

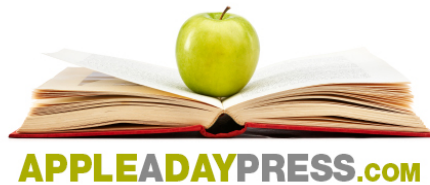
# Microbiome

## Your Foundation of Health

A Natural Health Perspective on Microflora, Leaky Gut,  
and 21<sup>st</sup> Century Disease

By WellnessWiz Jack Tips [Ph.D., C.C.N.]

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# Microbiome: Your Foundation of Health

## A Natural Health Perspective on Microflora, Leaky Gut, and Health in the 21<sup>st</sup> Century

[#1 of the Microbiome series. Also in the series: #2: *Leaky Gut – A New View of A Prime Health Disturbance*, #3: *Your Intestinal Microbiome—A Marriage of Microbes & Human Functionality*.]



By WellnessWiz Jack Tips (Ph.D., C.C.N.)

*Changes in diet automatically mean changes in our intestinal microbiome<sup>1</sup>—the teaming conglomerate of bacteria that inhabit our gastro-intestinal tracts. When the microbiome changes, the body’s genetic response to food changes—for better or worse. Thus the profound statement, “we are what we eat” and it irrefutably establishes that food quality is integral to health and disease. Further, the gut microbiota directly influence the Brain’s regulation of mood and body management, establishing what is called the But/Brain Connection.*

*Science is also revealing that changes in thought pathways changes the gut-microbiota composition establishing the Brain/Gut Connection. Thus the microbes and the brain are in a “bi-directional conversation” for our benefit or our distress.*

*This natural health information reveals the profound importance of the microbiome as a factor that predisposes health or disease in each human being, and the dire need for clinicians to address the microbiome as a prerequisite for restoration of health; and for people desiring the most optimal level of personal health to support their intestinal microbiome to encourage their bodies to heal themselves. – WellnessWiz Jack Tips [Ph.D., C.C.N.]*



**Inescapable Foundation.** Regarding core nutrition in the 21<sup>st</sup> Century, a chief concern is the body’s cellular inflammation that stems from the microbiome’s struggle with antibiotics, altered foods, and environmental toxins. **Altered microbiome colonies equal altered health.** **Inflammation in the gastro-intestinal tract can result in raising the set-point of inflammation in the brain and throughout the body. The result? A key cause or contributor to: anxiety, depression, brain fog, skin conditions, low libido, hormone imbalances and dysregulation of autonomic neurological processes (bowel motility, heart rhythm).**

Researchers state that 85% - 90% of a human's microbiome should be the beneficial probiotic bacteria and 10% to 15% should be potential pathogens. Why the pathogens at all? They maintain immunity and some species contribute metabolic wastes that contribute molecules that the body can use. Concerns of over-sterilization arise based on the "use it or lose it" perspective. Pathogens keep the immune system vigilant and the probiotics keep the pathogens in check. Nature's symbiotic perfection.

Today, researchers are finding that a person's intestinal microbiome exerts influence over the brain, thyroid, immune system, and organ function by sharing DNA, sugars, fats, and proteins that regulate health.



### The New, Hot Microbiome Button

The microbiome is the new and exciting hot button in nutrition. Researchers are delving into this profound, microscopic world and pulling out astounding connections between having happy bacteria in the tummy and having a happy, healthy life. Here, let's grab an overview on what is unfolding.

**Adapt to survive.** That's the *prime directive* of all life forms: Plantae, Animalia, Protista, Monera, Fungi, and Bacteria. Simply put: *that which adapts well is more fit to survive. That which does not, dies.* Nature's admonition is simply, "Adapt or die." The body's answer to adaptation is "innate vitality" or "cellular intelligence." The body's answer to "die" is reproduction. Thus libido is a key marker of a person's vitality.

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**Key Resource:** *Libido as a primary marker for human health.*

**Dr. Keesha Ewers**, Founder & Director, Functional Sexology Institute <http://iTeleseminar.com/72931665>



Human beings live in a complex and delicate symbiotic relationship of dependency with all kingdoms of life. For example, bacteria and fungi must occupy root nodules of plants so that plants can receive nourishment from the soil. That nourishment passes to the human body through food. Thus the human food supply is dependent on microbes.

