

APPLIED NUTRITION SCIENCE



REBOOT YOUR GUT BACTERIA,
WITH BARLEY⁺ AND ITS PREBIOTIC
DIETARY FIBER



What is Barley⁺?

Barley⁺ is a new range of whole grain muesli and muesli bar products, brought to you by Freedom Foods Group. Barley⁺ is special because it has a kind of superior, non-genetically engineered whole grain called BARLEYmax™ as its key ingredient.

BARLEYmax™ was developed by Australia's leading research institute, the CSIRO, in response to their research on fiber, and their knowledge that we don't get nearly enough of certain important fiber types.

We can group fiber types into 3 families - resistant starch which acts a little like fiber as it escapes breakdown in the small intestine, soluble and insoluble fiber. The first two play particularly important roles as prebiotics and it is these that often fall seriously short in our diets, especially resistant starch.

The important known health benefits of prebiotic fiber and other fiber types

Until recently, we really thought of fiber as one entity, being the 'roughage' type or **insoluble fiber** and we primarily thought the importance of fiber was to keep us regular. Of course, this is crucial for good health - if you've ever suffered from constipation you'll understand just how crucial that is! You can feel lethargic, bloated and uncomfortable, experience abdominal pains, bad breath, lack of appetite and even your concentration and brain power can be affected. *Luckily, Barley⁺ is packed with this kind of fiber (Figure 1).*

More of the important fiber types together in one whole grain



Figure 1: BARLEYmax™ has more resistant fiber, soluble fiber and insoluble fiber in the one whole grain compared with other grains like wheat, oats and rye.

However, we now know fiber has other effects. **Soluble fiber types** form a gel in the intestines, slowing down the attack of our digestive enzymes that break down the carbohydrates (starch and sugars) in our food. This in turn slows down their absorption and thus blunts the rise in blood sugar levels after eating. These types of fiber are therefore hugely beneficial for blood sugar control.

Soluble fiber types are also highly effective at lowering blood cholesterol levels, especially LDL-cholesterol, the type that is associated with an increased risk of heart disease.

The most recent and exciting research is that **resistant starch and some soluble fiber types** are premium fuel for the good gut microflora that live primarily in the large intestine. *These nutrients also have prebiotic effects and Barley⁺ is also naturally loaded with these good prebiotic fiber types (Figure 1).*

Prebiotics and probiotics

You may be more familiar with the term *probiotics*, so let's clarify the difference. *Probiotics* are beneficial bacteria that we consume, either as supplements or present in fermented foods like yogurt, cheese, kefir, miso, sauerkraut or kimchi.

In contrast, dietary *prebiotics* are 'food' for the good bacteria already living in your gut. Arguably, prebiotics are more important as they encourage the growth of the good microflora already there in your gut. As they grow stronger they push out the bad guys, making your gut stronger and healthier. Probiotics on the other hand may not survive the journey to your large intestine and if they do, may not be able to compete against those bugs already there to make it their home.



Only 7 percent of Americans eat the recommended amount of whole grains.

The importance of whole grains

We know that whole grain intake is linked to reduced risk of a range of chronic lifestyle related diseases. One of the main reasons for this is that whole grains are one of the key food sources of the various fiber types discussed here, but especially prebiotics.

Unfortunately, Americans are falling short on our intake of whole grains. Only 7 percent of Americans eat the recommended amount of whole grains, which is to consume 3 ounce-equivalents per day of whole grains for a 2,000-calorie diet - but the more the better! **One serve of Barley⁺ Muesli provides around 2 ounce-equivalents of whole grains to your daily intake. Barley⁺ can help Americans meet their recommended intake of whole grain foods.**

Reboot with Barley⁺ in a way that's right for your gut

As all the good prebiotic and other fiber types in Barley⁺ pass undigested into your large intestine, and as your good gut bacteria use these prebiotics as their own food to build up more of their own good kind, they produce some of their own 'wind' or 'gas'.

We've all been conditioned to think this 'wind' is a bad thing, but it can be an indication that the good gut bugs are fighting back. The trick is to introduce this good prebiotic fiber back into your diet slowly, to give the good gut bugs time to adapt to all the good stuff you're feeding them.

Follow our step-by-step guide on the following pages, to reboot your gut in a way that's right for you.

Reboot with Barley⁺

Can you eat legumes (e.g. baked beans & chick peas), garlic, artichoke, shallots, leek/onions without feeling wind build up?

