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Exploring the Link Between Inflammatory Bowel Disease and Dementia

Analysis by Dr. Joseph Mercola | September 26, 2025

STORY AT-A-GLANCE

- People with dementia who develop inflammatory bowel disease (IBD) show faster deterioration in thinking, memory, and reasoning skills
- A large-scale analysis of 7.9 million participants revealed IBD patients face significantly elevated dementia risk, with Crohn's disease showing stronger association than ulcerative colitis
- IBD triggers systemic inflammation, releasing cytokines that breach the blood-brain barrier, disrupting neural communication and contributing to progressive neurodegeneration over time
- IBD creates gut dysbiosis, producing neurotoxic metabolites, and increasing intestinal permeability, allowing harmful substances to reach the brain through bloodstream circulation
- Supporting cellular health through vegetable oil elimination, proper carbohydrates, targeted probiotics, vitamin D optimization, and natural antimicrobials can address IBD's root causes

According to the U.S. Centers for Disease Control and Prevention (CDC), around 2.4 to 2.8 million Americans currently have inflammatory bowel disease (IBD),[1] a condition that is broken down into two types — Crohn's disease and ulcerative colitis. Symptoms generally include persistent diarrhea, abdominal pain, fatigue, and unintended weight loss.[2]

Left untreated, these conditions can cause permanent intestinal damage, increase the risk of colon cancer, and lead to systemic complications that affect other organs. What's more, researchers have discovered that those with IBD also have a higher risk of developing dementia.

IBD Speeds Up Cognitive Decline in Dementia Patients

In a study published in the journal Gut, researchers investigated how IBD worsens the rate of cognitive decline in people already living with dementia. They analyzed a large, nationwide registry and compared two groups — individuals diagnosed with dementia who later developed IBD, and a matched control group with dementia but no IBD diagnosis. The goal was to measure differences in cognitive decline over time using the Mini-Mental State Examination (MMSE), a widely used test for cognitive function.[3,4]

The test population included 111 people with dementia who subsequently received an IBD diagnosis and 1,110 people with dementia but no IBD. Both groups were similar in age, gender, and education level.

- **Cognitive decline was noticeable —** People with dementia who later developed IBD lost almost one MMSE point per year compared to those without IBD. To put that into perspective, this means their thinking, memory, and reasoning skills declined at a much faster pace. As noted by co-author Hong Xu, Ph.D.:[5]

  > *"Our results indicate that inflammatory bowel disease (IBD) can worsen cognitive function in people with dementia."*

- **More research is needed to solidify the connection —** Since the research follows an observational model, the authors did not claim a direct cause-and-effect relationship. However, the consistent patterns in the data make it clear that IBD is a red flag for anyone with dementia.

- **The future of treatment —** With the connection being made, Xu believes that new treatments focusing on IBD and dementia can be created:[6]

> *"This opens the door to more effective care strategies with closer monitoring and targeted treatment, which will hopefully be able to improve the quality of these individuals' lives."*

More Evidence Supports Link Between Dementia and IBD

In an analysis published in Scientific Reports, researchers evaluated whether IBD is linked to a higher risk of dementia by pooling data from multiple population-based studies across the globe. The team examined 10 observational studies involving a combined 7,895,339 participants, of whom 269,387 had IBD.[7]

- **The link between IBD and dementia is clear —** The team compared dementia rates in people with IBD against those without the condition. Their analysis revealed that people with IBD were 17% more likely to develop dementia overall.

  Breaking it down further, both major types of IBD were linked to their own risks. Specifically, Crohn's disease showed a stronger association (26% higher risk) compared to ulcerative colitis (15% higher risk), theorizing that the type and severity of gut inflammation might influence brain health differently.

- **A closer look at the numbers —** The findings showed consistency across most subgroup analyses. The elevated risk persisted regardless of whether the study populations came from Western or Asian countries, signifying the link is not dependent on cultural or dietary factors alone.

  That's important for you because it means the connection is likely a biological one rooted in the disease itself rather than lifestyle patterns only. The findings also held up in sensitivity analyses, which are checks researchers run to see if removing any one study drastically changes the results. In this case, the overall pattern stayed stable, strengthening the reliability of the association.

- **The analysis also explored follow-up durations —** Some included studies in the meta-analysis followed participants for as little as two years, while others tracked them for over a decade. Longer follow-up times tended to show clearer differences between people with and without IBD, suggesting that the longer the brain is exposed to chronic gut inflammation, the greater the cumulative impact on cognitive health.

- **A theory on how IBD affects cognitive function —** The study points to several interconnected processes. Chronic systemic inflammation — a hallmark of IBD — results in high levels of inflammatory cytokines circulating in the bloodstream. These pass through the blood-brain barrier where they disrupt the brain's delicate chemical balance and interfere with neuron-to-neuron communication. Over time, this inflammatory environment contributes to neurodegeneration.