Such symbiotic relationships abound. The cow's rumen (stomach), harbors microorganisms from the Animalia kingdom that ferment grass and provide protein (from the grass and their dead cells) to support the cow's life. (This also means that cows are not vegetarians as much of their dietary protein comes from the microscopic animal kingdom.)

Worms such as *helminthes* in the intestines can engage the immune system's attention and prevent it from attacking the intestines. Despite the disgusting thought, worms can serve to prevent autoimmune activity, and in experiments, have resolved diseases such as Crohn's.



The bacteria, *lactococcus lactis*, ferments milk, consumes the lactose, and renders milk nutrients more bioavailable for adults who lose lactase enzyme production after weaning, thus allowing *fermented* animal milk products to serve humans nutritionally. Many nutritionists cite raw,



organic, fermented milk products (yogurt, kefir, etc.) to be superfoods with massive health benefits; and contrarily cite commercial (growth hormone, pesticides, force-fed with genetic-ally modified grain, estranged from their natural grass diet), pasteurized milk as very damaging to health. Just makes sense!

**Immunological diversity.** The bacterial life cycles upon which human life rests are chiefly found in the human intestines, but skin bacteria is cited as helping perpetuate the human species by helping choose the loves of our lives our mates via subliminal sense of smell<sup>2</sup>. Skin bacteria establish the cultural *mōrēs* against incest by controlling the pheromones that communicate with the brain about our potential mates' immune systems. Nature prefers immunological diversity as a species survival trait. People with similar immune systems limit diversity and can be more vulnerable to disease. [I'll take this moment to thank my bacteria for my wonderful wife! Way to go, guys!]

In our intestines, our bacterial microbiome (collection of more than a thousand species of teeming bacteria) is busy working for our survival and health. With a population of 100 trillion (last time I counted) compared to the 10 trillion cells that comprise our bodies, our microbiome outnumbers our cells 10:1. Certainly a humbling vote count about who's really running the show. From a DNA perspective, bacteria outnumber us 99:1, and therein is the awesome regulatory power of your intestinal microbiome's ability to influence your thoughts, food cravings, thyroid performance, and immune system.



### **Bidirectional Symbiosis.**

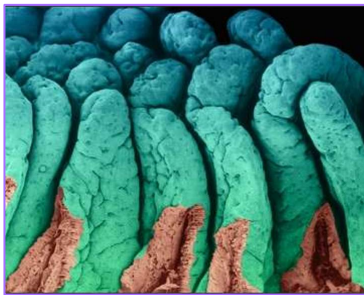
So gut bacteria and humans share the same prime directive, *adapt to survive*. The body and bacteria work together for mutual self-interests. Bacteria establish a neural network and leverage their ecosystem to actually program the brain and stress response<sup>3</sup>. The mi-

crobiome can cause the brain, for better or worse, to experience states of increased boldness, anxiety, calm, increased rate of learning, enhanced memory and various moods depending upon the ratio of beneficial bacteria to pathogens. Conversely, the brain can alter the microbiome via hormones, immune activity, and neurotransmitters such as serotonin, dopamine, acetylcholine, melatonin, cortisol, and norepinephrine that impact the activities of the colonies.

**So if you want to be smarter, make your intestinal microbiome smarter with the right foods (fibers, organic whole foods) and probiotic superiority!**

**Two Nerve Systems Enteric & Central.** The two nervous systems influence and alter each other's processes with stress being detrimental to both. Immune signaling molecules (inflammatory cytokines) produced in the intestines directly affect the brain and engender moods such as anxiety and depression. So it may actually be bacteria, singin' the blues.

Thus human beings have two brains – the fatty matter between the ears, and the gut-based enteric nervous system comprised of a hundred million neurons. These two brains are in constant cahoots via both the vagus nerve and messenger molecules to discuss how to adapt and survive the hostile, capricious external environment.



**Celiac & Leaky Gut.** The latest scientific research establishes a new perspective about self-destiny and proves *the gut/brain connection* that natural health practitioners have been advocating for over 30 years. When the modulating molecule, *zonulin*, and/or chronic inflammation, opens the

intestines' *tight junctions*, large molecules and microbes invade the body triggering an increased immunological response. This is part of celiac



disease. Zonulin also loosens the blood/brain barrier allowing toxins such as mercury from dental fillings and vaccinations (if methylized by intestinal bacteria turn into one of the most toxic substances on earth), and pesticides in foods, to enter the brain where they can cause cellular inflammation and neurotransmitter disruption. This is why forward-thinking medical practitioners include prebiotic (dietary fiber) and probiotic (bacterial cultures) therapy as a component of autism treatment and for the many cases of “never well since vaccination” syndromes.

