

Psychobiotics for Anxiety

Taken from: <https://www.optimallivingdynamics.com/blog/the-9-most-promising-psychobiotics-for-anxiety>

The author of this article used to walk around ruminating, struggling with inner turmoil and nervousness all the time which never went away. An unnecessarily high state of worry and arousal when there is nothing threatening you? That's a nightmare. It doesn't have to be that way though.

If you have chronic anxiety, there are ways to manage and reverse it; psychobiotics are one way to do that. Psychobiotics are probiotics and prebiotics that can improve your mental health by changing the mixture of bacteria in your gut.

It is estimated that 100 trillion bacteria, and 500 to 1,000 species of bacteria, live in the human gut. These gut bacteria, collectively known as the gut microbiome, help with digestion. But an increasing amount of research suggests that they also communicate with your brain through the microbiome-gut-brain axis, affecting your thoughts, feelings and behaviour.

A dysfunctional gut microbiome has been linked to a number of psychiatric conditions, including anxiety. In fact, anxiety and gut health are very tightly linked. Research shows that people who have digestive disorders are more likely to have anxiety, and those with anxiety have higher rates of gastrointestinal disease.

Many studies show that when digestive disorders improve, anxiety improves as well. Many health professionals are well aware of the gut / brain connection.

People may have poor gut health because of the widespread use of antibiotics, medications, herbicides, stress, infections and poor diet. But don't worry. You can improve your gut health and anxiety at the same time with the use of psychobiotics.

Studies show that psychobiotics can improve anxiety by:

- Stimulating the vagus nerve
- Producing neurotransmitters, such as GABA and serotonin
- Reducing stress hormone levels
- Reducing inflammation, one of the major underlying causes of mental illness
- Increasing BDNF levels
- Crowding out pathogenic bacteria
- Increasing nutrient production and absorption

Here are the nine most promising psychobiotics that have been shown in human and animal studies to decrease stress and help treat anxiety disorders.

1. *Lactobacillus rhamnosus*

Lactobacillus rhamnosus is a bacterium found in the human gut. It is one of the most popular probiotic species found in supplements. Preliminary research suggests that supplementing with *lactobacillus rhamnosus* (strain GG) can lower anxiety in humans (3).

GABA is the main inhibitory and relaxing neurotransmitter in the central nervous system, and studies suggest that *lactobacillus rhamnosus* (strain JB-1) may reduce anxiety by changing the expression of GABA receptors (1-2, 4).

In one study, researchers gave *lactobacillus rhamnosus* (strain JB-1) to mice, and it reduced their anxiety-like behaviours. But when researchers removed part of their vagus nerve, *lactobacillus rhamnosus* did not reduce their anxiety, suggesting that psychobiotics communicate with the brain and improve mental health through the vagus nerve (1-2).

“The mice [given *Lactobacillus rhamnosus*] were more chilled out.”

— Dr. John Cryan, researcher and pharmacologist with the Alimentary Pharmabiotic Center at University College Cork, Ireland

Other studies have found that *Lactobacillus rhamnosus* (strain JB-1) decreases stress-induced anxiety-like behaviour, and researchers have concluded that it can protect against anxiety. *Lactobacillus rhamnosus* (strain GG) has also been shown to reduce obsessive-compulsive disorder (OCD)-like behaviour in mice. In fact, researchers found it was just as effective as fluoxetine, an SSRI antidepressant commonly used to treat OCD.

So if you struggle with OCD or obsessive-compulsive tendencies, it's probably worth trying this psychobiotic.

Lactobacillus rhamnosus (strain GG) can be found in this multi-species psychobiotic supplement. It can also be found in some yogurt and dairy products, such as fermented and unpasteurized milk and semi-hard cheese. But I typically don't recommend eating these foods unless you're sure you can tolerate them.

2. *Bifidobacterium longum*

Bifidobacterium longum is another bacterium present in the human gut. It is often added to food as it can help prevent the growth of pathogenic organisms.

It helps treat depression and help reduce anxiety. Researchers have concluded that *bifidobacterium longum* (strain R0175) can reduce cortisol and alleviate psychological distress in humans (including obsessions, compulsions, paranoia, anxiety).

Lots of animal research also shows that *bifidobacterium longum* (strain 1714) can significantly reduce anxiety-like behaviour (31-34). One study found that a chronic infection in mice increased inflammation and caused anxiety-like behaviour, but *bifidobacterium longum* (strain NCC3001) reduced anxiety and normalized behaviour.

Researchers have even figured out that it works by acting through the vagus nerve.

Bifidobacterium longum (strain R0175) is available in this supplement and this supplement.

3. *Lactobacillus plantarum*

Lactobacillus plantarum is another probiotic species that can reduce anxiety. In one study, researchers gave *Lactobacillus plantarum* (strains CECT7484 and CECT7485) to patients with irritable bowel syndrome and it significantly reduced their anxiety and improved their quality of life.

