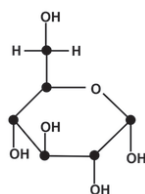


WHAT IS RESISTANT STARCH & WHY SHOULD I CONSUME IT

Starches are a type of carbohydrate.

Carbohydrates provide the body with **glucose**, Which is the main energy source for every cell.



Starches can be found in many foods, including grains, legumes, some vegetables and fruits. Most starches are broken down and absorbed, however **resistant starch resists digestion and can't be broken down**. These fibers are considered prebiotics as they are able to reach the colon where they are fermented and **provide food for the good bacteria** in the colon.



A study published in the journal Cancer Prevention Research in 2022 showed that Lynch Syndrome Patients who consumed **30 grams of resistant starch* per day for 2 years** had a **significantly reduced risk of cancer** compared to those who took a placebo. The difference appeared to be in cancers of the upper gastrointestinal track (such as stomach, upper intestine, bile duct and pancreas).



*The supplement used in the study is not available in the United States, so we have put together some information on how patients can get 30 grams of resistant starch into their daily diet.

WHAT FOODS CONTAIN RESISTANT STARCH

LEGUMES & PEAS



- Add canned or cooked/cooled beans or green peas to green or pasta salads.
- Make a cold 3 bean pasta salad.
- Snack on roasted lima beans, garbanzo beans, or green peas for a snack high in RS.
- Incorporate bean dips and hummus into meals and snacks.

Item	Cooking Method	Serving Size	Grams of RS
Lima beans	Cooked	½ Cup	6.4 gm
Red Kidney beans	Cooked	½ Cup	3.8 gm
Black beans	Cooked	½ Cup	2.7 gm
	Cooked, chilled x 2 days	½ Cup	4.1 gm
Pinto beans	Cooked	½ Cup	2.0 gm
	Cooked, chilled x 2 days	½ Cup	2.7 gm
Garbanzo Beans/ Chickpeas	Cooked	½ Cup	2.1gm
Lentils	Cooked	2/3 Cup	2.0 gm
Peas	Cooked	2/3 Cup	1.9 gm
Mung beans	Cooked	¾ Cup	1.6gm
Navy beans	Cooked	½ Cup	1.6gm
Great northern beans	Cooked	½ Cup	1.2gm

OATS

- Instead of cooking oats, make oatmeal by soaking raw rolled oats in milk or a milk alternative overnight, otherwise known as "overnight oats."
- Use raw oats to make energy bites:
 - Pulse oats in a food processor and mix with nut butter, cocoa powder, vanilla, and a pinch of salt.



WHAT FOODS CONTAIN RESISTANT STARCH

OATS

Item	Cooking Method	Serving Size	Grams of RS
Oats, rolled (not milled)	Cooked	½ Cup	0.4 gm
	Uncooked, soaked	½ Cup (measured with dry oats)	3.2 gm

GREEN BANANAS AND PLANTAINS

- Add slices of unripe green bananas to a yogurt parfait or overnight oats.
- Add unripe green bananas or plantains to your favorite smoothie recipe.
- Boil ripe plantains, then mash and add a small amount of butter, sugar, and cinnamon to sweeten. Then chill and consume when cold.
- Use Plantain or Green Banana Flour to boost the amount of RS you consume in a day.
 - These supplements are typically unflavored and can be added to liquids or items with good moisture content such as smoothies, yogurt, or oats. Typically, 1 tbsp will contain 3gm.



Amazon.com: LiveKuna Organic Plantain Flour Pack - 100% Natural Non-GMO Plantain Flour, Rich In Fiber & Vitamins - Gluten-Free All-Purpose Flour Alternative For Baking, Cooking, Keto & Paleo Diets, 32 oz : Grocery & Gourmet Food
 Amazon.com: Let's Do Organic Green Banana Flour, 14 Ounce (BWA25059) : Grocery & Gourmet Food
 Organic Resistant Starch Complex - 30 Servings (mercolamarket.com) 1 scoop contains 7.5gm.