Prebiotics include ingredients such as fructooligosaccharides, inulin, chicory, dandelion greens, raw asparagus, raw Jerusalem artichoke, raw garlic, guar fiber, unripe bananas, plantains, raw potato, and beans. Note: psyllium has fallen out of vogue because of the 2008 article in the *"Journal of Clinical Gastroenterology"* that states: “Treating the psyllium with synthetic forms of the gastric and pancreatic enzymes found in the digestive tract did allow the psyllium to be used as a food source for the bacteria, but even then psyllium only increased the levels of these bacteria in women who had abnormally low levels of probiotic bacteria.”

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#### **The Open Sesame of Leaky Gut Syndrome.**

Chronic inflammation of the small intestines causes degeneration in the intestinal tissue whereby the enterocytes (absorptive cells lining the intestines) fail and allow large, complex molecules to



pass into the bloodstream. Once these food molecules enter the bloodstream, the immune system's lymphocytes must attack them because they are foreign to the body. The body's use of lymphocytes to complete the digestion process is taxing to the immune system and can lead to chronic fatigue syndrome. Further, this constant immunological excitement is a significant cause of autoimmune processes, fatigue, malaise, and inflammatory processes that impact the hypothalamus and brain.

Gluten/gliadin reactions contribute to the intestinal derangement that opens the door to pathogens thus establishing the pathogen connection with leaky gut syndrome. So there is a self-perpetuating reactivity in the intestines based on the inflammatory immune-excitement regarding gluten and the immunological battle with pathogens. The result leaves the intestinal lining a scarred battlefield resulting in poor nutritional uptake, pain, suffering, and a host of chronic, degenerative and autoimmune diseases.

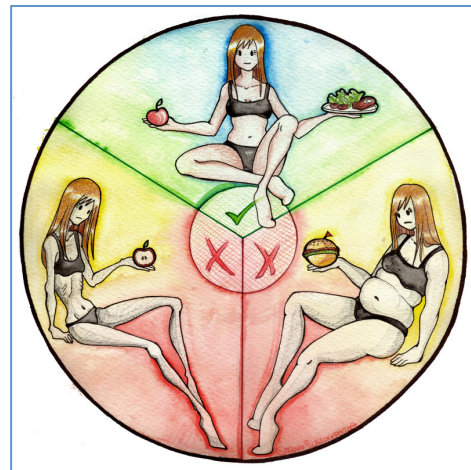
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The “zonulin story” is basically what is called *Leaky Gut Syndrome*. Natural health practitioners are familiar with leaky gut as a factor that physically alarms the immune system and launches chronic-inflammatory and autoimmune diseases. They cite candida, pathogens, allergenic food molecules in U.S. commercial hybridized wheat such as *gluten*, *glutenin*, and *gliadin* as causing inflammation that alters the intestinal ecology and opens the tight junctions. For years, natural health practitioners have addressed this with diet, enzymes, nutrients, probiotics, and a slew of antibacterial, antifungal “candida” programs with some success, but exciting new research points the way to even more effective therapeutics!

More information on leaky gut with new, practical insights and the latest research are featured in the fascinating interview/article: *Leaky Gut: A New View of a Prime Health Disturbance* available at [www.appleadaypress.com](http://www.appleadaypress.com)

**Astounding Gut Instinct.** Even though the natural health model pioneered the leaky gut theory (now medical fact), that concept is “kindergarten material” in light of the latest microbiome research. Here are some emerging facts and perspectives:

- It’s not so much “you are what you eat” it’s “you are what your bacteria eat” that sets the nutritional standard for your body’s life processes. Feeding the ‘good guys’ brings a more vibrant health; feeding ‘bad guys’ causes inflammation throughout the body that disrupts hormones and leads to disease. [Bad guys like refined sugar.]



- Your microbiome is unique to your genetics<sup>4</sup>. Yours is a personal, biochemically-individual microbiome, whose integrity is linked to your optimal health. Your genetics adapt to certain foods that feed the bacteria and help set the *terrain* for certain species to thrive and others to fail. It’s teamwork. Terrain is the “soil” from which your health grows.

