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Heart, Hope, Healing

Create a Healthy Microbiome to Heal and Energize

BY KARYN SHANKS MD | JANUARY 9, 2017



After decades of helping clients recover from persistent complex illness, I have come to view the gut as a key part of the solution to energy recovery. The gut and its inhabitants—the microbiome—are central to our health as the seat of our nutrition, immunity, detoxification, as well as important emotional wisdom—all critical drivers of our precious energy. Solving the riddle of persistent fatigue and illness involves many considerations about how to optimize the function of our complex bodies—there are usually many components to figure out.

Our miraculous microbiome.

It's utterly amazing how our mindsets have circled back from germs-are-bad thinking to germs-are-necessary-to-our-health-and-survival thinking. Germs—bacteria, viruses, yeasts, and parasites—are key players in the ecosystem that we inhabit. Turns out we live in much closer proximity than we previously thought—we inhabit bodies that are homes not only to ourselves, but to billions of microorganisms—microorganisms we need, who support us and

are vital to us, and who need us—for optimal health and survival.

We are our microbiome.

Our microbiome—the billions of microorganisms that live in our bodies with us, making their home in our gut, on our skin and surfaces with mucus membranes—comprise a greater proportion of cells than we can claim as our own, and they provide critical support for virtually all aspects of our body's functioning.

Every one of the bacteria residing in our gut are living systems with the genetics and dynamic communication molecules we'd expect from living beings. Each of them is an integral part our biological milieu, contributing to our genetic expression and profoundly influencing our function. Everything that makes us human is effected by the living microbiome within us—including our energy, our mood and feelings, and our minds.

Ways that a healthy microbiome influences our energy and health:

- Provides barrier protection at the outermost lining of the gut (the critical interface between the outside and inside worlds).
- Supports healthy gut function.
- Assists with detoxification and the breakdown of toxic wastes.
- Protects us from pathogens and foreign invaders.
- Protects us from toxins, irritants, and disease.
- Breaks down our food to provide us with enhanced nutrition—they digest complex carbohydrates in our diets and manufacture key nutrients like vitamins K, B12, niacin, and pyridoxine.
- Calibrates and controls our immune system, and reduces inflammation.
- Shares their genes to enhance our genetic expression.
- Influences our thoughts, mood, and behavior through interactions with our nervous systems.
- Controls our metabolism and body fat.
- Supports healthy sleep.

Our microbiome must be tended, cared for, and

protected.

The living beings inhabiting us require the same protection and nourishment that we do. They are sensitive organisms with complex metabolisms. In most cases, by tending to our own optimal protection and nourishment through self-care, our microbiome will thrive without our having to think about them specifically. If we become imbalanced—through illness, stress, or poor diets—so will our microbiome, with wide sweeping repercussion to our energy and health.

What is a Healthy Microbiome?

Healthy, or my favorite word—optimal—all relates back to function: how do the changes in our microbiome alter function and impact our health? After reviewing the list of attributes that a healthy microbiome has on our energy and health (above), science has made it clear that losing any of these key attributes of our microbiome will adversely effect our health. We need their diversity (large array of different species), optimal quantity, and the strength of particular species to support our health and prevent disease.

What factors lead to impairment of our gut microbiome?

- Poor diets, especially those high in processed grains, sugars, artificial ingredients, toxins, and low in plant sources of prebiotics.
- Antibiotics.
- Excesses of stress.
- Poor sleep habits.
- Obesity.
- Commercially raised meat.
- Gastrointestinal infections.
- Environmental toxins and irritants.

Functional problems associated with loss of a healthy microbiome:

- Increased levels of systemic inflammation, from gut to brain.
- Abnormalities in gut function—pain, bloating and gas, constipation, diarrhea, and reflux.

- Increased risk of inflammatory bowel disease.
- Impact of inflammation and microbial metabolic products on brain function—leading to problems with mood (depression and anxiety), behavior, executive function, and thinking.
- Detoxification impairment.
- Problems with nutrient availability and assimilation.
- Immune system problems, leading to greater illness.
- Increased risk of autoimmune disorders.
- Higher risk of environmental allergies and asthma.
- Loss of critical energy reserve.
- Decreased resilience and susceptibility to disease.

How to Create a Healthy Microbiome

It all starts at the beginning of life. When new infants are born vaginally, they are inoculated with the vaginal flora of their mothers, initiating the process of establishing a healthy microbiome. Breast milk furthers this process by providing precisely the types of sugars and nutrients that the fresh bacterial colonies need to grow and thrive. A healthy mom delivers optimal nutrition to her baby through the breast milk, providing just what the gut and the microbiome need to develop in healthy ways.

As we grow, the fundamentals of strong self-care nourish the microbiome—through good nutrition, sleep, movement, stress management, and avoidance of toxins and irritants.

