

PARTIALLY HYDROLYZED GUAR GUM (PHGG), PREBIOTIC FOR DIGESTIVE PROBLEMS

This is a summary of a review article: Rao, Theertham Pradyumna, and Giuseppina Quartarone. "Role of guar fibre in improving digestive health and function." *Nutrition* (2018). <https://www.sciencedirect.com/science/article/abs/pii/S0899900718309031?via%3Dihub>

Partially hydrolyzed guar gum is a well-tolerated prebiotic fibre with a lot of evidence supporting its use in those with digestive complaints. Partially hydrolyzed guar gum has shown to significantly improve symptoms such as constipation, diarrhea, bloating, flatulence (gas), abdominal pain, and more.

Pretty much all prebiotics can all be useful for people with imbalanced gut bacteria. Much like probiotics being strain-specific in their effects; each prebiotic has a slightly different impact on the beneficial bacteria colonies that live in your gut. But the problem with many prebiotics is that they're not particularly well-tolerated by those with digestive issues.

Some prebiotics cause digestive problems, especially when taken in high doses. The most common digestive side effect when taking prebiotics is bloating.

PHGG IS A WELL-TOLERATED PREBIOTIC FIBER: PHGG, unlike many other prebiotic fibres, is very well-tolerated by most people with digestive issues. But just because a prebiotic is well-tolerated by those with digestive issues doesn't necessarily mean that it's useful. Looking at the research though, Partially hydrolyzed guar gum (PHGG) is unique in that the scientific evidence supports its use in a range of digestive issues, including reducing constipation, diarrhea, abdominal pain, and more.

PHHG REDUCES CONSTIPATION: Partially hydrolyzed guar gum has been used in many studies to reduce constipation and increase bowel movement frequency. In addition to this, research shows that PHGG consumption improves stool consistency, changing it from hard to normal.

Consuming PHHG also seems to reduce the need for the use of laxatives. Partially hydrolyzed guar gum at 5g/day increases colonic transit time (the speed at which your digestive system moves food through it) by about 12 hours in constipated patients, and by about 22 hours in those with slow transit time. Interestingly, these benefits occurred when using a wide range of dosages of PHHG within these studies. Dosages from 5g/day to 36g/day were used, all with significant benefits to constipation. This means that even at dosages as low as 5g/day, you may notice improvements in bowel movement frequency, abdominal pain related to constipation, and stool consistency.

PHHG REDUCES DIARRHEA: PHHG significantly reduces the incidence of diarrhea as well as the frequency of diarrhea in those with health issues that make them more prone to this condition. In a study of healthy adults made to have diarrhea (by giving them a hefty dose of sugar alcohols), 10g of PHHG sharply reduced the incidence of diarrhea by a cumulative 82%. It seems that a higher relative dose of partially hydrolyzed guar gum is beneficial for diarrhea — these studies used doses from 5g up to 28g/day with good effect.

PHHG IMPROVES IBS SYMPTOMS: Irritable Bowel Syndrome (IBS) is a condition where partially hydrolyzed guar gum has significantly improved a host of IBS symptoms like bloating, abdominal pain, bowel habits, flatulence (gas), abdominal spasm. In addition to this, PHHG decreases the concentration of methane in the stool.

The dosages used in these studies ranged from 5-10g/day, but even at the lower dosage partially hydrolyzed guar gum was highly effective in reducing IBS symptoms.

PHHG IS PREBIOTIC: Partially hydrolyzed guar gum is prebiotic, meaning that it increases the number of healthy bacteria in the gut microbiome. Research shows that PHHG increases counts of Bifidobacteria and Lactobacillus species — two of the main beneficial bacteria present in the gut. In addition to this, PHHG is highly fermentable. The bacteria can ferment partially hydrolyzed guar gum produce highly beneficial compounds called short-chain fatty acids (SCFAs). Short-chain fatty acids fuel the cells of the digestive tract, keeping the gut healthy.

TAKING PARTIALLY HYDROLYZED GUAR GUM (PHGG): At 6g/day partially hydrolyzed guar gum becomes prebiotic meaning that we see significant increases in the counts of beneficial bacteria in the gut microbiome). Dosages go up to 36g/day were used in some studies; however, it is clear from this research that a high dosage like that may not be necessary for symptom improvement.