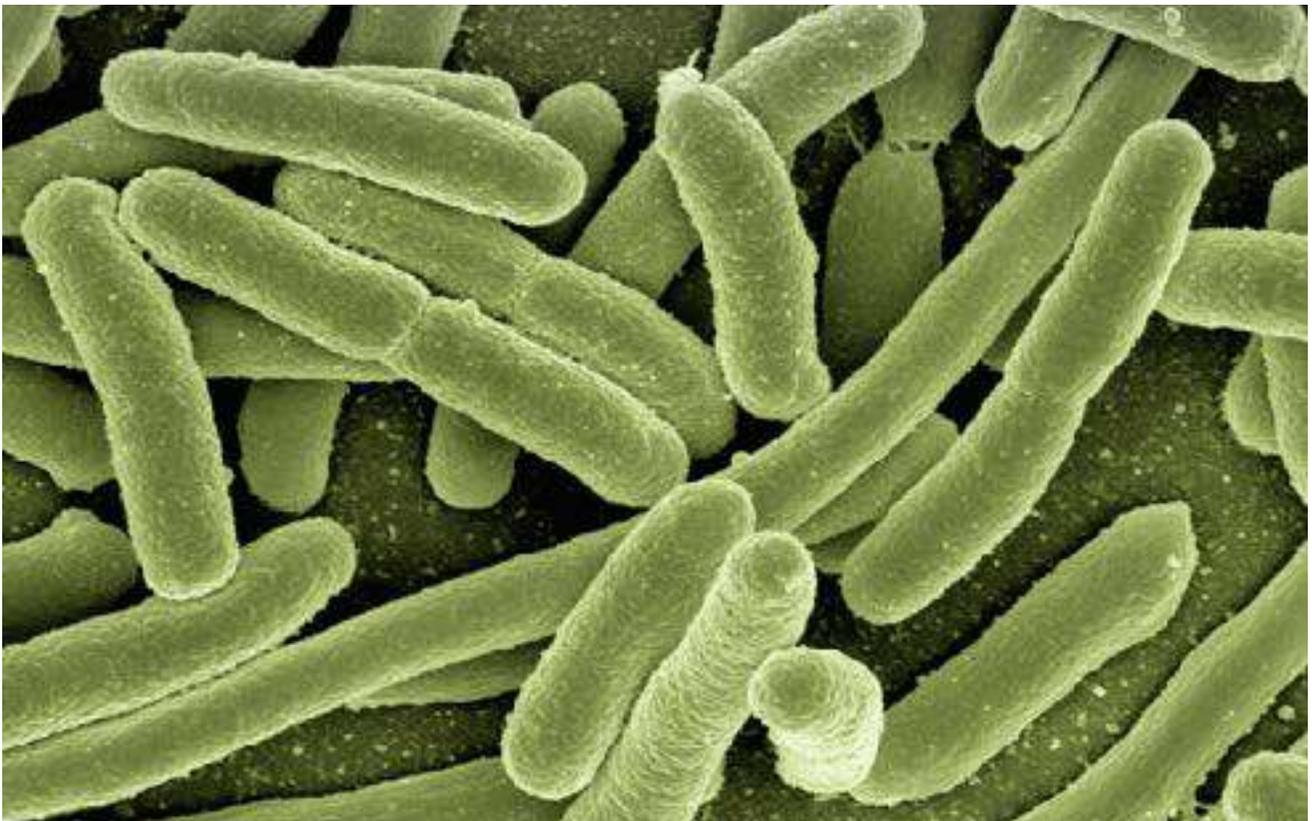

Probiotics: Everything You Need To Know

What are Probiotics, How Probiotics Help, How They Work And How To Use Them



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1st Edition

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Introduction

Probiotics are microorganisms that provide benefit to their host. You have likely heard that yoghurt contains probiotics. But there is much more to the world of these bacteria than just yoghurt. For example, most people have around a thousand different species occupying their gut: yoghurt may contain five to ten species.

There is much confusion and dogma surrounding probiotics. Many of the new clients that come to my practice purchase probiotics with very little understanding about what they are putting in their mouths, how they work, what conditions they can help and to use them effectively

In this ebook, I want to shed some unbiased light on the subject of probiotics. We will be discussing:

1. What are the four main types of probiotics and their benefits
2. How Probiotics work
3. How to use probiotics

What are Probiotics

Types and Benefits

There are four main types of probiotics including:

1. Lactic Acid Producers
2. Non-Lactic Acid Producers
3. Fungal (Yeast) Probiotics
4. Ecoli Probiotics

1. Lactic Acid Producers

Many lactic acid producing bacteria belong to the Lactobacillus and Bifidobacterium families of probiotics. Within these families, there are some probiotic species that you may have heard of before including Lactobacillus acidophilus or Bifidobacterium infantis.