  For example, the researchers pointed to gut dysbiosis — an imbalance in the populations of bacteria living in your intestines. In healthy digestion, beneficial bacteria produce short-chain fatty acids (SCFAs), which help regulate inflammation and maintain the blood-brain barrier integrity.

  In IBD, the balance shifts toward harmful bacteria, reducing these protective compounds. This imbalance leads to increased intestinal permeability, which allows harmful toxins and bacterial byproducts to enter the bloodstream and reach the brain.

- **The disruption of the gut-brain axis is another factor —** IBD-related changes to gut nerves and immune signaling can alter brain function directly.

The authors of the study stressed that while the data show a consistent association, the observational nature of the included studies means they couldn't confidently prove IBD directly causes dementia. However, there is still a takeaway here — knowing that IBD is linked with higher dementia risk should allow you to make positive lifestyle changes in your life to reduce gastrointestinal inflammation to protect your brain health as much as possible.

Dementia Risk Rises After IBD Diagnosis

Published in Frontiers in Neurology, a 2022 systematic review examined whether people develop dementia more often after being diagnosed with IBD. Researchers pooled together data from several large, population-based studies, analyzing a total of 2,334,472 participants. Their objective was to compare dementia rates before and after IBD diagnosis.[8]

- **The data revealed a clear pattern —** Dementia risk was significantly higher after IBD began. Specifically, participants were 27% more likely to develop dementia after their IBD diagnosis compared to the general population. In contrast, dementia rates were not elevated in the years before IBD was diagnosed, supporting the hypothesis that the gut disease preceded and contributed to later cognitive loss.

  When the researchers broke down the results further, they found that the association between IBD and dementia was consistent across age groups and sexes. Younger patients, older adults, men, and women all showed a similar pattern of increased risk after diagnosis.

- **Dementia and deteriorating gut health are inextricably linked —** In studies where follow-up periods extended beyond 10 years, the risk remained elevated, indicating that the effects of IBD on brain health are not limited to short-term durations.

  Subgroup analysis also showed similar trends between Crohn's disease and ulcerative colitis. While previous research found slightly higher risk with Crohn's, the study found the increase in dementia risk to be substantial and statistically significant for both forms of IBD.

- **Chronic systemic inflammation is a central suspect —** Similar to the Scientific Reports study, this research also theorizes that inflammatory cytokines breach the blood-brain barrier. Once inside, they disrupt nerve cell communication, damage neurons, and trigger neurodegeneration linked to dementia.

On a related note, the researchers pointed out the role of gut microbial-derived neurotoxic metabolites, which are harmful byproducts produced by an imbalanced gut microbiome. These byproducts travel through the bloodstream to the brain, where they may interfere with normal brain function and speed up the neurodegenerative processes.

The authors emphasized that the data supported a "unidirectional association," meaning the IBD diagnosis came first and dementia followed. While the study design does not prove causation, the findings make it clear that IBD is not simply a byproduct of early dementia. Likewise, they acknowledge the limitations of their study, saying that the opposite can happen:[9]

> *"[C]urrent studies did not sufficiently consider temporality; dementia is a slow-progressing disease with an incubation period of several years, so reverse causality and the result of co-exposure are possible."*

Manage Your IBD with These Natural Strategies

If you've been diagnosed with IBD, addressing the root cause — dysfunctional cellular health — is key to achieving wellness. That said, here are my recommendations to help you reclaim and take control of your digestive health:

1. **Support your cellular health to build a strong gut foundation —** I recommend you start by reducing your exposure to **endocrine-disrupting chemicals (EDCs)** and **electromagnetic field (EMFs)**. Another strategy that can provide immediate results is minimizing your intake of linoleic acid (LA), a ubiquitous toxin in the Western food supply.

   I recommend minimizing your intake of LA to less than 5 grams a day, but if you can get it below 2 grams a day, that's even better. To track your intake, I recommend you download the upcoming Mercola Health Coach app. It has a feature called the Seed Oil Sleuth, which monitors your LA intake to a tenth of a gram.

Lastly, eat the right carbohydrates to repair your gut and produce proper cellular energy. Start by getting 200 to 250 grams of healthy carbohydrates per day from nutritious sources, such as white rice and whole fruit. These foods will give your cells the energy they need while minimizing digestive issues.

Once your gut function improves, you can move onto high-fiber foods. That's because a combination of dietary fiber and poor gut function will cause further problems. Specifically, they increase endotoxin buildup. If you have a severely dysfunctional gut, use easily digested carbs like dextrose water for the first week or two, sipping it slowly throughout the day to gently encourage recovery.