- Science once thought that your intestines were sterile (free of bacteria) while in the womb, but recent research countermands that. Your intestines are not sterile at birth (Nature provides a few probiotic species (bifido bacteria) according to the very latest research), but still, your microbiome is your mother’s legacy to you. It was “seeded” for the duration of your life by your passage through the birth canal and from nursing (colostrum and breast milk). Your skin microbiome was seeded during vaginal birth. There are over 1200 bacterial species that can comprise your biome<sup>5</sup>.

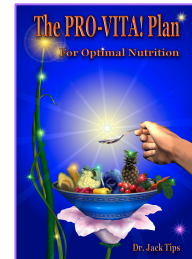


Researchers have counted more than 700 species of beneficial bacteria in human breast milk. Just as soil microflora is easily influenced by environmental and other factors, the study also found that the composition of breast milk microflora is influenced by the mother's weight, as well as her method of delivery.

*“Milk from obese mothers tended to contain a different and less diverse bacterial community compared with milk from normal-weight mothers. Milk samples from elective, but not from non-elective, mothers who underwent cesarean delivery contained a different bacterial community than did milk samples from individuals giving birth by vaginal delivery, suggesting that it is not the operation per se but rather the absence of physiological stress or hormonal signals that could influence the microbial transmission process to milk.”*

Research has proven that breastfed babies develop entirely different gut flora compared to bottle-fed babies. **Infant formula is not a healthy replacement to breast milk**, for a number of reasons, as it cannot duplicate the diverse microbial species found in breast milk, and therefore leads to altered gut flora.

**Resource:** For a natural health recipe for infant formula (important for mothers who cannot breast feed), see the nutritional milestone book, *The Pro-Vita! Plan For Optimal Nutrition* available at [www.appleadaypress.com](http://www.appleadaypress.com)



Breast milk, but not formula, appears to promote a healthy colonization of beneficial biofilms. These biofilms are essentially thin, sticky bacterial domes that adhere to the intestinal wall to block out pathogens and infectious agents. Breast fed babies experience greatly reduced infections as well as a lowered risk of developing allergies, type 1 diabetes, multiple sclerosis and other diseases, once again reaffirming the importance of nourishing and supporting the microbiome as foundational to health.

- Antibiotics kill and/or alter your microbiome. Replacement probiotics can only aspire to being second-best because they are not *your* personal strains. They can displace detrimental colonies and set up more beneficial colonies, so probiotics (supplements and foods such as raw, organic, fermented vegetables) are important. I call them “peacekeepers” as they help reduce pathogens and maintain the peace while a new relation is established with your key players: brain, genetics, food, immune system, and indigenous species.



- Your microbiome can control your thoughts, feelings, and food cravings<sup>6</sup>. [Might be grounds for a new ‘Twinkie’ defense in criminal court! “Yes, Your Honor, my microbiome told me to pull the trigger.”]
- Your microbiome has a direct link to the level of autoimmune activity against your thyroid<sup>7</sup>, thus the gut/thyroid link of thyroid dysfunctions. For this reason, people wanting to correct and restore their thyroid’s normal function often first improve their microbiome. More information on a model to reverse autoimmune processes (counter to popular belief that it can’t be done – but *au contraire!*), improving thyroid performance is rapidly emerging.
- Your microbiome is your first-line immunological defense against pathogens (IgA antibodies) and helps establish the immune system’s *set point* of inflammation throughout your body. [More on the “Set Point” is in the article, “Your Intestinal Microbiome – A Marriage of Microbes & Human Functionality” at [www.appleadaypress.com](http://www.appleadaypress.com)] Even low-level inflammation in the small intestines creates a higher inflammatory “set point” of immune activity and is linked with allergies and cell membrane inflammation that *Time Magazine* labeled “*The Secret Killer*,” causing Alzheimer’s and heart disease.



- Your microbiome directly influences glucose metabolism (blood sugar) and thus is linked to insulin-resistance diseases – diabetes<sup>8</sup>, obesity<sup>9</sup>, polycystic ovaries, and heart disease<sup>10</sup>. Some bacterial species (fermicutes) are super sugar makers and can drive sugar into the bloodstream with amazing efficiency, thus contribute to glucose issues.
- The intestinal microbiome has a profound influence over health. It is directly related to your hormone balance including the brains’ *leptin* (hormone of satiety) receptors that play a huge factor in appetite and the storage of fat – thus your bacteria predispose your weight<sup>11</sup>.