Lactobacillus Probiotics

Most Lactobacillus probiotics are transient, which means they pass through the gut. There are over one hundred different species of lactobacillus bacteria.

You do not usually find Lactobacillus acidophilus in the humans. While other, species of bacteria, like Lactobacillus gasseri and reuteri, are typical residents.

Some lactobacillus bacteria are known as homo-fermentative while others are known as hetero-fermentative.

Fermentative means to break down one thing and produce something else.

Homo means single, while hetero means many.

So, homo-fermentative bacteria produce lactic acid, while hetero-fermentative bacteria produce lactic acid and gases, like carbon dioxide, hydrogen and methane.

People with Small Intestinal Bacterial Overgrowth often report symptoms of bloating and gas. These symptoms may be because they have an overgrowth of hetero-fermentative bacteria.

Bifidobacterium Probiotics

Bifidobacterium bacteria typically reside in the small intestine. There are over thirty species of bifidobacteria.

Bifidobacteria are established in the gut during breastfeeding.

Bifidobacterium probiotics have various health benefits, from playing a role in the function the lining of the intestines to protecting against colon cancer.

The Lactobacillus and Bifidobacterium species are the most well-researched probiotics. These species have been shown to have much essential health benefits for people with Irritable Bowel Syndrome (IBS) and SIBO.

2. Non-Lactic Acid Producers

The most well known non-lactic producing probiotics are the Bacillus family of bacteria.

These probiotics are also known as soil-based or spore-forming bacteria. These names are because you typically find this family of bacteria in soil and water, and often spend part of their life cycle in a dormant “spore-state”.

Bacillus bacteria may be an essential type of probiotic to include in a supplemental program because they may help replace what we have been missing due to our reduced contact with soil and the natural environment.

Many Bacillus species show health benefits, including Bacillus cogulans and subtilis. These probiotic has been shown to improve and balance the microbiota.

Some species of bacilli bacteria are harmful, so it is essential to use well-labelled and tested strains.

These types of probiotics are contraindicated in critically ill-patients but are otherwise safe.

3. Fungal (Yeast) Probiotics

The well known fungal probiotic is *Saccharomyces Boulardii* (Sac B).

Sac B is not a regular part of the human microbiota, meaning that it is transient and does not colonise our gut.

Sac B also does not appear to be affected by stomach acid or bile.

Sac B has been shown to be efficacious in the treatment of diarrhea, *C.difficile* infection, to prevent relapse of Crohn's Disease, and as a treatment of Inflammatory Bowel Disease.

Sac B has anti-fungal and biofilm disruptor properties. Biofilms are the protective coating that surrounds bacteria, fungus and parasites. These properties mean that Sac B can help fungal or candida overgrowths in the small intestine.

Sac B has been shown to be effective in treating digestive parasites such as entamoebas, giardia and *balstocystis hominis*. When you coadminister antibiotics with Sac B, it increases treatment outcome of treatment compared to antibiotics alone.

Sac B has also been shown to be as effective as the antibiotic metroidazole (Flagyl) in treating *Blastocystis hominis*, which is a potential gut pathogen.

Sac B has been shown to be useful in the treatment of *H.Pylori* bacteria. *H.pylori* are bacteria found in the stomach that we associate with stomach ulcers and stomach cancer.

Although Sac B does not appear to colonise our gut, it has been shown to have the ability to correct imbalances in our microbiota.

4. *Escherichia Coli* Probiotics

Escherichia Coli (E Coli) is a regular resident of the human gut and one of the most commonly found bacterial species in stool testing.

We associate specific *E.coli* with food poisoning, and therefore it is often seen as the "bad guy". For some species of *E.coli*, like *E. Coli O157:H7*, this is true.

However, E.coli appears to only become damaging after changing, definitely after acquiring specific genetic material.

There have been some notable clinical trials treating diarrhea and IBD using the E.coli probiotic, E.coli Nissle 1917.

How Probiotics Work

Transient Antimicrobial Agents

Probiotics Are Transient Agents

Contrary to popular opinion, most probiotics do not appear to colonise your gut.