2. **Nourish Akkermansia muciniphila growth afterward —** This is a keystone beneficial bacterium that plays a central role in a balanced microbiome. Ideally, it should comprise 3% to 5% of your total gut microbiome population. That said, polyphenol-rich fruits like berries and inulin-rich foods such as garlic, asparagus, bananas, and leeks will help increase your Akkermansia levels.

   You can also take an Akkermansia supplement, but go at least six months without vegetable oils first to allow mitochondrial recovery and create a gut environment where this bacterium can thrive.

   Once ready, choose a supplement with advanced delivery methods, such as time-release capsules or microencapsulation, which keep the bacteria protected until they reach the colon — the part that needs Akkermansia the most. Delayed-release methods increase the number of live bacteria that survive the digestive process, giving you the greatest benefit.

3. **Protect your gut after antibiotic use with Saccharomyces boulardii —** If you absolutely need to take an antibiotic for medical reasons, you'll need to repopulate your gut with beneficial bacteria afterward.

   When you finish a course of antibiotics, help your microbiome bounce back by taking Saccharomyces boulardii, which is a probiotic yeast. It helps prevent antibiotic-related diarrhea and supports the regrowth of healthy gut bacteria,

making your recovery smoother and reducing the risk of ongoing gut imbalance.

4. **Turn to natural antimicrobials before drug antibiotics —** Aside from pharmaceutical antibiotics, try food-based and herbal antimicrobials that can tackle harmful bacteria — including drug-resistant strains. Powerful examples include medicinal honey, garlic, ginger, and thyme essential oil. These natural agents help fight infection while causing less disruption to the overall microbial balance.

5. **Improve vitamin D status and restore healthy cell energy —** Vitamin D is key for gut health. Aim for daily sun exposure around midday, when UVB rays are strongest, to allow your body to naturally produce vitamin D. However, there's a caveat to this recommendation, especially if you've been on a diet high in LA.

   Wait until you've minimized LA intake for at least six months before sunbathing during peak hours, since UV exposure combined with high LA levels in skin tissues can trigger inflammation and DNA damage.

   It takes around two years to purge vegetable oils from your system, provided you've been following a low-LA diet. But you can speed up this process by increasing your intake of **C15:0 fat (pentadecanoic acid)**, which is found in grass fed dairy. Most people get 100 to 200 grams from their food per day, but I personally take 2 grams, divided with meals.

   Lastly, check if your levels are in the optimal range. I recommend you reach 60 to 80 ng/mL (nanograms per milliliter) to optimize your gut health. Then, have your blood tested regularly to maintain it.

Frequently Asked Questions (FAQs) About Inflammatory Bowel Disease and Dementia

Q: What is inflammatory bowel disease (IBD) and why is it a concern beyond the gut?

A: IBD is a chronic condition that inflames the digestive tract, leading to symptoms like ongoing diarrhea, abdominal pain, fatigue, and unintentional weight loss. Left untreated, it can cause lasting intestinal damage, increase colon cancer risk, and trigger complications in other organs, including the brain. Research now shows IBD is linked to a higher risk of dementia.

Q: How does IBD affect dementia progression?

A: A study published in Gut found that people with dementia who later developed IBD experienced faster cognitive decline. On average, they lost nearly one more point per year on the Mini-Mental State Examination compared to dementia patients without IBD. This means thinking, memory, and reasoning skills deteriorated at a noticeably faster rate when IBD was present.

Q: Does having IBD increase the risk of developing dementia?

A: Yes. A large review in Scientific Reports that analyzed 7,895,339 people found that those with IBD were 17% more likely to develop dementia. Crohn's disease had the highest association, with a 26% increased risk, while ulcerative colitis showed a 15% increase. The risk was consistent across age, sex, and geographic regions.

Q: What could explain the link between IBD and dementia?

A: Several mechanisms are at play. Chronic systemic inflammation releases cytokines, which are inflammatory compounds that can cross the blood-brain barrier and harm brain cells. Gut microbiome imbalances also reduce protective compounds and increase intestinal permeability ("leaky gut"), letting toxins and bacterial byproducts enter the bloodstream and reach the brain. This combination disrupts brain chemistry, damages neurons, and accelerates cognitive decline.

Q: What are natural strategies to manage IBD?

A: Recommendations include minimizing mitochondrial stressors like vegetable oils, endocrine-disrupting chemicals (EDCs), and electromagnetic fields. To optimize health, start with easy-to-digest carbohydrates to support gut repair. In addition, taking probiotics like Akkermansia muciniphila, supplementing with Saccharomyces boulardii after an antibiotics course, trying natural antimicrobials, and optimizing vitamin D levels through safe sun exposure also help optimize gut health.

Sources and References

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