The foundation of a vaginal birth, breast feeding, and healthy lifestyle are important, however, they are not always possible. There can be unavoidable slip-ups. It's important to know that there is still much we can do to ensure that babies develop a healthy microbiome and that we can reestablish ours at any time.

How to establish a healthy microbiome at the beginning of life:

- Provide a vaginal birth and breast feed for at least six months, if possible.
- Eat an optimal diet during breast feeding (see below).
- Provide an optimal diet to the growing child after breast feeding is complete.
- Avoid the use of antibiotics as much as possible, particularly in the first few years of life when the balance of organisms is stabilizing itself and the immune system is developing.

- Provide probiotics to compensate for baby's born by c-section or when breast feeding is not possible (see below for what to look for in a probiotic).
- Use fermented foods (see below).
- Live with pets, who are great sources of healthy microbial exposure.
- Avoid all toxins (household products, pesticides, poisons, plastics), which damage both our gut lining and the microbiome.
- Eat only organic food.
- Eat only pasture-raised animals and avoid all animals raised in a commercial setting, fed grains, hormones, or antibiotics.
- Avoid all sugar and process food products.

How to Protect and Optimize Your Microbiome to Improve Your Energy and Health

I like the analogy that Emeran Mayer, MD uses in his book, *The Mind-Gut Connection*: *“Consider your gut microbiome as a farm and your microbiota as your own personal farm animals, then decide what to feed them to optimize their diversity, stability, and health, and optimize production of beneficial signaling molecules that affect our brains. Would you feed them food items that you knew were loaded with potentially harmful chemicals or enriched with unhealthy additives?”*

- Eat a healthy diet: follow the guidelines for a real food, nutrient-dense, healthy diet as outlined in my [Liftoff Foundational Intensive Nutrition Food Plan](#). This will provide the nutrients the microorganisms need to thrive.
- Eat clean and organic: remove all toxins and irritants from your diet: this includes pesticides and plastics, non-food additives, sugar additives, including artificial sweeteners, and high-fructose-corn-syrup.
- Include fermented food options in your diet, such as sauerkraut, kim chi, and other fermented vegetables.
- Grow some of your own food—tending the soil leads to greater exposure to healthful microbes.
- Avoid excesses of cleanliness—no one needs to sterilize their home environments.
- Optimize your sleep and manage your stress well—our stress is toxic to our microbiome.
- Avoid antibiotics if possible—they don't discriminate between bad and good bacteria.
- Avoid all drugs that harm the gut lining (steroids and non-steroidal anti-inflammatory drugs such as Ibuprofen, Aleve, and others).
- Tend to all key aspects of self-care (see [the Nine Domains of Healing](#) overview of essential self-care).

How to Re-build Your Microbiome After Antibiotic Exposure

Thanks god for antibiotics when we're really sick with invasive bacterial infections! But there's a price to pay in the loss of both the volume and diversity of species within our microbiome, leading to loss of the many ways they support us. It is very common for people taking antibiotics to develop diarrhea, gas, and intestinal pain as the gut microbial balance is upset. This usually returns to normal once antibiotics are completed. In certain susceptible people, an episode of antibiotic therapy can set off a cascade of symptoms and dysfunction that persists, requiring more radical intervention. Fortunately there are strategies that can help rebuild the microbiome and maintain its health over time.

- Take probiotics as soon as you start antibiotics or increase your current probiotic dose.
- Do not take probiotics within two hours of an antibiotic dose. I have people take their probiotics at bedtime, and dose their antibiotics during the day. This gives them a probiotic resuscitation overnight.
- Use lactobacilli, bifidobacteria, and saccharomyces strains and look for multi-strain formulas (I use Metagenics Ultraflora Spectrum).
- Shoot for a total probiotic dose of over 100 billion organisms.
- Continue the regimen for two weeks past the completion of antibiotics, though you can resume your normal probiotic dosing schedule.
- After two weeks, take a minimum of 60 billion organisms of the same species each day.
- Continue to feed your re-developing microbiome well (as above).
- Include pre-biotic foods in your daily food plan: most starchy plants—especially cruciferous veggies, berries, tart cherries, bananas (not overly ripe), and asparagus.

Further Reading:

Gerard Mullin, MD. *The Gut Balance Revolution*. 2015, Rodale.

Ed Young. *I Contain Multitudes: the microbes within us and a grander view of life*. 2016, HarperCollins.

Emeran Mayer, MD. *The Mind-Gut Connection: how the hidden conversation within our bodies impacts our mood, our choices, and our overall health*. 2016, HarperCollins.

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Karyn Shanks, MD, is a physician who lives and practices in Iowa City. Her work is inspired by the science of Functional Medicine, body-mind principles, and wisdom gleaned from the transformational journeys of thousands of clients over her twenty-five-year career. Her work honors each individual and the power of their stories, their inner wisdom, and innate healing potential. She believes that the bones of healing are in what we do for ourselves. She is the author of *Liftoff*, a manual of energy recovery and healing through essential self-care practices.

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