5 Steps to Kill Hidden Bugs in Your Gut That Make You Sick

Doctors are trained to identify diseases by where they are located. If you have asthma, it's considered a lung problem; if you have rheumatoid arthritis, it must be a joint problem; if you have acne, doctors see it as a skin problem; if you are overweight, you must have a metabolism problem; if you have allergies, immune imbalance is blamed. Doctors who understand health this way are both right and wrong. Sometimes the causes of your symptoms do have some relationship to their location, but that's far from the whole story.

As we come to understand disease in the 21st century, our old ways of defining illness based on symptoms is not very useful. Instead by understanding the origins of disease and the way in which the body operates as one whole, integrated ecosystem we now know that symptoms appearing in one area of the body may be caused by imbalances in an entirely different system.

If your skin is bad or you have allergies, can't seem to lose weight, suffer from an autoimmune disease or allergies, struggle with fibromyalgia, or have recurring headaches, the real reason may be that your gut is unhealthy. This may be true even if you have NEVER had any digestive complaints.

There are many other possible imbalances in your body's operating system that may drive illness as well. These include problems with hormones, immune function, detoxification, energy production and more. But for now let's take a deeper look at the gut and why it may be at the root of your chronic symptoms.

Symptoms Throughout the Body are Resolved by Treating the Gut

Many today do have digestive problems including reflux or heartburn, irritable bowel, bloating, constipation, diarrhea and colitis. In fact, belly problems account for over 200 million doctor's visits and billions in health care costs annually. But gut problems cause disease far beyond the gut. In medical school I learned that patients with colitis could also have inflamed joints and eyes, and that patients with liver failure could be cured of delirium by taking antibiotics that killed the toxin-producing bacteria in their gut. Could it be that when things are not quite right down below it affects the health of our entire body and many diseases we haven't linked before to imbalances in the digestive system?

The answer is a resounding yes. Normalizing gut function is one of the most important things I do for patients, and it's so simple. The "side effects" of treating the gut are quite extraordinary. My patients find relief from allergies, acne, arthritis, headaches, autoimmune disease, depression, attention deficit, and more--often after years or decades of suffering. Here are a few examples of the results I have achieved by addressing imbalances in the function and flora of the gut:

• A 58-year-old woman with many years of worsening allergies, asthma, and sinusitis who was on frequent antibiotics and didn't respond to any of the usual therapies was cured by eliminating a worm she harbored in her gut called Strongyloides.

• A 52-year-old woman who suffered with daily headaches and frequent migraines for years, found relief by clearing out the overgrowth of bad bugs in her small intestine with a new non-absorbed antibiotic called Xifaxin.

• A six-year-old-girl with severe behavioral problems including violence, disruptive behavior in school, and depression was treated for bacterial yeast overgrowth, and in less than 10 days her behavioral issues and depression were resolved.

• A three-year-old boy with autism started talking after treating a parasite called Giardia in his gut.

These are not miracle cures, but common results that occur when you normalize gut function and flora through improved diet, increased fiber intake, daily probiotic supplementation, enzyme therapy, the use of nutrients that repair the gut lining, and the direct treatment of bad bugs in the gut with herbs or medication.

A number of recent studies have made all these seemingly strange reversals in symptoms understandable. Let's review them.

Research Linking Gut Flora and Inflammation to Chronic Illness

Scientists compared gut flora or bacteria from children in Florence, Italy who ate a diet high in meat, fat, and sugar to children from a West African village in Burkina Faso who ate beans, whole grains, vegetables, and nuts.(i) The bugs in the guts of the African children were healthier, more diverse, better at regulating inflammation and infection, and better at extracting energy from fiber. The bugs in the guts of the Italian children produced by-products that create inflammation; promote allergy, asthma, and autoimmunity; and lead to obesity.

Why is this important?

In the West our increased use of vaccinations and antibiotics and enhancements in hygiene have lead to health improvements for many. Yet these same factors have dramatically changed the ecosystem of bugs in our gut, and this has a broad impact on health that is still largely unrecognized.

There are trillions of bacteria in your gut and they collectively contain at least 100 times as many genes as you do. The bacterial DNA in your gut outnumbers your own DNA by a very large margin. This bacterial DNA controls immune function, regulates digestion and intestinal function, protects against infections, and even produces vitamins and nutrients.

When the balance of bacteria in your gut is optimal this DNA works for you to great effect. For example, some good bacteria produce short chain fatty acids. These healthy fats reduce inflammation and modulate your immune system. Bad bugs, on the other hand, produce fats that promote allergy and asthma, eczema and inflammation throughout your body.(ii)

Another recent study found that the bacterial fingerprint of gut flora of autistic children differs dramatically from healthy children.(iii) Simply by looking at the byproducts of their intestinal bacteria (which are excreted in the urine--a test I do regularly in my practice called organic acids testing), researchers could distinguish between autistic and normal children.