Item	Cooking Method	Serving Size	Grams of RS
Green Bananas	Raw	1 small, 6" long	2.8 gm
Plantains	Raw and ripe	¾ Cup Sliced	5.0 gm
	Raw and unripe	¾ Cup Sliced	5.1 gm
	Cooked and cooled	½ Cup mashed or ¾ Cup Sliced	3.2 gm
	Cooked, reheated	½ Cup mashed or ¾ Cup Sliced	1.2 gm
	Cooked, unripe chips	½ Cup	0.0 gm

WHAT FOODS CONTAIN RESISTANT STARCH

POTATOES



- Use cold, chopped potatoes in your potato salad.
- Make russet potato wedges in the oven or air fryer, allow them to cool before eating. Try with your favorite dip or condiment.
- Make leftover mashed potato cakes with yellow potatoes. Boil, mash, chill, and then reheat before consuming.

Item	Cooking Method	Serving Size	Grams of RS
Russet Potato	Boiled or Baked	1 small	3.1 gm
	Cooked, Chilled	½ Cup mashed 2/3 Cup Chopped	4.3 gm
	Cooked, Chilled, Reheated	½ Cup mashed 2/3 Cup Chopped	3.9 gm
Red Potato	Boiled or Baked	1 small	1.7 gm
	Cooked, Chilled	1 small	2.0 gm
	Cooked, Chilled, Reheated	1 small	3.2 gm
Yellow Potato	Boiled or Baked	1 small	0.5 gm
	Cooked, Chilled	1 small	2.5 gm
	Cooked, Chilled, Reheated	1 small	5.1 gm

GRAINS AND RICE

- Use cooked and cooled long grain rice to make stir-fried rice.
- Rotate in cooked long grain rice for meals.
- Use leftover rice to make rice pudding and add in potato or banana starch to further increase the RS content.
- Add cooked and cooled barley to a cold grain salad or grain bowl.
- Store corn tortillas at room temperature for 3-5 days before using to increase the resistant starch content.
- Cook and chill pasta for a pasta salad and add in your favorite legume and vegetables.



WHAT FOODS CONTAIN RESISTANT STARCH

GRAINS AND RICE



Item	Cooking Method	Serving Size	Grams of RS
Barley	Cooked	2/3 Cup	1 gm
Corn Tortillas	Stored at room temp for 72 hours	2-6" Tortillas	2.3 gm
Corn, hominy grits	Cooked	½ Cup	1.3 gm
Pasta, durum wheat	Cooked	¾ Cup	1.2 gm
	Cooked, chilled for 3-5 days	¾ Cup	3.4 gm
Rye Bread	Baked	2 slices	2.0 gm
Wheat Bread	Baked	2 slices	0.7 gm
White Rice, long grain	Cooked	2/3 Cup	1.4 gm
	Cooked, Chilled	2/3 Cup	0.9 gm
	Cooked, Chilled, Reheated (stir-fried)	2/3 Cup	2.2 gm
	Stir-fried then chilled	2/3 Cup	4.5 gm

PREPARATION, COOKING & STORAGE METHODS

HOW DOES HEATING & STORING FOODS AFFECT STARCH CONTENT?

HEATING CONSIDERATIONS:

In some foods, heating/cooking can reduce the amount of resistant starch. These include oats, green bananas and plantains.



In other foods, the process of cooking and cooling increases the amount of resistance starch. This is the case in russet potatoes, legumes, peas, and pasta.



Rice, and red and yellow potatoes are best to consume after cooking, cooling AND then reheating, which will increase the resistant starch content.



STORAGE CONSIDERATIONS:



Chilling cooked pasta for up to 3 to 5 days further increases the amount of resistant starch.

Keeping corn tortillas at room temperature for 3-5 days before consuming increases the levels of resistant starch.



HOW TO CONSUME 30 GRAMS OF RESISTANT STARCH PER DAY



- When increasing fiber intake, **adequate fluid intake is important** to avoid issues with constipation. An average recommended fluid intake is 2 liters or 64 ounces daily. Focus on meeting these goals on a consistent basis before adding in the resistant starch.



- Gradually increase the amount of resistant starch** you consume to allow your digestive system to adjust. One might experience bloating and discomfort when adding in RS.
 - Increase intake by 3-5 gm daily for 3-5 days before increasing in increments of 3-5 gm to the goal of 30 gm daily.



