

# Microbiome

## 1. What is the human microbiome?

The human microbiome encompasses the diverse community of microorganisms living on or within us, including bacteria, archaea, fungi, protists and viruses. Collectively known as the microbiome, these microbial cells span our entire body. Similar to our human cells, these microorganisms can be alive, healthy, replicating, damaged or deceased.

## 2. Do we have more than one microbiome?

Yes. Other biomes include the respiratory, skin and urobiome; each are characterised by distinct microbial cells. There are also sub or minor biomes, such as the brain, vascular, metabolic, and oral biome, each comprising unique microorganisms. The gut microbiome is the most common; the gastrointestinal (GI) tract processes what we eat and since a focus on ensuring good nutrition has grown in popularity in recent years, so has the topic of our gut microbiome.

## 3. What makes our biomes healthy?

Diversity, balance and having the right amount of healthy microbial cells is the best way to help our biomes thrive.

## 4. Will my microbiome change as I get older?

Yes. As we age, the diversity of microbial cells changes and often declines. This is normal as we age, but maintaining optimal microbiome health is always beneficial.

## 5. What can I do to support my microbiome?

Consuming a balanced diet forms the foundation of vitality and is a great place to start if you're looking to improve your microbiome. Supplements such as dōTERRA PB Restore™ and PB Assist+™ can offer additional support, daily and throughout life, but remember supplements must not replace food-based nutrition. Using dōTERRA products correctly also makes a difference. The dōTERRA Wellness Chart can help guide you through the different levels of self-care as it encompasses other important factors such as exercise.

## 6. What is the difference between dōTERRA PB Restore™ and PB Assist+™?

dōTERRA PB Restore™ has been developed with more diversity of genus, species, and strains (pre, pro and post-biotics) to support overall wellness. The innovative double-layer capsule system shields the bioactive cultures from the harsh stomach environment, ensuring the optimal delivery of their active benefits.

PB Assist+™ supports the gut microbiome with a targeted and diverse family of live microbes from prebiotics and probiotics, helping to promote the growth of friendly bacteria. What sets PB Assist+ apart is the microencapsulation of its live cultures, ensuring their survival through the stomach to reach the gut alive, where optimal conditions foster their flourishing.

## 7. Can I take dōTERRA PB Restore™ and PB Assist+™ together?

Yes, absolutely! By incorporating both products into your daily care regimen, you can enjoy a powerful collaboration of biotics and strains, helping you further support your overall wellbeing and work towards optimal microbiome health!

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## 8. Some probiotic products offer 50-100 billion colony-forming units (CFUs). Is this a required amount?

Single or multi-probiotic products that state 50-100 billion CFUs can often be ineffective and may even cause a less positive response for the body due to imbalance. Achieving a balanced and diverse microbiome is essential. It is important to consume the right amounts, strains and diversity of healthy bacteria.

## 9. What makes dōTERRA ProBiome products different?

dōTERRA's exclusive formulations include broad diversity of microbial compounds, more genus, species, strains, prebiotics, probiotics and postbiotics to help support a great microbiome.

## 10. Why are micro-encapsulated strains important?

Microencapsulated strains are found in dōTERRA PB Assist+ to protect the strains from damage and enable them to arrive at the lower gastrointestinal tract where they can work most effectively.

## 11. What is the difference between a genus, species, and strain?

Genus, species and strain are terms used in microbiology to categorise and differentiate organisms. For example, in the context of bacterial strains utilised for lactic fermentation, each strain is identified by its genus, species and, if applicable, subspecies, along with a number that uniquely identifies the strain.

For example, *Lactobacillus plantarum* 14D:

- **Lactobacillus** = genus: This is the broad category above species. The genus groups microbes with common attributes.
- **Plantarum** = species: This is the largest group of organisms that can replicate.
- **14D** = strain: This is a specific genetic variant or name that helps identify unique attributes and capabilities of the microbe.

## 12. What is the difference between a prebiotic, a probiotic and a postbiotic?

- **Prebiotic** = The food for probiotics, which help them grow.
- **Probiotics** = Healthy microbes that provide functional benefits when consumed or applied to the body.
- **Postbiotic** = A deceased or "after-life" probiotic which has transformed into a metabolite and continues to provide benefits for the body.

## 13. Is there a way to test the health of our microbiome?

Yes, microbiome gastrointestinal testing, respiratory and lung biome testing, oral biome testing, urobiome testing (urinary, vaginal, kidney) are all available to test. These tests can detect the diversity of strains, as well as the ratio of the largest phyla of firmicutes and Bacteroidetes.

## 14. What strains are in dōTERRA PB Restore™?

See supplement facts panel on the product label.

## 15. What strains are in PB Assist+™?

See supplement facts panel on the product label.

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**16. Are these products gluten-free?**

Yes, both dōTERRA PB Restore and PB Assist+ are gluten free.

**17. Can I use dōTERRA ProBiome products if I'm pregnant/breastfeeding?**

It is advisable for pregnant or breastfeeding women to seek guidance from a healthcare professional before using these products.

**18. Do the ProBiome products contain any allergens?**

dōTERRA PB Restore and PB Assist+ are free from Genetically Modified Organisms (GMOs), gluten, soy and dairy.

**19. Can kids and teenagers use dōTERRA PB Restore™ and PB Assist+?**

PB Restore is not designed for children. Focusing on the pillars of wellbeing (healthy eating, daily movement, stress management and health connections) in the younger years of our children's lives will be of great benefit. PB Assist+ can be safely consumed by the whole family, including kids and teenagers.

**20. What products can I use with dōTERRA PB Restore™ and PB Assist+?**

Using the dōTERRA Lifelong Vitality Pack™ (LLV) in your supplement routine can be a great first step to helping you build a strong base of micronutrients, antioxidants and essential fatty acids. Other supplements you can incorporate into your routine are GX Assist™, TerraZyme™, Zendocrine™, ZenGest™ products, dōTERRA™ Plant Protein and Turmeric Dual Chamber Capsules.