Probiotics are more transient in nature, which means that they are more like tourists than residents and they pass through the gut.

In her article in the journal *Nature*, Catherine A. Lozupone states, "The gut microbiota generally shows colonisation resistance, in which the nature microbiota prohibits harmful and potentially beneficial microbes from establishing."

We find further support that probiotics are transient in a 2008 review paper. In the paper the author states that, "all probiotics appear to have a short life span within the gut and need repeated dosing to keep a constant level...it is apparent that after a week after stopping oral intake, they largely disappear from the stool."

Further evidence that probiotics do not colonise comes from studies using "heat-killed" probiotics. As the name implies heat-killed probiotics have been heated to death. If a heat-killed probiotic shows benefit it supports the thinking that benefit from probiotics is not due to colonisation.

There are many studies that show heat-killed probiotics have a benefit including treating diarrhea, improving IBS symptoms, treating skin allergies, and decreasing the incidence of colds in the elderly.

Probiotics As Antimicrobial Agents

So, probiotics are transient but still appear to have beneficial effects.

Probiotics have been shown to be an effective treatment for SIBO. We also have evidence showing that probiotics are as effective as anti-fungal drugs in treating fungi and that probiotics are as effective as anti parasitic drugs in treating parasites.

So, probiotics are antimicrobial in nature. The antimicrobial effect can help to reduce bacterial overgrowths, clear fungus and parasites infections.

Probiotics Work Better In The Small Intestine

In your intestines, the more densely populated with bacteria an area, the harder it is for the probiotics to affect that environment. As a result, we could suggest that probiotics may exert more of an effect on the small intestine than the more highly populated large intestine.

How To Use Probiotics

In chapter 1 we covered the four main types of probiotics and their benefits. In chapter two we covered how probiotics work to achieve their benefits. In this chapter, we will explain:

- What to use in a probiotics protocol
- How to interpret recommended dosages
- What to expect when using probiotics
- How to understand and manage reactions
- How to personalise a probiotics protocol

What to use in a probiotics protocol

The following protocol is the one I typically recommend in my practice. The protocol uses three of the four probiotic types we described in chapter one.

1. Lactobacillus/Bifidobacterium (LactoBifido) blend

The LactoBifido blend is the most studied and has been shown to help a wide variety of conditions. I recommend [Probiotic Supreme](#) by Designs for Health (DFH). Take one capsule one to two times per day, preferably on an empty stomach.

2. Saccharomyces Boulardi (Sac B)

Sac B is not a bacteria but a healthy fungus. I recommend [FloraMyces](#) by DFH. FloraMyces is a unique freeze-dried strain of non-GMO Sac B. Unlike other SAC blends, FloraMyces is dairy and lactose-free and does not require refrigeration. I recommend taking 1 capsule twice a day, preferably away from food.

3. A Soil-Based or Spore-Forming Probiotic

At the time of writing, my regular soil-based probiotic Prescript Assist is unavailable. Currently, I recommend a spore-forming probiotic called [Megasporebiotic](#) by Microbiome Labs. I recommend one capsule two times per day, with food.

How to interpret recommended dosages

Anytime you see a dose range of one or two capsules it is best to start at the lowest dose. After a few days on this dose observe how you feel. If you are feeling great, then stay at this dose. If you still need improvement then increase to the full dose. Following these steps will help you find the minimal dose, which should always be the goal. Remember, more is not always better.

What To Expect When Using Probiotics

After a couple of days or weeks on these probiotics, you may experience an improvement in how you are feeling.

What exactly will you notice?

Well, as we covered in chapter one, probiotics can help a wide variety of conditions and symptoms. The improvements you experience will depend on your current symptoms. Maybe you will experience less bloating, clearer thinking, improved stool consistency and regularity, clearer skin or less joint pain. Several things may improve (not limited to this list), and if the improvement coincides after taking the probiotics, the probiotics are likely the reason for the change.

How to understand and manage reactions

There are two types of responses you may experience after taking probiotics, die-off and allergic reactions.

Die-Off Reactions

As we discussed in chapter 2, probiotics can cause antibacterial effects. When bacteria die, they can cause what is known as die-off reactions in the body. These die-off reactions take the form of symptoms. These symptoms may include a general

feeling of being unwell, tiredness, headaches, irritability, digestive upset, and flu-like symptoms. If you experience die-off symptoms, they should last no more than a few days to a week. These symptoms are not harmful, so you should not be alarmed. If the symptoms become a concern, you can always reduce your dosage to lessen the die-off reactions.

