



Holistic practitioners are often sought to evaluate and treat various infectious diseases. These include chronic Lyme, Candida/yeast, SIBO (Small Intestinal Bowel Overgrowth), Epstein Barr virus and parasites such as Blastocystis. Cycles of improvement and illness supports the hypothesis that there is an organism lurking somewhere in the gut, sinuses, brain, gallbladder, sexual organs, skin, scalp, thyroid gland, or virtually any place in the body.

Depending upon the experience of the practitioner and the patient, sometimes all symptoms and experiences are explained by a single critter. This belief can take on the fervor of a religion or political party. However, usually there is a complex relationship between our ecology, our gut and our immune system, with more than one agent involved.

What Is an Infection?

“Infection”, by definition, means that there is an alteration of physiology for the worse. Ultimately, infections are not “caused” by an organism, because if that was true we all would be infected all the time. Therefore, an infection actually represents a faltering of the immune system. Which organism is able to penetrate our defense is dependent upon numerous factors. In fact, when a particular critter is found, such as in a sinus or bladder infection, what is not seen is the team of other players that have enabled that one to get over the wall of defense. Killing that winner with antibiotics or other agents might give the immune system a chance to mount its defense. However, sometimes the ensuing ecological imbalance is setting the stage for the next invasion by the same or different creature.

Class	Examples
Parasites	Trichomonas, Amoebiasis
Fungi/Yeasts	Candida,
Bacteria	Strep, Staph, E Coli, H. Pylori, Tuberculosis, Clostridia
Spirochetes	Lyme, Syphilis
Chlamydia	Chlamydia
Virus	Herpes, Polio, Mumps, Measles, Smallpox, Flu

Stealth Infections, Quorums and Biofilms

Certain organisms, such as Lyme, can change their shape or shed their outer coat ("cell wall deficient"), rendering them invisible to the immune system. Such “stealth” infections invite others. When a single organism is coming over the wall, what we don't see is that it's standing on the shoulders of others. This cooperation between organisms can explain some chronic and recurrent infections and related inflammatory and gut-brain conditions.

This is in part why it is common to get a bacterial infection following a virus, or a yeast infection following bacteria, especially if certain antibiotics are used. Lyme is notorious for “co-infections” with other organisms.

All cells export molecules into their environment for defense and communication with other cells of the same and different species. Some share tricks with each other that can inactivate the immune system or act as a decoy.

Certain molecules, when detected by cells of the same or other species can signal a “quorum” or “critical mass” of individuals. In response, these organisms, working in a community, build a “biofilm”, a structure similar to a coral reef, multi-layered blanket, or shopping mall. This structure defends and supports its inhabitants. Biofilms can make an organism such as Candida up to 1000 times more resistant to an antibiotic or the immune system. On the other hand, combining antibiotics with anti-biofilm agents can greatly increase the potency of such remedies. Biofilms exist on teeth, in the stomach lining, in the gut, bladder, sexual organs, sinuses, and other places. They often occur when there is an interface of two surfaces, including those caused

by the growing list of implants (metal, ceramic, mesh).

Intracellular and Extracellular Invaders

Organisms such as yeasts and parasites are as large as our human cells, so they remain outside our cells. Other agents such as viruses can be 100 times smaller than our cells and work by invading the cell. They interlace their biologic molecules into the cell, disarming the cell's defense. They then use the cell's own machinery to replicate and spread to other cells. There is likely coordination between the external and internal invasions, as we see when Shingles activates after an infection or other stressor.

Microbiome, Dysbiosis & Leaky Gut

The totality of organisms living in us and on us is called the “microbiome”. Bacteria, viruses, yeasts and even parasites are all part of this community. Up to 60% of our immune cells reside in our intestines, where we maintain a farm of organisms that teach and support our immune system when working well. While we are made of approximately 10 trillion cells, we host 100 trillion. In other words, on a cellular basis, we are only 10%! Up to 67% of the DNA floating in our blood is of viral origin, suggesting an important role in defense and health. An imbalanced ecology, called "dysbiosis", damages our gut lining, called "leaky gut syndrome", which then confuses and/or suppresses the immune system.

Evaluation and Treatment

When an “infection” manifests, it is not a beginning, it is the last straw in a series of events that can go back days, weeks, years, decades, or even precede our conception. The hope that we can accurately evaluate our ecology when faced with a chronic illness is unlikely. Our technology can only detect two things--the organisms themselves, or our body's response to those organisms. However, if they can go stealth, hide in a biofilm, and/or suppress the immune system, such testing will result in a “false negative”. This is when holistic medicine is helpful.

An ecological approach is often effective and requires the re-balancing of a dysfunctional biome community. Core measures include the use of probiotics, pre-biotics, and enhancing lifestyle factors such as good sleep, movement, love and stress reduction. Additional indirect means include foods, supplements and reductions or eliminations of toxins including foods, heavy metals, fluoride and bromide, GMO's, plastics, pesticides and electro-magnetic radiation.

IMPORTANT NOTES:

1. **This educational material may not be used to influence medical care without supervision by a licensed practitioner.**
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3. Dr. Cheikin's website has related articles such as "Infectious Organized Crime", "Leaky Gut", "Stealth Infections" and others.

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