

PROBIOTICS

Starter Guide



DrRuscio.com

Will taking a probiotic supplement improve your health?

A large body of research shows that probiotics are beneficial for a surprisingly wide variety of conditions. I've summarized evidence from more than 500 studies in this chart.

Probiotics Improve These Conditions		
High level of scientific support for:		
IBS Gas, bloating, diarrhea, constipation, abdominal pain	IBD Crohn's and ulcerative colitis	Mood Depression and anxiety
Gut Imbalances SIBO, H. pylori, candida/fungus, pathogens	Leaky gut Gut damage & permeability	Infections Vaginal infections, urinary tract infections, tooth decay
Limited, but encouraging, scientific support for:		
Cognition Cognitive function, brain fog	Hormonal Health Thyroid health, PCOS, endometriosis, bone density	Allergies Dairy intolerance, seasonal allergies
Autoimmune Conditions Type 1 diabetes,	Metabolic Health Blood sugar,	Sleep Sleep quality and disruption

¹ <https://www.ncbi.nlm.nih.gov/pubmed/28166427>

² <https://www.ncbi.nlm.nih.gov/pubmed/25748731>

multiple sclerosis, rheumatoid arthritis	cholesterol, blood pressure, weight loss	
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Let's take a closer look at each of these conditions:

Irritable Bowel Syndrome (IBS)

Probiotics have been shown helpful for the symptoms of IBS, which include constipation, loose stools, diarrhea, abdominal pain and gas.

- Two meta-analyses, involving more than 1,100 patients, have shown probiotics to be an effective treatment for IBS, with no side effects.^{1 2}
- Another *meta-analysis*³, involving 1,404 patients showed improvement in global IBS symptoms when compared to the placebo group.

Based on this compelling data, the Canadian Association of Gastroenterology Clinical Practice Guideline for the Management of Irritable Bowel Syndrome recommend a trial on probiotics for IBS.⁴

³ <https://www.ncbi.nlm.nih.gov/pubmed/18461650>

⁴ <https://www.ncbi.nlm.nih.gov/pubmed/31294724>

Gut Imbalances: SIBO, Leaky Gut, Fungus, H. pylori & Infection

Small Intestinal Bacterial Overgrowth (SIBO)

Some claim you should not take probiotics for SIBO because you already have too much bacteria. However, probiotics have been **CLEARLY** shown to be effective in treating SIBO, both in improving symptoms and in improving lab values.⁵

- One study found probiotics to be more effective than the antibiotic metronidazole (a standard treatment for SIBO).⁶
- A meta-analysis summarizing 18 clinical trials concluded that probiotics are an effective treatment for SIBO.⁷ Specifically, probiotics reduce bacterial overgrowths and hydrogen concentrations, and improve symptoms including abdominal pain.

Another exciting study found that probiotics work substantially better in patients with both IBS and SIBO, as

compared to those who have IBS without SIBO.⁸

Leaky Gut

One small clinical trial found that probiotics helped to promote intestinal repair in humans.⁹ Another trial found positive effects of probiotics when used to treat intestinal impairment after a GI infection.¹⁰

Fungus, Candida and Parasites

Probiotics don't just fight bad bacteria. They are antifungal and antiparasitic:

- In a study of 181 infants, probiotics were as effective as Nystatin (a standard antifungal medication) in reducing fungal infection and improving food intolerances.¹¹
- Two studies show that probiotics can be more effective than standard antiparasitic drug treatment in Blastocystis hominis and Giardia infections.^{12 13}

Inflammatory Bowel Disease (IBD)

Research shows that probiotics are very helpful for IBD (ulcerative colitis or Crohn's disease):

