Fiber & Resistant Starch For Smoother Blood Sugars

Dietary Fiber is plant material that cannot be completely digested yet feeds healthy gut bacteria. Fiber is mostly found in fruits, vegetables, whole grains, and legumes.

Benefits of Eating Fiber:

- Numerous studies have shown a reduction of fasting blood glucose and a decrease in HbA1c of 0.26% with dietary fiber as an intervention[1].
- Supplementation with resistant starch can lower energy intake by ~300 cals[2].
- Those who consume resistant starch (fibers that are slowly fermented in the large intestine) for 12 weeks have shown 19% improvement in insulin sensitivity and decrease in waist circumference and fat storage when compared with a placebo group[3].
- Daily consumption of resistant starch (examples below) over 6 weeks lowered post-meal blood sugars in overweight adults[4].

3 Types of Fiber As They Relate To Blood Sugar

1. Soluble

- Slows down the digestion of foods making people feel full longer.
- Forms a gel-like substance and draws water into the stool, also supporting constipation.
- Helps to regulate insulin and blood sugar. Puts the school bus in front of the Ferrari. Slows down the absorption of sugar.

2. Insoluble

- Creates bulk helping to maintain healthy bowel movements thus eliminating toxins and waste material.
- Softens stools helping to prevent hemorrhoids and diverticulitis.
- Physically fills up space in the stomach and intestines bringing the sensation of being full.

3. Resistant Starch

- Feeds your good gut bacteria directly, which improves overall metabolic health.
- Improves insulin sensitivity as well as post-meal blood sugar.
- Encourages weight loss by making our body use more energy to try to digest them.

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Nourish Your Gut with Fiber & Resistant Starch

- While the research is young, gut dysbiosis (gut bacteria imbalance) is found in individuals with type 1 diabetes (T1D).
- People with T1D are more likely to have gut characterized with reduced Firmicutes/Bacteroides (low Firmicutes, high Bacteroides) ratio and decreased microbial diversity[5].
- The more diverse a gut, the better.
- The consensus has been that the diet including high fiber and resistant starch may reduce inflammation by producing more healthy gut fuel (short-chain fatty acids, SCFAs), and shifting the gut towards more diverse, richer, and healthier gut[6,7]!
- SCFAs have been linked to beneficial effects such as preventing weight gain and improved glucose control[8].
- SCFAs are a good energy source for the gut cells that can strengthen the gut barrier function, and the destruction of the gut barrier may accelerate the development of T1D[9].

Adding More Fiber & Resistant Starch into Your Diet

- Eat produce at each meal
- Opt for produce more than grains when the choice is present
- Enjoy more beans, peas, and lentils daily
- Make certified gluten-free overnight oats, which contain more resistant starch than cooked oatmeal.
- Add 1-2 tbsp of potato starch (the most condensed form of resistant starch) into your yogurt bowl or smoothie.
- Cook/Cool rice, potatoes, oats, and/or quinoa before enjoying them.
- Use practitioner-grade supplements, including Design for Health Paleo Fiber RS in your smoothies, coffee, or porridge most days.

Go Slow

Increasing your fiber intake is a dance. Adding too much fiber too quickly can lead to uncomfortable bloating, gas, and sometimes even diarrhea. Gradually increase your fiber intake over 4-6 weeks. Friendly reminder, to chew your food, as too often we don't do this enough.

Increase Water Intake

Keep the fiber afloat. Hydration facilitates the proper digestion of fiber as well as the elimination process. In general, you should try to drink one-half of your body weight in ounces per day. So, a 100lb person should drink 50oz of water per day.

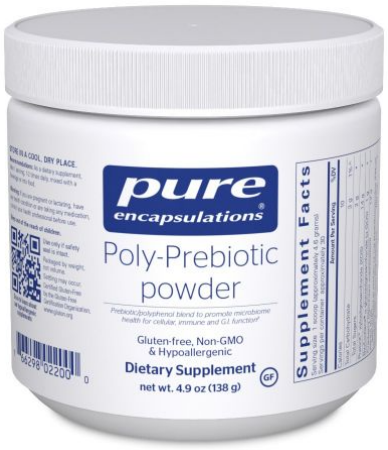
Some Examples of Foods with Resistance Starch & Fiber

Food	Serving/Amount	Total Dietary Fiber (g)	Resistant starch (g)
Apple, with skin	1 medium	4.4	-
Pear	1 medium	6	-
Banana, slightly green	1 medium, peeled	3.1	4.7
Blueberries	100g	2.4	-
Oats, rolled	¼ cup, uncooked	2	4.4
Rice, brown	½ cup, cooked	1.75	1.6
Rice, white	½ cup, cooked	0.3	1.1
Quinoa, cooked	½ cup, cooked	2.5	1.0
Flaxseeds	1 tbsp	2.8	-
Potato	1 medium, boiled	2.1	1.8
Potato starch	1 tbsp	0.6	8
Yams	½ cup, cooked	2.6	2.5
Carrot	100g, cooked	3	1.1-2.1
Chickpeas	½ cup, prepared	6.2	2.0
Peas, green	½ cup, prepared	4	2.0
White Beans	½ cup, prepared	5.6	3.7
Lentils	½ cup, cooked	8	3.4
Kidney Beans	½ cup, prepared	6.8	1.4
Onions	½ cup, raw	1.5	-
Mushrooms, white	1 cup, raw	1.0	-
Kale	1 cup, boiled	2.6	-
Broccoli	1 cup, cooked	5.14	-
Beets	1 cup, cooked	2	-

**Total dietary fiber = insoluble fiber + soluble fiber*

My Favorite Fiber Powders?

https://us.fullscript.com/welcome/diabeticdietitian



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