

Essential Guide to Probiotics

If you have any of the following health complaints: digestive issues, irregular bowel movements, frequent cold/flu, challenges with weight management, diabetes, increased cancer risk or anxiety/depression, YOU need to have thorough understanding about how probiotics can help improve your health and reduce disease risk!

Just about everyone has heard of “probiotics” and it is also common knowledge they are “good for you”. But What exactly ARE they? Can you get It from foods? Do you HAVE To supplement? How do you know if the probiotic is right for you? These are some commonly asked questions I get from patients. The purpose of this guide is to help you gain a clear understanding on probiotics.

The Basics

The human body contains microorganisms that have been with us for over 10,000 years. These microorganisms (bacteria and yeasts) are beneficial for human health (they are not pathogenic, so they do NOT cause disease). Collectively, they are referred to as our microbiome.

The human body contains 10x more microorganisms than our own cells. In other words, for every ONE human cell, there are 10 bacterial/fungal cells residing on/inside of our bodies. Since they are so much smaller than our cells, they only take up about 1-3% of our total body weight; for a person who weighs 150 pounds, 1.5-4.5LB are these organisms.

Most of these organisms reside inside our digestive tract, but they also live in other areas such as the skin surface, nasal cavities and vaginal canal. These microorganisms colonize our body from birth. When babies are born, as they pass through the mother’s birth canal, the natural vaginal flora serves as the 1st colonizers. Later, as the baby comes into contact with the mother’s skin, and breast feed, they will be introduced to more species of bacteria.

Later in life, as toddlers are introduced to foods such as bread, yogurts, fermented vegetables and cheese, they will continue to get more of the bacteria beneficial for their health. Even exposure to dirt and the environment, provides small amounts of microorganisms.

The Importance of a Healthy Microbiome

1. A healthy microbiome helps to prevent infections. The external world is anything but sterile, and is full of many pathogenic microorganisms (bacteria, fungi and viruses) that can make us sick. When we have a healthy microbiome, their physical presence takes space, thus preventing pathogenic organisms from being able to grow (especially those found on our skin, our nasal cavity). They can also keep the environment hostile to pathogens. The microbiome in the human vaginal canal keeps the pH acidic which makes it unfriendly to pathogenic bacteria.
2. Some of these microorganisms are needed for digestion. They break down some of the fibre that our own digestive system is unable to.
3. The metabolic by-products from these microorganisms serve beneficial effects on human health. These metabolic “waste” include nutrients that we need like thiamine (vitamin B1), folate, biotin, riboflavin (vitamin B2), and pantothenic acid (vitamin B5) and vitamin K. It can include: enzymes, amino acids, short chain fatty acids, various polysaccharides and cell wall fragments. These compounds have an effect on our immune system, it can have an anti-inflammatory effect, alter our cholesterol metabolism and influence blood sugar regulation.
4. Our microbiome also provides important training to our immune system. A diverse ecosystem leads to reduced incidences of allergies and autoimmune disease.

The Origins of Probiotics

It is not uncommon to confuse probiotics and the microbiome. The microbiome is comprised of microorganisms naturally found in the human body. Probiotics on the other hand, are organisms that have been isolated from other sources such as dairy products (yogurt and cheese) and fermented foods like sauerkraut and kimchi. There are probiotics made from organisms isolated from human breast milk and/or intestinal tract also. The bacteria from probiotic supplementation don't become permanent residents of the human microbiome. Instead, their presence and metabolic activity will help create a more favourable environment for the natural microorganisms already found in our flora to flourish.



Probiotics, Prebiotics and Postbiotics

Probiotics are the microorganisms themselves, while PREbiotics are the food sources for these microorganisms such as fibres and starches from the foods that we eat. Prebiotics are found in fruits, veggies and grains. Without a healthy dose of prebiotics (ie. fibres and resistant starches from our diet), the good micro-organism populations would not thrive.

"Postbiotics" are seen more and more frequently. It refers to the metabolites created by the friendly microorganisms, which are just as important for human health as the probiotics themselves.

Probiotic Supplementation

Research shows that the benefit of probiotics last for as long as it is being taken. However, this is not to say that everyone must take it indefinitely. The purpose of probiotics is to correct an imbalance of the flora present in the body (i.e. to help replenish the good bacteria lost to antibiotic use), or to help treat the health condition at hand (be it eczema or irregular bowel movements).

For long term-health benefits, it is crucial that other factors influencing the imbalance of the natural microbiome are addressed. It is important to adopt a diet that offers adequate fibre, and with minimal triggers for those with known food intolerances/allergies. It is also essential to have a regular and healthy eating schedule, as we know that our flora varies with our circadian rhythm. Better health habits and dietary sources of probiotics that promote healthy microbiome in the body will ensure that once probiotic supplementation stops, you will be able to continue with good overall health.

Did You Know?

There are many species of probiotics available to support not just bowel health but whole body health too. Most people are aware of only *Lactobacillus Acidophilus* and *Bifidobacterium* as probiotics, but other microorganisms like:

Lactobacillus rhamnosus,
Streptococcus thermophilus,
Saccharomyces boulardii, *Bacillus subtilis*, *Akermansia* and even healthy strains of *E. coli* can have incredible impacts on bowel, urinary tract, mental health, weight management, and more.

Book a discovery call now to see how we can help



9131 Keele Street - A1
Vaughan, ON L4K 0G7
Phone: 905-508-4498

Email: info@marsdencentre.com
Website: www.marsdencentre.com

How Do I Know What Probiotic Is Right for Me?

The benefits of probiotics are strain-specific. We can determine which probiotic supplement would be most appropriate for a health concern based on symptoms; however, there are instances where objective testing is necessary.

Lab testing regarding microbiome health typically use stool samples. The stool sample can be cultured or analyzed for genetic profile of the microorganisms present. Stool cultures are frequently used and can be a relatively inexpensive method; however they are not without limitations. Stool cultures can result in false negative findings if a particular microorganism is present in very small quantities and therefore can be missed. There are also many microorganisms that cannot be cultured.

At The Marsden Centre we frequently use an alternative to stool cultures, called GI MAP Testing. GI MAP testing also requires a stool sample. Instead of culturing the sample, this test extracts the DNA material from the sample and uses the genetic sequences found to determine what microorganisms are present. GI MAP testing will be able to find the presence of all microorganisms regardless of the quantity.

For those individuals who have had health issues (especially digestive system complaints) that don't seem to resolve despite probiotic supplementation and other interventions, it may be worthwhile consulting with a healthcare provider to see if GI MAP testing would be of benefit.