistamine and an anticholinergic. Acetylcholine is a chemical used by the brain to send messages between cells, and blocking acetylcholine can cause drowsiness, confusion, and memory loss. And unfortunately, in adults 65 and older, long-term frequent use of anti-cholinergics (including Benadryl) has been shown to be associated with the development of dementia and Alzheimer's disease (FDA, 2020, October 1)¹¹.

The bottom line.

Research continues to provide evidence that good quality sleep is necessary in order to provide optimum conditions for keeping IBD symptoms in remission. Disruptions in normal circadian rhythms and interruptions of other good quality sleep patterns have been shown by medical research to raise inflammation levels, and in cases where the disruptions are significant enough, to trigger relapses. Accordingly, it behooves all IBD patients to strive to get good quality sleep each night, in order to keep our disease in remission.

Does all this research apply to MC patients?

Note that MC patients are typically filtered out, when research groups are selecting candidates for IBD research studies. Consequently, all available medical research studies focusing on insomnia, appear to exclude MC patients.

But why wouldn't these research conclusions apply to MC patients?

Although bona fide medical research studies regarding MC and insomnia aren't available, fortunately, we have a huge amount of epidemiological data in the form of shared experiences posted by members of our discussion and support forum, available in the forum archives. Over the years, many, many MC patients have described their insomnia issues associated with their MC symptoms. It's probably safe to conclude that most of us have some degree of difficulty sleeping, when our MC is active. And for some of us, our sleep problems may persist even when our disease is in remission.

Looking at the data found in our shared posts, many members report sleeping much better when they take a magnesium supplement, or use topically applied magnesium, right before bedtime. And many report that in addition to improved sleep, many of the other clinical symptoms of MC, including bloating, abdominal pains, and muscle and joint pains, are helped.

Good sleep is associated with good health.

All in all, there doesn't appear to be any reason to doubt that insomnia is just as serious a problem for MC patients as it is for any other IBD patients. So until proven otherwise, getting good quality sleep each night is surely the proper goal for those of us who wish to keep our MC in remission, and our inflammation levels minimal.

References

1. McNamara, D. (2023, March 16). Have IBD and Insomnia? You're Not Alone. Retrieved from https://www.medscape.com/viewarticle/989743?ecd=wnl_infocus7_broad_broad_persoexpansion-algo_20230318&uac=95382HN&impID=5256673
2. Leal, T., Gonçalves, M., Antunes, P., Costa, D., Mendes, S., Soares, J.B., . . . Gonçalves, R. (2021). Sleep Disturbance in Inflammatory Bowel Disease Is Associated with Disease Activity and Adverse Outcome. *Digestive Diseases*, 39,496–501. Retrieved from <https://www.karger.com/Article/Abstract/515218>
3. Swanson, G. R., Kochman, N., Amin, J., Chouhan, V., Yim, W., Engen, P. A., . . . Keshavarzian, A. (2021). Disrupted Circadian Rest-Activity Cycles in Inflammatory Bowel Disease Are Associated With Aggressive Disease Phenotype, Subclinical Inflammation, and Dysbiosis. *Frontiers in Medicine (Lausanne)*, 4(8), 770491. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8900134/>

4. Wild, D. (2022, June 23). Does Poor Sleep Trigger IBD? Gastroenterology & Endoscopy News, Retrieved from <https://www.gastroendonews.com/Inflammatory-Bowel-Disease/Article/06-22/inflammatory-bowel-disease-poor-sleep-IBD/67175>
5. Salwen-Deremer, J. K., and Siegel, C. A. (2020). Cognitive Behavioral Therapy for Insomnia: A Promising Treatment for Insomnia, Pain, and Depression in Patients With IBD. *Crohn's & Colitis* 360, 2(3), otaa052. Retrieved from <https://academic.oup.com/crohnscolitis360/article/2/3/otaa052/5862396>
6. Thakkar, M. M. (2010). Histamine in the regulation of wakefulness. *Sleep Medicine Reviews*, 15(1), pp 65–74. Retrieved from <https://pubmed.ncbi.nlm.nih.gov/20851648/>
7. University College London. (2023, October 19). Consistent lack of sleep related to future depressive symptoms, genetic study finds. *Medical Xpress*, Retrieved from https://medicalxpress.com/news/2023-10-lack-future-depressive-symptoms-genetic.html?utm_source=nwletter&utm_medium=email&utm_campaign=daily-nwletter
8. Baker, F. C., Lampio, L., Saaresranta, T., and Polo-Kantola, P. (2018). Sleep and Sleep Disorders in the Menopausal Transition. *Journal of Clinical Sleep Medicine*, 13(3), pp 443–456. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6092036/>
9. Lee, J., Han, Y., Cho, H. H., and Kim, M-R. (2019). Sleep Disorders and Menopause. *Journal of menopausal medicine*, 25(2), pp 83–87. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6718648/>
10. Moulton, C. (2023, October 3). Why popular sleep meds don't actually help you get better sleep. They just sedate you, expert says. *Medical Xpress*, Retrieved from https://medicalxpress.com/news/2023-10-popular-meds-dont-sedate-expert.html?utm_source=nwletter&utm_medium=email&utm_campaign=daily-nwletter
11. U.S. Food and Drug Administration. (2020, October 1). FDA warns about serious problems with high doses of the allergy medicine diphenhydramine (Benadryl). Retrieved from <https://www.fda.gov/drugs/drug-safety-and-availability/fda-warns-about-serious-problems-high-doses-allergy-medicine-diphenhydramine-benadryl>

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