⁵ <https://www.ncbi.nlm.nih.gov/pubmed/28267052>

⁶ <https://www.ncbi.nlm.nih.gov/pubmed/21381407>

⁷ <https://www.ncbi.nlm.nih.gov/pubmed/28267052>

⁸ <https://www.ncbi.nlm.nih.gov/pubmed/29508268>

⁹

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5561432/>

¹⁰ <https://www.ncbi.nlm.nih.gov/pubmed/24501384>

¹¹ <https://www.ncbi.nlm.nih.gov/pubmed/23703468>

¹² <https://www.ncbi.nlm.nih.gov/pubmed/20922415>

¹³ <https://www.ncbi.nlm.nih.gov/pubmed/16798698>

- One review found that probiotics worked as well as the anti-inflammatory drug, mesalamine, in maintaining remission for Crohn's disease.¹⁴ Best results were for a combination of probiotics and mesalamine.
- Another review found the best approach for treating active ulcerative colitis was a probiotic supplement combined with an anti-inflammatory drug.¹⁵
- Other reviews have found probiotics to be equally effective for ulcerative colitis as anti-inflammatory drugs like mesalamine.¹⁶
- One systematic review has found probiotics do not help maintain remission, but overall the data suggest probiotics are helpful.¹⁷

Antibiotic-Associated Diarrhea

The prestigious Journal of the American Medical Association published a meta-analysis of 82 randomized control trials. They found that probiotics work to reduce antibiotic-associated diarrhea.¹⁸

Mood, Depression & Anxiety

Inflammation in the intestines can also cause inflammation in the brain. That's

why probiotics can aid with mood problems like depression and anxiety. We call this the gut-brain connection. Here's the research:

- In a meta-analysis of 10 clinical trials with a total of 1,349 subjects, probiotics were associated with significant improvements in the moods of individuals with mild to moderate depressive symptoms.¹⁹ This effect was not seen in healthy individuals.
- Another systematic review with meta-analysis of clinical trials has found probiotics lead to a significant reduction in depression.²⁰
- There is also data showing anxiety can be improved from probiotics. The data here are not as strong, but still have documented an anti-anxiety effect, in human clinical trials.²¹

So, if you have depression or anxiety, probiotics may help. If your mood is fine, then they won't.

Brain Fog

Data here are preliminary but encouraging:

¹⁴ <https://www.ncbi.nlm.nih.gov/pubmed/17637082>

¹⁵ https://pdfs.semanticscholar.org/df7f/8622f435e39a042592994306e919b5d9711c.pdf?_ga=2.116836934.1960166786.1562104584-2099317289.1562104584

¹⁶ <https://www.ncbi.nlm.nih.gov/pubmed/15479682>

¹⁷ <https://www.ncbi.nlm.nih.gov/pubmed/22161412>

¹⁸ <https://www.ncbi.nlm.nih.gov/pubmed/22570464>

¹⁹ <https://www.ncbi.nlm.nih.gov/pubmed/29197739>

²⁰ <https://www.ncbi.nlm.nih.gov/pubmed/27509521>

²¹ <https://gpsych.bmj.com/content/32/2/e100056>

- Research has found increased brain fog, aka lack of coherence, in those with IBS.²²
- Since there's impressive evidence that probiotics can improve, we can draw a tenable inference that if IBS occurs with brain fog, reducing IBS could reduce brain fog.

Brain fog, or fuzzy thinking, isn't usually studied in isolation but we can look at other disease-model studies where probiotics have improved cognition, including:.

- Alzheimer's^{23 24}
- Bipolar disorder²⁵
- Fibromyalgia²⁶

Sleep

The research data for probiotics and sleep quality is limited but encouraging:

- In a 2 year trial of medical students, those who took probiotics showed superior sleep quality during times of exam stress.²⁷
- In a clinical trial, participants reported that their sleep quality improved after 6 weeks of taking probiotics.²⁸
- Another clinical trial of IBS patients showed sleep improvements for diarrhea-type IBS patients. The same

results were not seen for constipation-type mixed-type IBS patients.²⁹

- An additional study of subjects with depression showed that the group taking probiotics had less sleep disruption than the placebo group.³⁰

Autoimmunity

This is another area where data is sparse but encouraging. These are highlights from a research review that explored probiotic treatment and autoimmune disease.³¹

Type 1 Diabetes

- In a large study of 7,473 children at risk for type 1 diabetes, early probiotic supplementation was shown to reduce the risk of autoimmunity when compared to children who had not taken probiotics early in life.³²

Multiple Sclerosis (MS)

A double-blind study of 60 MS patients, found that patients treated with probiotics showed less disability, lower insulin resistance and fewer inflammatory markers.

