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The Alarming Rise of Inflammatory Bowel Disease Among US Youth

Analysis by Dr. Joseph Mercola | January 30, 2025

STORY AT-A-GLANCE

- IBD prevalence is dramatically rising, with 100,429 U.S. youth under 20 affected, showing significant increases in both Crohn's disease and ulcerative colitis diagnoses
- Racial and demographic disparities exist, with White individuals experiencing the highest IBD rates, followed by Black, Hispanic and Asian populations
- Antibiotic overuse significantly increases IBD risk, with individuals receiving five or more antibiotic prescriptions experiencing a 236% higher likelihood of developing the condition
- Mitochondrial dysfunction and compromised cellular energy production play key roles in triggering gut inflammation, creating a hostile environment for beneficial bacteria
- Strategic approaches to gut health include eliminating mitochondrial toxins, supporting beneficial bacteria through targeted supplementation and maintaining optimal vitamin D levels

Inflammatory bowel disease (IBD) is a chronic condition characterized by persistent inflammation of the gastrointestinal tract. IBD primarily exists in two forms: Crohn's disease and ulcerative colitis. Crohn's disease can affect any part of the digestive system, from the mouth to the anus, while ulcerative colitis is confined to the colon and rectum.

This condition is marked by a range of debilitating symptoms. Individuals with IBD often experience severe abdominal pain, ongoing diarrhea, fatigue and unintended weight

loss. These symptoms not only cause significant physical discomfort but also interfere with daily activities and overall quality of life.

A study published in Inflammatory Bowel Diseases revealed that in 2016, 1 in 209 adults and 1 in 1,299 children in the U.S. were living with IBD.[1] This represents a 123% increase in adult cases and a 133% rise among children from 2007 to 2016.[2] Additionally, more than 100,000 young people in the U.S. are affected by IBD.[3] These figures highlight the growing impact of IBD on both the health care system and the lives of those affected.

Living with IBD extends beyond managing daily symptoms. The disease leads to serious complications such as strictures, fistulas and an increased risk of colorectal cancer. Moreover, IBD often necessitates long-term medical treatment, including immunosuppressive medications and surgeries, which impose a substantial financial and emotional burden on patients and their families.

Diagnosing and Understanding IBD

IBD, a chronic condition affecting the gastrointestinal tract, presents several risk factors that complicate its management. Conventional treatments often involve medications like corticosteroids and immunosuppressants, which have significant side effects such as increased infection risk and bone density loss.

These treatments aim to reduce inflammation but do not address the root causes of the disease, leaving patients vulnerable to recurring symptoms and complications. Environmental and lifestyle factors play a substantial role in the **development of IBD**, with excessive **antibiotic use** being particularly concerning.

Antibiotics disrupt your gut microbiome, which is key for maintaining digestive health. Additionally, genetic predispositions and family history are significant, as they increase an individual's susceptibility to developing IBD.

The interplay between these factors leads to the onset of IBD by triggering an abnormal immune response in your gut. This response causes chronic inflammation, damaging the intestinal lining and resulting in the symptoms associated with IBD. Understanding

this process is essential for developing more effective treatments that target the disease's underlying mechanisms rather than just alleviating symptoms.

Diagnosing IBD is often challenging due to the overlap of symptoms with other gastrointestinal disorders. Tests like colonoscopies and MRIs are standard but may not always provide a definitive diagnosis, especially in early stages or atypical cases. Furthermore, these procedures are invasive and costly, posing barriers for some patients.

Misdiagnosis is a common issue, often due to the reliance on symptom-based assessments and the variability in disease presentation. Uninsured populations are particularly at risk, as they lack access to comprehensive diagnostic tools. This highlights the need for improved diagnostic methods that are both accurate and accessible, ensuring timely and appropriate treatment for all affected individuals.