N

Are you lactose intolerant or FODMAPs sensitive?

Y

N

Y

Enjoy 1/4 cup Barley⁺ Muesli with your favorite milk/yogurt every 2nd or 3rd day for 2 weeks or until you are enjoying your Barley⁺ and your gut is feeling good.

Start with 1 to 2 tbsp Barley⁺ and gradually increase to 1/3 cup Barley⁺ Muesli every 2nd or 3rd day for 2-4 weeks or until your gut is feeling good.

Gradually increase to 3/4 cup Barley⁺ Muesli every 2nd or 3rd day for 2 weeks or until your gut is feeling good.

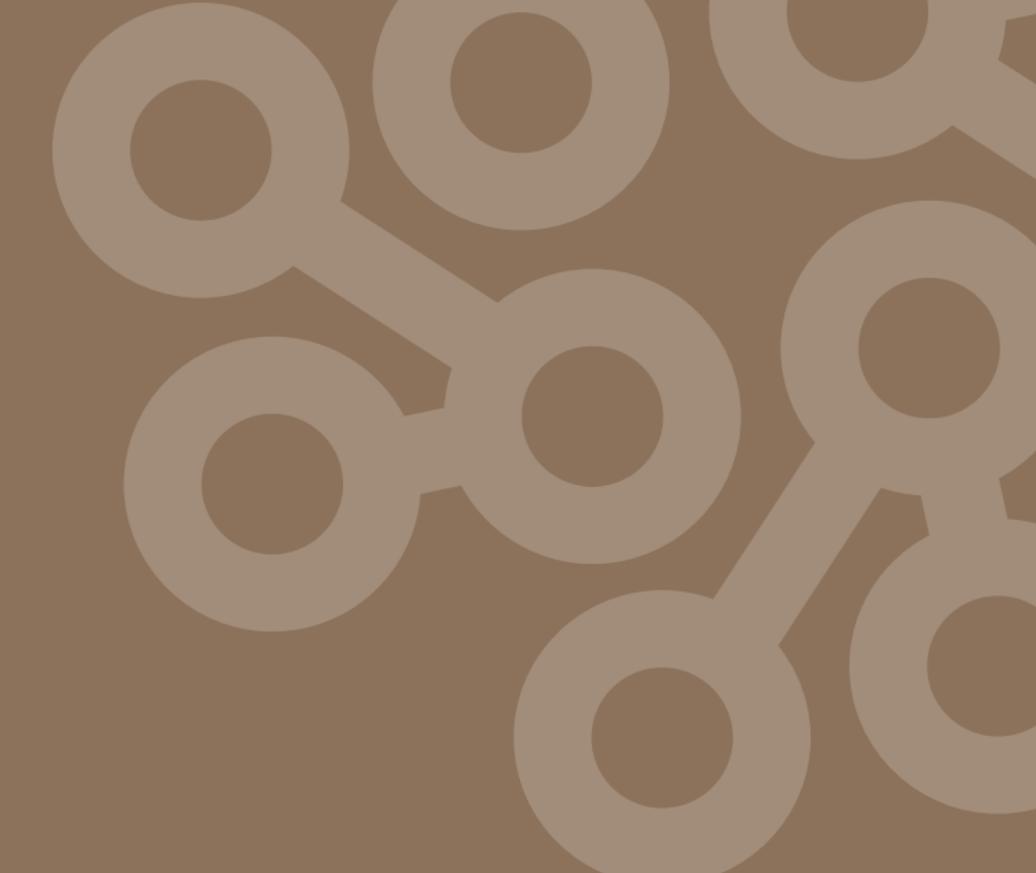
Being lactose intolerant or FODMAPs sensitive means it may take you extra time to adjust to the good prebiotic fiber in Barley⁺.

Start with 1 to 2 tbsp Barley⁺ with your favorite milk alternative every 2nd or 3rd day for 2 weeks or until you are enjoying Barley⁺.

If you are adjusting well to your Barley⁺, then keep going. Gradually increase your Barley⁺ until you reach an amount that sits well with your gut, up to a 3/4 cup serving.

If not, continue enjoying Barley⁺ in amounts that allow your gut to feel good.

Gradually enjoy Barley⁺ more regularly to continue reaping all the gut health benefits that go with eating resistant starch, soluble and insoluble fiber all in one nutritious whole grain. Barley⁺ Muesli Bars make a great whole grain breakfast on the run.



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V105/11/17