²² <https://www.ncbi.nlm.nih.gov/pubmed/27401139>

²³ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5105117>

²⁴ <https://www.ncbi.nlm.nih.gov/pubmed/30642737>

²⁵ <https://www.ncbi.nlm.nih.gov/pubmed/30227422>

²⁶ <https://www.nature.com/articles/s41598-018-29388-5>

²⁷ <https://www.ncbi.nlm.nih.gov/pubmed/28443383>

²⁸ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6445894>

²⁹ <https://www.ncbi.nlm.nih.gov/pubmed/26586385>

³⁰ <https://www.ncbi.nlm.nih.gov/pubmed/28068788>

³¹ <https://www.ncbi.nlm.nih.gov/pubmed/28556916>

³² <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4803028>

Rheumatoid Arthritis (RA)

- Three different studies found mixed results for probiotics in RA disease activity. One study did not show significant improvement while two other studies did show improvements.^{33 34 35}

The authors of this research review noted that intestinal dysbiosis is seen in autoimmune disease.³⁶ Specifically, autoimmune patients have:

- Decreased bacterial function and diversity
- Impaired gut barrier function
- Increased inflammation
- Autoimmunity

Metabolism

This has not been studied robustly yet, but from the preliminary data we do have, it does appear that SIBO affects metabolism:

- Two studies support the connection between SIBO and metabolism. In these studies, patients who tested positive for SIBO had higher BMI scores than patients without SIBO.^{37 38} However, not all the data show SIBO correlates to weight gain.³⁹

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<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3539551>

34

<https://www.ncbi.nlm.nih.gov/pubmed/24673738>

35

<https://www.ncbi.nlm.nih.gov/pubmed/27135916>

36

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5857604/>

37

<https://www.ncbi.nlm.nih.gov/pubmed/22347829>

38

<https://www.ncbi.nlm.nih.gov/pubmed/23533244>

- Two other studies suggest that methane-producing bacteria, *M. smithii* (found in SIBO patients), may help you to extract extra calories from your diet, leading to weight gain.^{40 41}
- Finally, preliminary evidence that shows treating SIBO may help improve blood sugar, cholesterol, and even reduce weight.⁴²

This is a semi-inferential connection, however the evidence seems to suggest that SIBO patients who use probiotics may achieve metabolic improvements and weight loss.

Food Allergy & Seasonal Allergy

There's good news for people who suffer with allergies:

- A systematic review of 15 clinical trials found that probiotics can improve dairy tolerance.⁴³
- A meta-analysis of 22 randomized control trials concluded that probiotics can improve seasonal allergy.⁴⁴
- Other high-quality studies support similar findings.⁴⁵

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<https://www.ncbi.nlm.nih.gov/pubmed/28480652>

40

<http://www.diabetesforecast.org/2012/nov/certain-bacteria-might-make-type-2-more-likely.html>

41

<https://www.ncbi.nlm.nih.gov/pubmed/19164560>

42

<http://www.ncbi.nlm.nih.gov/pubmed/26833719>

43

<https://www.ncbi.nlm.nih.gov/pubmed/29425071>

44

<https://www.ncbi.nlm.nih.gov/pubmed/27442711>

45

<https://www.ncbi.nlm.nih.gov/pubmed/28228426>

There is also data, albeit mixed, suggesting that probiotics given to children may prevent or reduce formation of allergy.⁴⁶

Female Hormones

We don't have good data regarding female hormones and probiotics, but we can make some inferences based on other research:

- We know that the gut microbiota is involved in regulating estrogens and that gut dysbiosis can disturb estrogen levels.⁴⁷
- A research review and one additional study indicates that women with PCOS, obesity, endometriosis, cardiovascular disease, and breast cancer have lower diversity in their intestinal bacteria.^{48 49} All of these conditions are all associated with unbalanced estrogen levels.
- One study found that probiotics plus soy isoflavones improved bone density.⁵⁰
- Preliminary evidence suggests that these types of health conditions can improve when bacterial diversity in the gut increases.⁵¹ This is where probiotics may come in.