Allergic Reactions

If your so-called symptoms do not go away after a week, They might not be due to die-off reactions. In such cases, you may be experiencing an allergic reaction to an ingredient in the probiotics. Symptoms of an allergic response typically include itching, swelling and redness, but also bloating. If you do have this experience, stop all the products and experiment with trying one probiotic at a time to see if you can pinpoint the source of the reaction.

How to personalise a probiotics protocol

Should you take your probiotics with food?

In my opinion, it does not matter. I have expressed what might be an ideal recommendation for each probiotic, but I often instruct patients to disregard these instructions and take them at a time that is most convenient.

Will taking more probiotics improve or speed up the process?

As I mentioned before, doing more is not always better. You should be aware that treating symptoms or naturally is a process. By giving your body probiotics, you are aiding your body's innate ability to heal itself. The probiotics are bringing balance back to your microbiota. This effect will start the healing process. If you try too hard by taking too many probiotics, it will probably overwhelm your body.

Closing Thoughts

What have we learnt?

Probiotics are not all the same.

There are four main types.

All these types have benefits for improving both gastrointestinal and symptoms outside the gut.

Contrary to popular belief probiotics do not colonise but are transient and have antimicrobial effects that help to rebalance the bacteria in the gut.

Probiotics are relatively safe to use, but you should be mindful of reactions and not do too much.

When to use probiotics?

Probiotics are a safe and effective first-line treatment for both gastrointestinal and for symptoms that you feel might be related to the gut.

What should I do if probiotics do not help?

If the probiotics are going to help you, you should see some significant improvement in your symptoms within two to three weeks of taking the probiotics.

If you notice no change, then you probably have an underlying cause that requires a more in-depth and more extensive intervention.

If you would like assistance in uncovering the cause of your symptoms, then I am here to help.

In my, over 20 years of clinical practice, I have helped 1000's of people like you identify and resolve the root cause of their chronic health conditions and symptoms.

If you would like to find out more, I offer a **FREE 30-minute Discovery Session** when we can chat about your issues and whether I can help.

Click [here](#) to book your Free 30-minute Discovery Session.

Alternatively, you can find more about my work by visiting my personal website at: www.dominickhussey.ca.

About Dominick Hussey

Dominick combines osteopathy, muscle testing and functional medicine with nutrition and lifestyle counselling in his practice and strongly believes that

healing is a process in which the patient must take an active role.



He has become disillusioned with modern approaches which simply provide a band-aid approach to mask and temporarily relieve symptoms. His passion is in determining the real, underlying cause of those symptoms and in so doing to bring about true, deep, lasting healing.

Dominick was born and raised in London, England. He initially studied Managerial and Administrative Studies at the University of Aston in Birmingham, England and went on to work as a marketing executive in West London for three years.

After spending a year exploring the world while backpacking, he returned to the UK to pursue an interest in natural medicine.

He studied at the British College of Naturopathy and Osteopathy in North London, graduating in 1997 with a BSc with honours in Osteopathic Medicine and a Diploma of Naturopathy.

His clinical practice began at the Aston Clinic in Surrey, England with David Melrose D.O, a herbalist and osteopath. It was here that Dominick first became interested in Applied Kinesiology (AK). In 1999 he undertook training with the International

College of Applied Kinesiology and found AK to be a powerful tool for localising and identifying the causes of pain-related disorders.

Dominick regularly continues his training and education so that he can provide the very best care for his patients. He has learned other techniques that are incorporated into his approach to treatment, including Homeopathy, Herbal Medicine, Massage, Nutrition and NAET allergy therapy.

He is also studying with the Institute of Functional Medicine in the US to obtain his certification as a Functional Medicine Practitioner

In 2009, Dominick immigrated to Ottawa with his wife, Sue, where they joined Dr Shahram Ayoubzadeh and his team at the Integral Health Clinic.

In December 2010 he was invited to join the Seekers Centre for Integrative Medicine in Ottawa, along with Sue and Shahram, and worked there for a year before the Integral Health Clinic relocated to Waverley St, Ottawa.

In 2014 he and Sue established the Ottawa Holistic Wellness at MacLaren Street, Ottawa. As well as seeing clients, Dominick is Social Media and Marketing Director for the Centre.

He is currently registered with the Institute of Functional Medicine and with the Ontario Association of Osteopathic Manual Practitioners.