This 21<sup>st</sup> Century research raises questions about the dangers of genetically modified (GM) food. With 85% of the corn consumed in the USA being either Bt-Corn (*Bacillus thuringiensis* modified) or “RoundUp™ Ready. In Bt-Corn the bacteria gene is spliced into the corn to create more pesticide molecules in the corn itself, and the



fact that Bt toxin was found in the blood of 93% of pregnant women at the Sherbrooke University Hospital, suspicions suggest that the human microbiome is acquiring the Bt genes and producing pesticides inside

our bodies<sup>12</sup>. In RoundUp Ready corn, the amount of the dangerous pesticide, glyphosate, is greatly increased and is now turning up in newborn infant's bodies. Pesticides cause inflammation and are a root cause of chronic-degenerative and autoimmune disease. This is why purchasing and growing your own organic food is critically important to your health.

**Intestinal bacteria talk to your brain via the enteric hot line!** The varied influences from the bacteria colonies provide messages to the body via their presence as well as their excreted metabolites. The enterocyte cells that form the gastro-intestinal tract lining receive the bacteria's chemical messengers and communicate with the body via the enteric nervous system. Thus the collective bacterial presence in the intestines "talks" directly to the brain and this is part of the system called *innate intelligence*.

Recent research shows that signals from the bacteria affect the way the body epigenetically expresses information from the human genome (chromosomes) about how to live in either health or disease. Simplistically, bacterial messages instruct our cells' RNA transcriptional processes (how our genes make the proteins that tell our cells what to do)



to elicit "peace and health," or they transcribe disease processes that create symptoms. So in the very heart of cellular life, the microbiome has a voice in our life experiences.

**21<sup>st</sup> Century Nutritional Solutions.** Clinicians and people who work holistically with nutrition are excited about this deeply foundational information because it helps the body correct a myriad health issues itself. In today's clinical practices, clinicians use soluble and insoluble fiber supplements as food for the microflora because food-fibers dictate what colonies flourish or decline<sup>13</sup>.

**Opinion-Fiber:** The very SAD (Standard American Diet) is terribly depleted in fiber due to refining and fast foods, and supplementation of fiber often has profound benefits for people's health because it: 1) feeds the beneficial bacterial colonies to thrive and contribute health, 2) helps detoxify the body by absorbing the heavy metals that enter the small intestines via the gall bladder, 3) help balance cholesterol and glucose metabolism.

Note: if you've tried fiber and it doesn't agree with you (bloating, constipation/diarrhea), you may have a condition called SIBO (Small Intestinal Bacterial Overgrowth). See the article: *Your Intestinal Microbiome—A Marriage of Microbes & Human Functionality* at [www.appleadaypress.com](http://www.appleadaypress.com) for information and a method to test yourself.

Whole food probiotics (raw, fermented, organic vegetables) are mandatory. No supplement can be superior to food for the human body human adaptability and survival is predicated on bioenergetic and biochemical responses to Nature's nutrients. Clinicians advise patients to make or purchase raw, organic, fermented vegetables beets, cabbage (sauerkraut), carrots, celery, pickles and use a couple of tablespoons daily which contain massive more probiotics than supplements.

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**Key Resource:** How to make your own fermented foods, bone broths, and digestible ancient grains.

**Sarica Cernohous, author The Funky Kitchen**

<https://www.secureinfossl.com/affProgram/The-Secrets-of-The-Funky-Kitchen-1.20.15/88364>

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Probiotic supplement manufacturers and companies marketing probiotic-rich beverages are improving the availability of health-promoting strains. Medical and Scientific research is proving the efficacy of herbs. Boswellia, echinacea, turmeric, cumin, bacopa, saffron, ashwagonda, basil, rosemary, parsley, sage, tarragon, thyme, cayenne, and many, many more are now proven to have powerful health-promoting effects through microbiome adaptation, messaging, and epigenetic expression attesting to the importance of having a wide variety of *non-irradiated herbs* and spices in the diet. This means that Science is proving the efficacy and power of herbs and herbal medicine demonstrating that foods and herbs are indeed the true medicines.

Note: purchase organic herbs and spices. Some companies irradiate spices with nuclear gamma radiation to kill bugs, or use an intense steam blast for the same reason. Organic spices will also avoid pesticides. Best option: grow your own.