⁴⁶ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6406271/>

⁴⁷ <https://www.ncbi.nlm.nih.gov/pubmed/28778332>

⁴⁸ <https://www.ncbi.nlm.nih.gov/pubmed/28778332>

⁴⁹ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4554191/>

⁵⁰ <https://www.ncbi.nlm.nih.gov/pubmed/28768651>

⁵¹ <https://www.ncbi.nlm.nih.gov/pubmed/28778332>

One very recent meta-analysis confirms that we are on the right path with these inferences.⁵² The authors looked at 13 studies involving 855 women and found that *probiotic use improved hormonal and inflammatory markers for women with PCOS*.

Blood Pressure & Cholesterol

When it comes to blood pressure and cholesterol, we have five meta analyses (the highest quality of research data available), so this is worth a look. The results are a bit mixed, however the majority of results do show benefits

- Four meta analyses involving 68 clinical trials and 3885 patients found that probiotic supplements can *improve overall cholesterol profiles*. One of these studies also shows significant improvements to blood pressure.^{53 54 55 56}
- Another meta analysis evaluated 9 clinical studies with 678 pre-diabetic participants and found probiotics had a significant effect on *reducing LDL Cholesterol*. However, there was no effect on blood pressure or any other cholesterol readings.⁵⁷
- Another study found that probiotics can *lower homocysteine*,⁵⁸ which is

⁵² <https://www.ncbi.nlm.nih.gov/pubmed/31256251#>

⁵³ <https://www.ncbi.nlm.nih.gov/pubmed/28318686>

⁵⁴ <https://www.ncbi.nlm.nih.gov/pubmed/29390450>

⁵⁵ <https://www.ncbi.nlm.nih.gov/pubmed/29384846>

⁵⁶ <https://www.ncbi.nlm.nih.gov/pubmed/28594860>

⁵⁷ <https://www.ncbi.nlm.nih.gov/pubmed/30889572>

⁵⁸ <https://www.ncbi.nlm.nih.gov/pubmed/25453395>

an independent risk factor for heart disease.

The amount of improvement found in these studies is usually small, but favorable. So, probiotics should not be viewed as the primary therapy for high cholesterol or blood pressure.

Thyroid Function

There is significant research that demonstrates a *gut-thyroid connection*:

- A large and fascinating study investigated the health conditions that are most commonly found in patients with SIBO.⁵⁹ **Being hypothyroid or on thyroid medication were the most highly associated with SIBO.**
- Another study⁶⁰ also found that *thyroid autoimmunity* was higher in those with SIBO as compared to healthy controls. Thyroid autoimmunity is the underlying cause in most cases of hypothyroidism.
- A recent meta-analysis concluded that there is an association between the bacteria *H. pylori* and thyroid autoimmunity.⁶¹

Since we know that probiotics are effective for treating gut imbalances like SIBO and *H. pylori*, probiotics may be an effective therapy for improving thyroid health.

⁵⁹ <https://www.ncbi.nlm.nih.gov/pubmed/28223728>

⁶⁰ <https://www.ncbi.nlm.nih.gov/pubmed/29374417>

⁶¹ <https://www.ncbi.nlm.nih.gov/pubmed/23544831>

⁶² <https://www.ncbi.nlm.nih.gov/pubmed/27514932>

⁶³ <https://www.ncbi.nlm.nih.gov/pubmed/27554239>

Skin Health

Is there a gut-skin connection? Here's a look at the evidence:

- The skin and the gut have similarities in their structure, they play similar roles in immune function and both host a diverse bacterial population.⁶²
- Evidence suggests that intestinal health and skin health are closely linked.^{63 64}
- A recent review paper summarized the research into acne and the microbiome and confirms the connection.⁶⁵
- 2 clinical trials showed that topical probiotic treatments were effective for *treating acne*.^{66 67}
- Another study compared traditional antibiotic therapy for acne with a probiotic supplement. The young women in both groups showed significant improvement after 4 weeks. A third group that was treated with both antibiotics and probiotics had the best results.⁶⁸