Animal studies also show that *Lactobacillus plantarum* (strain PS128) can cause positive changes in emotional behaviours and significantly reduce anxiety-like behaviours. It does this by increasing dopamine and serotonin, lowering stress hormone levels, and reducing inflammation (9-11). As a result, researchers have concluded that *Lactobacillus plantarum* (strain PS128) has psychotropic properties without physical side effects, and has great potential for treating neuropsychiatric disorders, including anxiety.

Lactobacillus plantarum can be found in this multi-species psychobiotic supplement. Or you can take it alone. However, I couldn't confirm that these supplements actually contain the exact *Lactobacillus plantarum* strains used in the studies above. You will have to contact the manufacturers to see.

Lactobacillus plantarum is also commonly found in many fermented vegetables including sauerkraut, pickles, brined olives, kimchi.

4. *Lactobacillus helveticus*

Lactobacillus helveticus (R0052) is a probiotic strain that has been shown to reduce cortisol and have anti-anxiety effects in humans. One study found that it can even reduce paranoid and obsessive-compulsive thoughts.

Animal research shows that a Western-style diet can negatively change the gut microbiome, increase brain inflammation, and contribute to anxiety. But *Lactobacillus helveticus* (strains R0052 and NS8) can protect against this, reducing both neuroinflammation and anxiety (40-42). One study even found that *Lactobacillus helveticus* (strain NS8) works better than citalopram, a common SSRI antidepressant, at reducing anxiety-like behaviour in rats. It also reduced their stress hormone levels and increased their serotonin.

Lactobacillus helveticus (strain R0052) is found in this psychobiotic supplement. I couldn't find a supplement that contains *Lactobacillus helveticus* (strain NS8) as it may not be commercially available yet.

Lactobacillus helveticus is also commonly found in American Swiss cheese and Emmental cheese, and sometimes other cheeses, such as Cheddar, Parmesan, Romano, provolone, and mozzarella. I'm very sensitive to dairy so I can't eat cheese regularly. But if you're not and can tolerate them, you could try adding some of these cheeses into your diet.

5. *Lactobacillus reuteri*

Also mentioned with [Dr Eric Berg on youtube here:](#)

Lactobacillus reuteri is a bacterium with anti-inflammatory effects that scientists first discovered in the 1980s. It is usually found in the human gut. However, not all humans have it, and some people simply have very low levels of it. Therefore, you may need to supplement with it to introduce and maintain high levels of it.

Research shows that *Lactobacillus reuteri* (strain 23272) can reduce anxiety-like behaviours in animals by reducing stress hormone levels and altering the expression of GABA receptors .

And one study found that the absence of *Lactobacillus reuteri* causes social deficits in animals.

“We found that treatment with this single bacterial strain was able to rescue their social behaviour.”
— Shelly Buffington, neuroscience researcher at Baylor College of Medicine

By adding it back in to the guts of the animals, the researchers were able to reverse some of their behavioural deficits, which were similar to symptoms of social anxiety and autism in humans. Therefore, *Lactobacillus reuteri* is definitely the psychobiotic strain worth trying if you struggle with social anxiety or symptoms of autism.

Lactobacillus reuteri (strain 23272) can be found here.

Lactobacillus reuteri is also available in this psychobiotic supplement. However, I couldn't confirm that the strain used in that supplement is the same strain used in the studies above. It's also found in breast milk, and some meat and dairy products.

6. *Lactobacillus casei*

Lactobacillus casei is another bacterium found in the human gut. It has antioxidant and anti-inflammatory effects.

In one double-blind, placebo-controlled trial, patients with chronic fatigue syndrome and digestive problems took *Lactobacillus casei* (strain Shirota) as a daily supplement for two months. At the end

of the study, they had a significant decrease in their anxiety symptoms. So this might be a good psychobiotic to try if you struggle with a mixture of fatigue, digestive problems and anxiety.

In order to obtain the strain used in the study above, you will have to consume the probiotic drink called Yakult. It contains high levels of *Lactobacillus casei* (strain Shirota).

Lactobacillus casei is also the dominant species in naturally fermented Sicilian green olives, and can be found in other fermented vegetables and dairy products. But the specific strain found in Yakult is most likely to reduce anxiety based on the research above.

7. *Lactobacillus fermentum*

Lactobacillus fermentum is another species that is part of the human microbiome and commonly found in fermented vegetables.

It hasn't been studied as much as other *Lactobacillus* probiotic species.

But there still is some evidence that it may be able to help treat anxiety, especially if you have a long history of antibiotic treatment.

Research shows that antibiotics can trigger anxiety in animals by disturbing the microbiome.