## **The Step-By- Step Solution.**

Therapeutically, improving the microbiome naturally provides tremendous leverage over health processes and involves four distinct activities: 1) Eliminate some of the dysbiotic organisms (foods, spices, and herbal therapies) and thus open up some terrain-niches for re-colonization, 2) Stop leaky gut and repair the intestinal cells (again foods and herbs to the rescue), 3) Re-seed with



multitudes of numerous species, and 4) Reinforce the new colonies with continued fibers, foods and fermented foods.

These four steps can be implemented in various combinations according to the need of the individual. For example, Steps 2 and 3 are often combined and programs include: fibers; probiotics; nutrients to stop zonulin (leaky gut); fight inflammation; enzymatically clean up inflammatory gluten (from many grains as well as gluten-like molecules called Wheat Germ Agglutinin an excitotoxin), and casein (a protein in non-fermented milk products); and chelators that clean up chemicals, mycotoxins (molds, sporing microbes). The comprehensive programs have proven to work the best for the most people. Let's take a look at the four steps:

### • **STEP #1. Reduce increased pathogenic or dysbiotic microbes.**

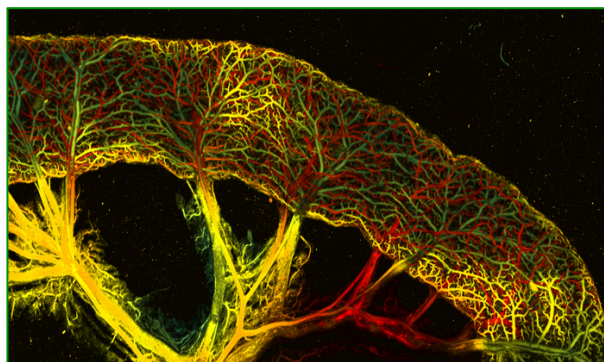


This includes reduction of good bacteria in the wrong place (e.g. SIBO - Small Intestinal Bacteria Overgrowth) such as bowel bacteria (fermenters) inhabiting the small intestines where they cause bloating. Tools employed: anti-pathogenic botanicals that address virus, bacteria, protozoa, fungi, spirochetes,

and mycotoxins (molds); enzymes that clean the terrain so pathogens are deprived of food; as well as and increased beneficial microbes from, raw, organic, fermented vegetables.

Here the concept of a “pathogen purge” is employed. Often lasting 15 to 60 days and featuring a firm array of botanical agents (Goldenseal, Lomatium, superactivated charcoal, Echinacea, Grapefruit Seed Extract, Oregano Oil, Neem Oil, Garlic, Olive Leaf, and anti-pathogenic enzymes to name a few.

This initial phase is critically important for people with SIBO as it helps



solve the cause of bloating, gas, cramping, loose stools and constipation (depending on the individual) and helps make room (niches) for the proper organisms to proliferate in that region. [Note: people with SIBO often need to avoid fibers and

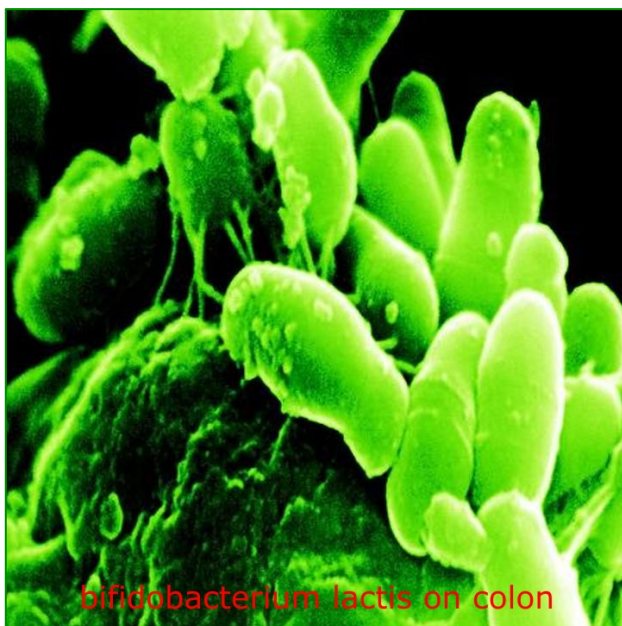


probiotics initially, and then re-introduce slowly; and most require Neuro-Activation support to re-engage the brain regarding the autonomic process of peristalsis.]