⁶⁴ <https://www.ncbi.nlm.nih.gov/pubmed/23342023>

⁶⁵ <https://www.ncbi.nlm.nih.gov/pubmed/31284694>

⁶⁶ <https://www.ncbi.nlm.nih.gov/pubmed/19229497>

⁶⁷ <https://www.ncbi.nlm.nih.gov/pubmed/23286870>

⁶⁸ <https://www.ncbi.nlm.nih.gov/pubmed/23582165>

Infant & Mom Health

Researchers have found benefits from probiotic use for infants, including:⁶⁹

- Less colic and irritability
- Less diarrhea
- Fewer spitting episodes
- Fewer respiratory infections

Women who took probiotics during pregnancy had fewer incidences of:⁷⁰

- Gestational diabetes
- Pre-eclampsia (high blood pressure during pregnancy)
- Excessive weight gain
- Vaginal bacteria infections

More studies show that probiotics:

- Appear to be safe for infants and even preterm infants^{71 72}
- Protect infants against intestinal fungus (candida) overgrowth⁷³
- Reduce the risk of ear and respiratory infection in babies⁷⁴
- Reduce colic

Why Do Probiotics Help So Many Different Conditions?

The *Journal of Clinical Gastroenterology*⁷⁵ and the journal *Trends in Microbiology*⁷⁶ offer insights regarding how probiotics make you healthier.

Probiotics can:

- Increase bacterial diversity, or health, of your bacterial community⁷⁷
- Fight pathogens (harmful bugs) and their toxins
- Promote a more rapid recovery from imbalances in your gut organisms
- Promote a healthy immune response in your gut^{78 79}
- Reduce gut inflammation (*remember excessive inflammation is part of an overzealous immune response*)⁸⁰
- Encourage the growth of healthier microbes in your gut⁸¹
- Reduce leaky gut aka damage to your gut lining.^{82 83 84}

⁶⁹ <https://www.ncbi.nlm.nih.gov/pubmed/28856907>

⁷⁰ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5618799/>

⁷¹ <https://www.ncbi.nlm.nih.gov/pubmed/16877985>

⁷² <https://www.ncbi.nlm.nih.gov/pubmed/19369375>

⁷³ <http://www.ncbi.nlm.nih.gov/pubmed/16705580>

⁷⁴ <http://www.ncbi.nlm.nih.gov/pubmed/18986600>

⁷⁵ <https://www.ncbi.nlm.nih.gov/pubmed/21992949>

⁷⁶ <https://www.ncbi.nlm.nih.gov/pubmed/25840765>

⁷⁷ <https://www.ncbi.nlm.nih.gov/pubmed/30101706>

⁷⁸ <https://www.ncbi.nlm.nih.gov/pubmed/29693607>

⁷⁹ <https://www.ncbi.nlm.nih.gov/pubmed/27810310>

⁸⁰ <https://www.ncbi.nlm.nih.gov/pubmed/30101706>

⁸¹ <https://www.ncbi.nlm.nih.gov/pubmed/29693607>

⁸² <https://www.ncbi.nlm.nih.gov/pubmed/28045137>

⁸³ <https://www.ncbi.nlm.nih.gov/pubmed/24501384>

⁸⁴ <https://www.ncbi.nlm.nih.gov/pubmed/22992437>

Said simply, probiotics can help improve the balance of organisms in your gut, reduce overzealous immune system activity and reduce the inflammation which many of us suffer with.

Unhealthy Gut Bacteria = Inflammation

Inflammation = Symptoms

You may be surprised to know how many common conditions are caused by inflammation. Modern-day inflammatory conditions include):

- Fatigue
- Depression or Anxiety
- Brain Fog
- Insomnia
- Acne or Other Skin Conditions
- Female Hormone Imbalances
- Male Hormone Imbalances
- Hypothyroid Symptoms
- Immune System Dysregulation and Autoimmunity

Quality Matters - Don't Buy Junk!

