

## The real dirt on immune health

By Dr. Nicholas Larkins

It's easy to think of bacteria as bad. We grow up learning to wash our hands, to throw away food that's fallen on the floor, and to load up on antibacterial wipes. Yet exposure to bugs is far from bad, in fact, some exposure is vital to immune health.

Like a vaccine, bacteria in the body challenge the immune system and teach it how to deal with germs. And while we've all been schooled that a clean environment is a healthy environment, an environment that's too sterile could mean the body won't learn how to defend itself properly. "Continuous exposure to germs every day of your healthy life is what keeps you strong," argues immunologist Mary Ruebush, Ph.D. and author of *Why Dirt is Good*. "It keeps your immune cells, which are there to protect you, multiplying and reproducing." It's also how your immune cells educate themselves.

And immune cells need all the education they can get. They're exposed to a constant array of foreign microbes and molecules, including an infinite variety of disease-causing agents, and they need to sort friend from foe. A healthy immune system is **not** one that's never been exposed to disease, it's one that has learned to protect us from infectious microbes while leaving peaceable microbes alone.

### Innate immunity

To understand how the immune system fights off invaders, it helps to break the immune system into two levels of functioning: innate and adaptive. The innate immune system is composed of cells that seek out, ingest, and destroy the microbes that could do us harm. This part of the immune system is on-guard 24-7, monitoring what's going in, what's going on, and what's going out—all of the time. When it encounters a pathogen, it rallies more resources, rapidly manufacturing new cells to help in the fight. Some of these cells are trained to identify the invader, some are trained to remove the invader, and other cells provide fuel for the fight. All three of these functions are vital to a speedy and strong immune response. But how does the immune system know which of the trillions of microbes it needs to defend against? This is where the second level of immune functioning, the adaptive level, comes into play.

### Adaptive immunity

Speed is of the essence when it comes to microbes. Bacteria, viruses, and germs multiply at rate that's difficult to imagine. That's why the body has a means for "remembering" microbes that it's fought in the past so that it can alert the body quickly should that microbe return. This immune memory function is passed partially through lactoferrin. Just as a mother passes her immunity along to her newborn in the baby's first milk, so certain molecules in lactoferrin preserve immune memory and pass that immune knowledge along to naïve immune cells.

### Strengthening your defenses

Instead of worrying about all the microbes moving throughout the body, a better plan is to nourish and strengthen the body's natural defenses. That way, when the immune system detects a bad guy in the midst of all that friendly bacteria, it has the means to eliminate the threat. I designed XIGO immune health supplements to provide nutritional support for all three of the immune systems primary functions: it includes beta glucans that alert the immune system quickly of possible threats; it includes L-glutamine that supplies the fuel for when the body does need to fight off a health threat; and it includes lactoferrin that supports the body's immune memory function.

As we continue to learn about the immune system, we know we don't yet have all the answers, but we can say that it makes good clinical sense to provide our bodies with the nutrients essential to detecting invaders and defending against them.