Think about this: Problems with gut flora are linked to autism. Can bacteria in the gut actually affect the brain? They can. Toxins, metabolic by-products, and inflammatory molecules produced by these unfriendly bacteria can all adversely impact the brain. I explore the links between gut function and brain function in much greater detail in my book, *The UltraMind Solution*.

Autoimmune diseases are also linked to changes in gut flora. A recent study showed that children who use antibiotics for acne may alter normal flora, and this, in turn, can trigger changes that lead to autoimmune disease such as inflammatory bowel disease or colitis.(iv)

The connections between gut flora and system-wide health don't stop there. A recent

study in the *New England Journal of Medicine* found that you could cure or prevent delirium and brain fog in patients with liver failure by giving them an antibiotic called Xifaxan to clear out bugs that produce toxins their poor livers couldn't detoxify.(v) Toxins from bacteria were making them insane and foggy. Remove the bacteria that produce the toxins, and their symptoms clear up practically overnight.

Other similar studies have found that clearing out overgrowth of bad bugs with a non-absorbed antibiotic can be an effective treatment for restless leg syndrome (vi) and fibromyalgia. (vii)

Even obesity has been linked to changes in our gut ecosystem that are the result of a high-fat, processed, inflammatory diet. Bad bugs produce toxins called lipopolysaccardies (LPS) that trigger inflammation and insulin resistance or pre-diabetes and thus promote weight gain.(viii)

It seems remarkable, but the little critters living inside of you have been linked to everything from autism to obesity, from allergy to autoimmunity, from fibromyalgia to restless leg syndrome, from delirium to eczema to asthma. In fact the links between chronic illness and gut bacteria keep growing every day.

So what can you do to keep your gut flora balanced, your gut healthy, and thus overcome or avoid these health problems?

Five Steps to a Healthy Gut (and a Healthy Body!)

Follow these five simple steps to begin rebalancing your gut flora.

1. Eat a fiber-rich, whole foods diet--it should be rich in beans, nuts, seeds, whole grains, fruits, and vegetables--all of which feed good bugs.

2. Limit sugar, processed foods, animal fats, and animal protein--these provide food for unhealthy bugs.

3. Avoid the use of antibiotics, acid blockers, and anti-inflammatories--they change gut flora for the worse.

4. Take probiotics daily--these healthy, friendly flora can improve your digestive health and reduce inflammation and allergy.

5. Consider specialized testing--such as organic acid testing, stool testing (new tests can look at the DNA of the bacteria in your gut), and others to help assess your gut function. You will likely have to work with a functional medicine practitioner to effective test and treat imbalances in your gut.

And if you have a chronic illness, even if you don't have digestive symptoms, you might want to consider what is living inside your gut. Tending to the garden within can be the answer to many seemingly unrelated health problems.

To your good health,

Mark Hyman, MD

Mark Hyman, M.D. is a practicing physician, founder of The UltraWellness Center, a four-time New York Times *bestselling author, and an international leader in the field of Functional Medicine. You can follow him on Twitter, connect with him on LinkedIn, watch his videos on YouTube, become a fan on Facebook, and subscribe to his newsletter.*

References

(i) De Filippo, C., Cavalieri, D., Di Paola, M., et al. 2010. Impact of diet in shaping gut microbiota revealed by a comparative study in children from Europe and rural Africa. Proc Natl Acad Sci USA. 107(33): 14691-6

(ii) Sandin, A., Bråbäck, L., Norin, E., and B. Björkstén. 2009. Faecal short chain fatty acid pattern and allergy in early childhood. Acta Paediatr. 98(5): 823-7.

(iii) Yap, I.K., Angley, M., Veselkov, K.A., et al. 2010. Urinary metabolic phenotyping differentiates children with autism from their unaffected siblings and age-matched controls. J Proteome Res. 9(6): 2996-3004.

(iv) Margolis, D.J., Fanelli, M., Hoffstad, O., and J.D. Lewis. 2010. Potential association between the oral tetracycline class of antimicrobials used to treat acne and inflammatory bowel disease. Am J Gastroenterol. Aug 10 epub in advance of publication.

(v) Bass, N.M., Mullen, K.D., Sanyal, A., et al. 2010. Rifaximin treatment in hepatic encephalopathy. N Engl J Med. 362(12): 1071-81.

(vi) Weinstock, L.B., Fern, S.E., and S.P. Duntley. 2008. Restless legs syndrome in patients with irritable bowel syndrome: response to small intestinal bacterial overgrowth therapy. Dig Dis Sci. 53(5): 1252-6.

(vii) Pimentel, M., Wallace, D., Hallegua, D., et al. 2004. A link between irritable bowel syndrome and fibromyalgia may be related to findings on lactulose breath testing. Ann Rheum Dis. 63(4): 450-2.

(viii) Cani, P.D., Amar, J., Iglesias, M.A., et al. 2007. Metabolic endotoxemia initiates obesity and insulin resistance. Diabetes. 56(7): 1761-72.

Follow Mark Hyman, MD on Twitter: www.twitter.com/markhymanmd