When it comes to buying probiotic supplements, quality assurance practices do matter. Probiotic manufacturing is not highly regulated and some labels claims do not stand up to scrutiny. Consider the

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<https://www.tandfonline.com/doi/full/10.1080/13102818.2019.1621208>

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<https://www.tandfonline.com/doi/full/10.1080/13102818.2019.1621208>

results of these investigations into probiotic quality:

- Of 26 commercial probiotics assessed in this study, none fully supported label claims, and some of them contained unacceptable microorganisms.⁸⁵
- These researchers conclude that two common problems in probiotic supplements are a low concentration of viable cells (ie your getting ripped off) and the presence of undesired (potentially harmful) organisms.⁸⁶
- One study found only half of the probiotics examined had the specific strain listed on the label.⁸⁷
- Another study found 43% of the probiotics assessed contained less than half the amount of probiotic listed on their labels.⁸⁸

If a company follows quality assurance practices, a probiotic supplement will meet its label claims and not contain potentially harmful organisms.

What to Look for in a Probiotic Supplement

Independent Laboratory Analysis

All probiotic raw materials and final products undergo independent laboratory analysis ensuring probiotic quality and fulfillment of GMP

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<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6430388/>

88

<https://labdoor.com/rankings/probiotics>

requirements. This ensures the probiotic meets its label claims.

Genetic Identification

To ensure the strain of probiotic meets the label claim, thus protecting you from using frankenstein probiotics or harmful organisms. Harmful organisms are one of the most common problems with probiotics.

Free of Major Allergens

Probiotics should be grown on media which are free of the common allergens: wheat, gluten, milk, casein, eggs, fish, shellfish, tree nuts, peanuts and soybeans. A quality probiotic will also be free of artificial colors, flavors, or preservatives.

Validated Potency

Probiotics should always meet their lab's claims upon testing. Certain probiotics should be stored by the manufacturer and shipped in refrigerated conditions to retain the potency list on the label claims.

Good Manufacturing Practices (GMP) in Manufacturing

GMP are a set of best practices for dietary supplement manufacturing in the United States. This includes utilizing a state-of-the-art facility where temperature and air quality are tightly controlled. This produced a consistent quality and purity of product.

You don't need to purchase the most expensive probiotic supplements. But, **you should be wary of a probiotic that is substantially cheaper than the rest.**

This usually indicates corners have been cut in the quality assurance standards.

All three of the probiotic supplements that I sell and also use in my practice, meet these quality standards.

How to Find the Right Probiotic for You

Taking probiotics doesn't need to be complicated. Yes, there are a lot of different probiotic strains, but all you really need to know are the three main probiotic categories. Nearly every probiotic product can be classified into one of these categories⁸⁹.

CATEGORY 1	CATEGORY 2	CATEGORY 3
Lactobacillus & bifidobacterium species predominated blends	Saccharomyces Boulardii (a healthy fungus)	Soil-Based Probiotics using various Bacillus species
These are the most well-researched, with over 500 trials assessing their validity. These live microorganisms are also known as lactic-acid producing probiotic bacteria. They typically do not colonize the host, but do improve the	The second most researched probiotic, with over 100 studies. Saccharomyces boulardii (S. boulardii for short) is not a normal part of human microbiota, meaning it does not colonize us but does improve the	The third most researched category of probiotics is soil-based probiotics. This group has roughly 14 clinical trials evaluating their effectiveness. This category is also known as spore-forming bacteria. This category of probiotic can

⁸⁹ <http://internationalprobiotics.org/download/ipa-guidelines-qualify-microorganism-probiotic/>

health of the host.	health of the host.	colonize the host ⁹⁰ .
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This is great news. This means ***you don't need to try every probiotic strain on the market***, but rather you can pay attention to the category and pick one quality formula from each.

You also don't need to match specific probiotic strains to specific symptoms. All probiotics work in a similar way by addressing the underlying reasons for your symptoms.