IBD on the Rise Among US Youth

Research published in the journal Gastroenterology[4] analyzed data from multiple insurance sources to estimate the prevalence of pediatric inflammatory bowel disease in the U.S., focusing on children under 20 years of age.[5]

It revealed that 100,429 youth under 20 have IBD in the U.S.,[6] with an overall prevalence of 122 per 100,000. Crohn's disease accounted for 71 per 100,000, while ulcerative colitis had a prevalence of 44 per 100,000. The study also highlighted demographic disparities in IBD prevalence. It was found that men are more likely to develop Crohn's disease than women, while the prevalence of ulcerative colitis did not show a significant gender difference.[7]

Additionally, White individuals had the highest rates of IBD, followed by Black, Hispanic and Asian populations.[8] These disparities suggest that genetic and environmental factors interact in complex ways to influence IBD risk. Andrés Hurtado-Lorenzo, Ph.D., senior vice president of translational research and IBD ventures at the Crohn's & Colitis Foundation, said in a news release:[9]

"This comprehensive evaluation of pediatric IBD prevalence in the U.S. is an important step in understanding the full spectrum of the disease in our youth. These data are essential for healthcare professionals and policymakers to effectively manage pediatric IBD, make informed public health decisions, and ultimately improve outcomes for affected children and adolescents."

Antibiotic Overuse Significantly Boosts IBD Risk in US Adults

A separate study investigated the relationship between antibiotic usage and the development of IBD among older adults in the U.S.[10] The research aimed to determine whether excessive antibiotic prescriptions contribute to the rising incidence of IBD, a chronic condition characterized by inflammation of the gastrointestinal tract.

Researchers identified individuals newly diagnosed with IBD and compared their antibiotic usage history. The findings revealed a strong association between antibiotic use and an increased risk of developing IBD, particularly with higher doses and prolonged use.

Individuals who received five or more antibiotic prescriptions had a 236% higher risk of developing IBD compared to those who took no antibiotics in the previous five years.[11] This significant increase underscores the dangers of overprescribing antibiotics. The research further identified that all classes of antibiotics were linked to an elevated risk of IBD, with fluoroquinolones showing the strongest association.

This suggests that not only the quantity but also the type of antibiotics used influence the likelihood of developing IBD. The study emphasized the importance of antibiotic stewardship, recommending that antibiotics be prescribed only when absolutely necessary to mitigate these risks.

Your microbiome — the community of microorganisms living in your digestive tract — is essential for maintaining gut health. Disruption of the microbiome by antibiotics leads to an imbalance that triggers chronic inflammation, a hallmark of IBD.

Optimizing Cellular Energy Is Key for Autoimmune Disease Like IBD

Optimizing your mitochondrial function is one of the most important strategies to optimize your cellular energy, which is at the core of preventing and managing autoimmune diseases like IBD. Mitochondrial dysfunction, due to low cellular energy production, triggers a cascade of digestive health complications.

As mitochondrial energy generation becomes impaired, the tight junctions in your colon become compromised, allowing oxygen to leak into your colon. The introduction of oxygen creates a hostile environment for beneficial bacteria and allows pathogenic bacteria to take over.

The disruption is further exacerbated by antibiotics, which indiscriminately eliminate both beneficial and harmful bacterial populations. The result of this intricate chain of events is a condition known as dysbiosis, where the delicate bacterial balance in your gut is fundamentally altered.

As pathogenic bacteria increase, they produce endotoxins that progressively damage your gut lining, creating microscopic perforations that enable foreign proteins to enter your bloodstream and additional oxygen to infiltrate the colonic environment — a condition known as leaky gut.

This oxygen infiltration creates a self-reinforcing cycle that continually disrupts your gut's microbiological equilibrium. Without a diverse and balanced microbiome, restoring gut health becomes extremely challenging, trapping individuals in a progressive state of declining health.

Addressing this complex systemic issue requires a sophisticated approach that extends beyond simple probiotic supplementation. Conventional probiotic strategies often fail because these supplements struggle to survive the harsh journey through the small intestine. If the capsule disintegrates prematurely, the probiotics are quickly decimated by ambient oxygen, preventing them from reaching their intended destination in the colon.