Dietary adjustment is also popular 4-day diets that have no carbohydrate (bone broth diet), or avoidance of all fruit, juices, grains and sugar. A wheat-free, gluten-free diet is a tremendous boost to many people, not just people suffering from celiac. Modern wheat has been hybridized so many times, it no longer even slightly resembles the wheat our ancestors ate the wheat to which our bodies have some degree of genetic/immunological adaptation. Ancient wheat had 8 chromosomes and today's wheat can have as many as 64 chromosomes with many of them being highly allergenic. Many of the hybridizations had nothing to do with health, but instead provided convenience for thrashing machines and chewiness for pizza crusts.

## • **STEP #2. Replenish the Terrain.**

Further support with probiotics from raw, organic, fermented vegetables; fiber blends that serve as *pre*biotics; and supportive nutrients such as butyrate, alanine, glutamine, and allantoin in combination with key Herbalomic<sup>®1</sup> botanicals (Lion's Mane Mushroom) and nutrients/enzymes that help close the tight junctions between the enterocytes provides state of the art nutrition for optimal clinical results.



*Bifidobacterium lactis* on colon

## • **STEP #3. Inoculate the Culture.**

Re-seeding an array of beneficial bacteria that can find their niches and not overly compete with each other is a necessary step to allow new colonies to develop biofilms and establish a healthy relationship with the body. An enhanced probiotic blend formula, enterically-coated for effective delivery, and counts of 2-500 billions of viable cultures has a

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<sup>1</sup> Herbalomics is © by Dr. Shayne Morris, an herbalomic expert and person who researches the epigenetic impact of botanicals on DNA expressions of health and disease.



proven track record. Cultures employed include: *Bifidobacterium bifidum*, *Lactobacillus casei*, *Lactobacillus paracasei*, *Bifidobacterium breve*, *Bifidobacterium longum*, *Lactobacillus acidophilus*, *Lactobacillus brevis*, *Lactobacillus plantarum*, *Lactobacillus rhamnosus*, and *Lactobacillus salivarius*. *Bacillus* and *Soil-Based Organisms* help with biodiversity. Human and bovine colostrum is also a valuable enhancement. The enteric coating means less attrition due to stomach acids, as well as delivery to the right places (lower G.I. tract). Upper G.I. tract support is best accomplished by prebiotic fibers and fermented foods.

Further, it is necessary to specifically address Leaky Gut and reestablish the intestinal integrity with nutrients such as allantoin, alanyl glutamine, whey peptides/colostrum (for those who tolerate dairy), and herbalomic® botanicals such as schizandra, black radish, aloe, berberine, lion's mane mushroom, and zinc. Specific nutrients that help tighten the *tight junctions* and restore the intestine's tissue integrity include the lion's mane mushroom.

The inclusion of more organic vegetables, spices, and herbs in the diet to stimulate beneficial epigenetic transcriptional processes is important to the program. Raw vegetables, cooked vegetables, resistant starches, fermented vegetables and herbs are what our microbiome, bacterial genetics, and personal epigenetic processes have used to adapt and survive over the past millennia. Supplemental probiotics and the inclusion of colony forming foods are necessary to replace what antibiotics, prescription drugs, chlorinated/fluoridated water, alcohol, and pesticides have deranged.

#### • Step #4: Reinforcement / Maintenance

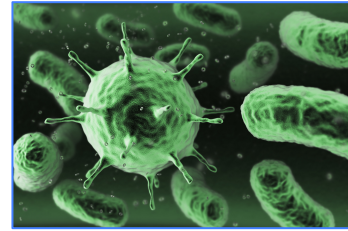


Critically important to the thorough re-seeding of the G.I. tract, the ending of leaky gut, and optimizing the microbiome's role in optimal health, it's important to maintain the new cultures after re-seeding. This means 1) feeding them and 2) replenishing their presence to ensure numeric superiority.

So after the hundreds of billions probiotic cultures introduced in Step 3, it's important to segue into a maintenance program for at least 30-days do the new cultures have time to fill niches, build intestine-protective biofilms, join the mucous layer's anaerobic, barrier colonies (bacteroides), and displace resistant pathogens.