Take Probiotics When It's Convenient for You

Despite advice that you might read elsewhere, taking probiotics is simple:

- You can take them with or without food.
- You can take them at any time of the day.
- You can (and should) take probiotics with antibiotics.

The 3 for BALANCE Probiotic Protocol Graphic (3-legged stool)

Many people don't seem to achieve balance in their microbiota with just one strain of probiotic. Some lucky people do, but for many, one probiotic won't suffice. I have seen the best results with my patients following a protocol that includes

all three probiotic categories. For many patients who have tried probiotics in the past, this approach makes all the difference.

What you need to do – easy as 1, 2, 3

1. Try a quality formula probiotic from category **1**, category **2** and category **3** - **take all three together**.
2. Monitor your symptoms for 3-4 weeks. If you're improving, stay on the 3 for Balance protocol until your improvements have plateaued.
 - Once you've seen your maximum improvement (you've plateaued), stay here for about a month to allow your system to calibrate to these new improvements. Then reduce your dose and find the minimal effective dose. Stay on the minimal effective dose.

If you haven't noticed any change in your symptoms after 3-4 weeks, you can stop taking probiotics and feel confident that you have fully explored probiotic therapy. There's no need to go shopping for other probiotic strains.

Probiotics from Food

Diet is a great source of probiotics. Below is a table of common foods that are high in probiotics compared with probiotic supplements. As you can see, a challenge with diet is that it is difficult to obtain the same dose used in the research studies.

⁹⁰ <https://www.ncbi.nlm.nih.gov/pubmed/28919884>

Food	Species	Amount	Equivalent Dose
Sauerkraut	Leuconostoc mesenteroides Lactobacillus brevis Pediococcus pentosaceus Lactobacillus plantarum	3 billion CFU per cup	¼ capsule Lacto-Bifido Blend Probiotic
Yogurt ^{91 92}	Lactobacillus acidophilus Streptococcus thermophilus Lactobacillus delbrueckii subsp. bulgaricus	2.5 billion CFU per cup	1/10 capsule Lacto-Bifido Blend Probiotic
Lacto-fermented Pickles ^{93 94}	Lactobacillus casei Lactobacillus rhamnosus Lactobacillus plantarum Lactobacillus brevis	1.3 billion CFU per pickle	.05 capsule Lacto-Bifido Blend Probiotic
Kefir ⁹⁵	Lactobacillus brevis Lactobacillus acidophilus Lactobacillus casei Lactococcus lactis Saccharomyces cerevisiae	2.5 billion CFU per cup	1/10 capsule Lacto-Bifido Blend Probiotic
Kimchi ^{96 97}	Weissella koreensis Lactobacillus sakei Lactobacillus graminis Weissella cibaria Leuconostoc mesenteroides	11.5 billion CFU per ½ cup	½ capsule Lacto-Bifido Blend Probiotic

For optimum results with probiotics, consider adding probiotic supplementation to your diet.

⁹¹ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6117398/>

⁹² <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1365-2621.1993.tb06096.x>

⁹³ <https://www.ars.usda.gov/ARSUserFiles/60701000/Pickle%20Pubs/p411.pdf>

⁹⁴ <https://www.olivemypickle.com/blogs/news/probiotics-in-our-pickles-microbiology-lab-verified>

⁹⁵ [http://www.ifrj.upm.edu.my/26%20\(02\)%202019/\(05\).pdf](http://www.ifrj.upm.edu.my/26%20(02)%202019/(05).pdf)

⁹⁶ <https://www.frontiersin.org/articles/10.3389/fmicb.2016.01493/full>

⁹⁷ https://www.researchgate.net/profile/James_Daily_III/publication/259880932_Health_Benefits_of_Kimchi_Korean_Fermented_Vegetables_as_a_Probiotic_Food/links/5746f02508ae298602fc05fd.pdf

Keep in Mind...

Probiotics can be very helpful for a variety of health conditions, however they are not a cure-all and sometimes other, more advanced, therapies are needed. If this interests you, please see [*Healthy Gut, Healthy You*](#) which provides a detailed guide for what else you can do to heal your gut beyond probiotics.