Consequently, an effective treatment strategy must prioritize restoring the health of colonocytes by systematically eliminating mitochondrial toxins that undermine cellular energy production. This is why it's important to reduce your exposure to mitochondrial poisons like linoleic acid (LA) — found in the seed oils used in most ultraprocessed foods — endocrine-disrupting chemicals, such as xenoestrogens in plastics, and electromagnetic fields (EMFs)

This approach creates the necessary conditions for oxygen-intolerant beneficial bacteria to reestablish themselves, ultimately restoring the gut's natural bacterial balance. By strategically creating an optimal environment for beneficial bacteria, you interrupt the dysbiosis cycle and establish a pathway toward comprehensive gut health restoration.

Natural Strategies for IBD Relief

Addressing the root cause of IBD involves taking proactive steps to restore and maintain a healthy gut microbiome. By implementing these strategies, you reduce the risk associated with antibiotic overuse and promote overall gastrointestinal health.

1. **Support gut health by eliminating mitochondrial toxins and eating healthy carbs —** Your diet plays a pivotal role in maintaining a healthy gut microbiome. As mentioned, beneficial gut bacteria thrive in an oxygen-free environment, which requires adequate cellular energy to maintain.

   Addressing the root cause — mitochondrial function and colon oxygenation — is essential for the success of any gut health intervention. Once you've reduced your exposure to mitochondrial poisons like LA, endocrine-disrupting chemicals and EMFs, consuming healthy carbohydrates is instrumental to your gut health journey.

   Introduce white rice and whole fruits to nourish beneficial bacteria before considering vegetables, whole grains and starches. Avoiding high-fiber diets initially is important if your gut microbiome is compromised, as excessive fiber will increase endotoxin levels.

If your gut health is severely compromised, as is often the case with IBD, focus on easily digestible carbohydrates like dextrose water for the first week or two. Sip it slowly throughout the day to support gradual gut healing.

2. **Incorporate Akkermansia supplementation —** The beneficial oxygen-intolerant bacteria Akkermansia muciniphila is essential for a healthy microbiome, but many people have few to none at all. However, it's important to eliminate all seed oils from your diet for at least six months before starting an Akkermansia supplementation program.

   This preparatory period allows your body to recover mitochondrial function and create a more hospitable environment in your colon for the beneficial bacteria. By taking these steps, you maximize the benefits of Akkermansia supplementation and support overall gut health.

   When selecting Akkermansia supplements, choose those that utilize advanced, timed-release capsules or microencapsulation technology. These methods keep the bacteria dormant and protected until they reach your colon, typically within two to four hours after ingestion, ensuring that a higher number of live bacteria survive the journey through your digestive system.

3. **Prevent antibiotic side effects with Saccharomyces boulardii —** After completing an antibiotic course, take the beneficial yeast Saccharomyces boulardii. This yeast helps prevent secondary complications like diarrhea by restoring the natural balance of your gut microbiome, ensuring a smooth recovery from antibiotic treatment.

4. **Optimize vitamin D and address cellular energy production —** Ensure you maintain adequate vitamin D levels through sensible sun exposure and supplementation. Vitamin D plays a key role in immune function and gut health, while **deficiency complicates autoimmune disease**.

   Daily sun exposure around solar noon, when UVB rays are strongest, allows your body to produce this hormone naturally. However, avoid direct sun exposure two to

three hours before and after solar noon until you've been seed oil-free for six months. This is because when ultraviolet (UV) radiation interacts with LA in your skin, it triggers inflammatory responses and damage to DNA.

While complete clearance of seed oils from tissue takes approximately two years, reaching the six-month milestone typically allows for safer sun exposure during peak hours. Sunlight remains the optimal source of vitamin D — with important considerations around seed oil consumption and safe exposure times as mentioned — however, supplementation offers a reliable alternative when needed.

Ideally, maintain vitamin D levels in the optimal range through regular testing and appropriate sun exposure or supplementation. Sufficiency begins around 40 ng/mL (100 nmol/L in European measurements), but the target range for optimal health is 60 to 80 ng/mL (150 to 200 nmol/L).

Sources and References

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