But by giving animals *Lactobacillus fermentum* (strain NS9), researchers can reduce the inflammation and reverse the psychological problems brought on by antibiotics, including anxiety-like behaviour (12).

So if you've taken a lot of antibiotics over the years, or noticed that your anxiety got worse after taking a course of antibiotics, taking a psychobiotic supplement with *Lactobacillus fermentum* (strain NS9) may be worth a try. However, I haven't been able to find a supplement that has that specific strain. This supplement contains *Lactobacillus fermentum* but it doesn't say whether it is strain NS9.

8. *Bifidobacterium breve*

Bifidobacterium breve is a beneficial bacterium found in human breast milk and the human gut. The amount in your gut declines as you get older (20).

Research shows that *Bifidobacterium breve* (strain 1205) can reduce anxiety-like behaviour in animals (21).

Anxious animals also perform better on cognitive tests after being given it (22).

This makes *Bifidobacterium breve* (strain 1205) a good psychobiotic option if your anxiety impairs your cognition and interferes with your ability to complete tasks.

Unfortunately, I haven't been able to find a psychobiotic supplement with *Bifidobacterium breve* (strain 1205) in it.

The *Bifidobacterium breve* species is included in this supplement but it doesn't list the exact strain. It can also be found naturally in some fermented foods.

9. Galacto-oligosaccharides

Not all psychobiotics are simply probiotics. Psychobiotics can also include "prebiotics," which are non-digestible soluble fibres that stimulate the growth of good gut bacteria, and therefore improve mental health and reduce anxiety. Galacto-oligosaccharides (GOS) are a type of prebiotic that have been shown to do just that.

In one study, GOS significantly decreased the secretion of cortisol, and participants paid more attention to positive information rather than negative information. People who are anxious tend to have high levels of cortisol and often get caught up in negative thinking. So this study suggests that GOS has anti-anxiety effects.

Other research has demonstrated that people with irritable bowel syndrome (IBS) often have anxiety because of the lack of microbial diversity in their gut. However, when IBS sufferers supplement with

a prebiotic mixture containing GOS, it significantly reduces their anxiety and improves the quality of their life.

What Psychobiotic Should You Take?

It's best to try the supplements that I've recommended in each section above because I've been able to confirm whether they actually contain probiotic strains that have been shown in research to help reduce anxiety.

I also typically recommend people try one probiotic strain at a time to figure out how they respond to each one. This is because some people like myself often have a bad reaction to one strain, but a good reaction to another. However, I understand that doing that can be time-consuming and tedious. Plus, clinical studies often demonstrate that probiotic mixtures with multiple strains are better at improving the diversity of gut bacteria than single strains.

I've gathered some probiotic supplements below that include a combination of the species above. It's hard to know for sure if they contain the actual psychobiotic strains used in the research.

- Thryve Probiotics - contains 8 of the 9 species above. This is the probiotic supplement I now take regularly because I like it so much. You can use the coupon code `optimialliving15` for a 15% discount.
- Hyperbiotics PRO-15 – contains 7 of the 9 species above
- Garden of Life Mood Plus – contains 7 of the 9 species above
- Bio-Kult Advanced Probiotic – contains 6 of the 9 species above
- LIFTED Mood Boosting Probiotic – contains 4 of the 9 species above

If you buy a psychobiotic supplement, take it for at least a month and see how you feel. Stop taking it if you start to feel worse. You may need to be your own guinea pig and test out different psychobiotic supplements to find the one that reduces your anxiety the most.

If all else fails, consider simply adding fermented foods into your diet and see how that goes instead. Fermented foods likely contain many strains of bacteria that have not been documented in the scientific literature. That said, the downside is that the bacteria in fermented foods will vary depending on the batch, and there is sometimes the risk of them containing pathogenic bacteria. Here are some other steps you can take to increase the good bacteria in your gut.

And this anti-anxiety supplement

(https://www.antianxietyplus.com/?utm_source=healthtrader&utm_medium=affiliate&utm_campaign=45496275) also includes several other natural compounds that have helped me manage my anxiety over the years. It can help reduce stress and anxiety while you work to improve your gut health. You can use the coupon code `FIVE$45496275` for a 5% discount.

Conclusion

The microbiome and psychobiotics are at the cutting-edge of neuroscience and mental health research and treatment. It hasn't been that long since researchers first discovered that there is a gut-brain connection.

When I first found out about it several years ago, I started consuming psychobiotics, and they have definitely helped me recover from chronic anxiety. But it's important to point out that psychobiotics alone were never enough. I also had to make changes to my diet, take key supplements, improve thyroid health, and overcome trauma. There really is no quick fix or magic bullet. Yet for some people, psychobiotics can be life changing, especially if you have digestive issues alongside your anxiety and worry. Overall, I think they are absolutely worth a try.