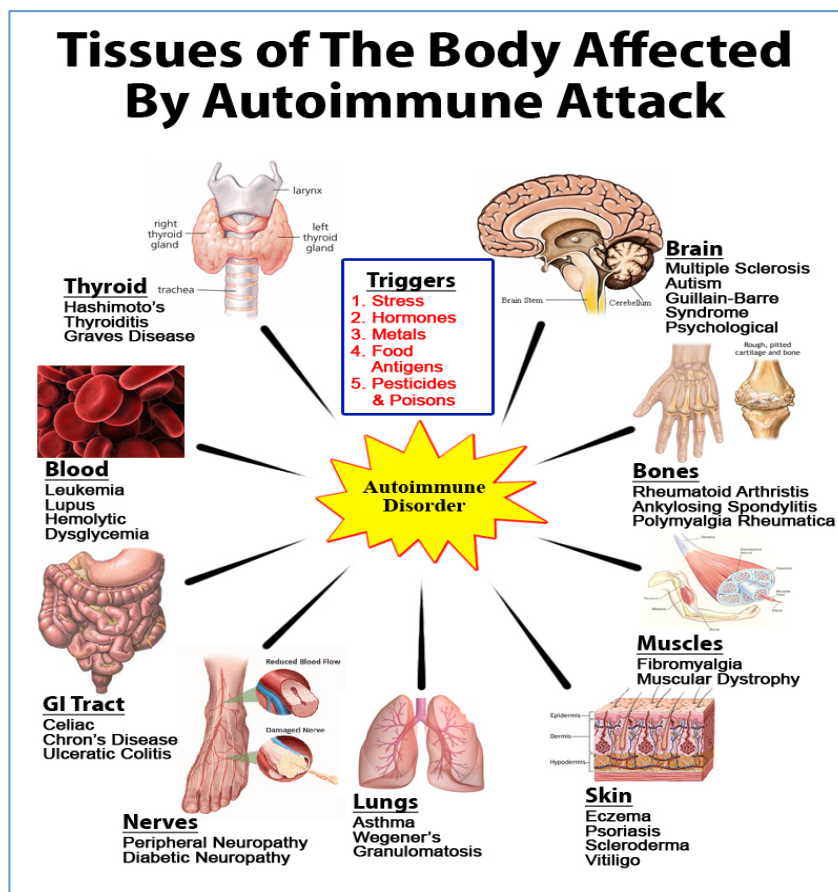
Thus many practitioners will have patients continue using fiber (plus it's

shown to help prevent colon cancer.) Excluding skin cancers, colorectal cancer is the third most common cancer diagnosed in both men and women in the United States. The American Cancer Society's estimates for the number of colorectal cancer cases in the United States for 2013 are: 102,480 new cases of colon cancer, and 40,340 new cases of rectal cancer. Overall, the lifetime risk of developing colorectal cancer is about 1 in 20 (5%). And virtually all of those grim statistics are preventable by correcting and maintaining a healthy microbiome.



As probiotic cultures create colonies and displace pathogenic microbes, there is attrition of their numbers, either by lack of food (thus fibers are part of the reinforcement process), or in hand to hand (flagella to flagella) combat. It's important to reinforce their numbers and presence, and thus bolster their colonization.

**Take action now.** Repair damages from the Standard American Diet (SAD), antibiotics, and stress. It is the first-line defense against acquiring auto-immune diseases. Here is a chart of conditions that start in the intestines with microbiome inflammation.



**For yourself, your family, and everyone!** Reestablishing a healthier microbiome is a critically important and necessary step on the path of optimal health. Failure to address the microbiome means that the 21<sup>st</sup> Century proclivity toward the silent killer inflammation continues unchecked, despite the best therapies. Neurological dysregulation means that the body become resistant to specific therapies (e.g. adrenal support that never seems to end). A healthy microbiome predisposes a healthy life.

*Thank you very much for sharing this time. Best wishes.* WellnessWiz Jack Tips (Ph.D., C.C.N.)

**About the Author** Dr. Jack Tips is a clinician[[www.wellnesswiz.com](http://www.wellnesswiz.com)], author of 16 books, and is a licensed clinical nutritionist, (New York), living in Austin, Texas. He is an avid proponent of intestinal microbiome support and trained over 100 doctors to implement the WellnessWiz PACT™ (Probiotic Advanced Colonization Technique). Known internationally for his insights on the body's innate cellular detoxification processes, thyroid health, and the intestinal microbiome, his insights and free&fee-based downloadable articles are posted at [www.AppleADayPress.com](http://www.AppleADayPress.com)

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