- Consuming 30 grams** of resistant starch through food choices alone **may be difficult** based on one's food preferences, appetite, and tolerance.
 - Consider using banana flour (links provided above) to supplement your intake of resistant starch and aid with meeting the goal of 30 gm daily.

SAMPLE MEAL PLANS



Day 1	Cooking Method	Grams of RS: 30.4g
Breakfast	<p>Overnight Oats</p> <ul style="list-style-type: none"> 3/4 cup oats 1/2 cup sliced green bananas 1-2 tbsp walnuts Brown sugar to taste 	4.3 gm 1.4 gm
Lunch	<ul style="list-style-type: none"> Grilled chicken 1 cup potato salad with russet potatoes Green salad with sliced cucumbers, carrots, tomatoes, etc. 	6.4 gm
Dinner	<p>Fish Tacos</p> <ul style="list-style-type: none"> Fish of Choice 3 corn tortillas(kept at room temperature) salsa, cabbage, cilantro, radishes, 1 cup o fblack bean salad: <ul style="list-style-type: none"> 2/3 cup canned, drained black beans (served cold) 1/3 cup (or preferred amount) mixture of corn, tomatoes, avocado, red onion 	3.5 gm 5.4 gm
Snacks	<ul style="list-style-type: none"> 1/2 cup vanilla yogurt with 1 tbsp green banana flour and added fruit of choice 1/4 cup roasted lima beans with preferred seasoning 	3 gm 3.2 gm



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- Raigond P, Ezekiel R, Raigond B. Resistant starch in food: a review. *J Sci Food Agric*. 2015 Aug 15;95(10):1968-78. doi: 10.1002/jsfa.6966. Epub 2014 Nov 21. PMID: 25331334.

SAMPLE MEAL PLANS



Day 2	Cooking Method	Grams of RS: 28.15g
Breakfast	<ul style="list-style-type: none"> Veggie egg or tofu scramble 1 cup yellow potato hash or latkes made with cooked/ chilled yellow potatoes Fresh fruit 	5.1 gm
Lunch	<ul style="list-style-type: none"> Chicken salad sandwich <ul style="list-style-type: none"> 2 slices of rye bread 	2 gm
	<ul style="list-style-type: none"> Pasta bean salad <ul style="list-style-type: none"> 3/4 cup cold pasta, chilled 3-5 days before consuming 1/4 cup kidney beans 1/4 cup garbanzo beans Add preferred vegetables and seasonings/ condiments 	3.4 gm 1.9 gm 1.05gm
	Stir-fried Rice with Tofu or Chicken <ul style="list-style-type: none"> 2/3 cup rice (used cooked and cooled) 1/3 cup green peas Additional vegetables 	4.5 gm 0.9 gm
	Lima Bean Hummus (1/4 cup) <ul style="list-style-type: none"> Blend together in blender or food processor: 1 14.5oz can of lima beans, drained 1/4 cup tahini 2 Tbsp. olive oil Salt and pepper to taste After blending, mix in 1 Tbsp. banana flour Choose preferred raw vegetables for dipping 	1.8 gm
Snacks	3 Oatmeal balls with banana powder <ul style="list-style-type: none"> 1/2 cup raw, rolled oats 1 tbsp banana flour 1/4 cup peanut butter 1-2 tbsp honey Chocolate chips if desired 	1.5 gm 3 gm



SAMPLE MEAL PLANS



Day 3	Cooking Method	Grams of RS: 29.9g
Breakfast	Smoothie <ul style="list-style-type: none"> 1 small green banana 1 tbsp banana flour Blueberries Spinach Greek yogurt Milk or milk alternative Sweeten as desired 	2.8 gm 3 gm
	Tofu or Chicken Curry with garbanzo beans and potatoes <ul style="list-style-type: none"> 1/2 cup garbanzo beans 1/2 cup cubed yellow potatoes - use baked/ cooled and add to curry for the last 5 minutes of cooking Once placed in serving dish, add 1 tbsp banana flour 	2.1 gm 3.3 gm 3 gm
Dinner	Shrimp and Grits <ul style="list-style-type: none"> 3/4 cup grits Sautéed Greens 16 Bean Soup <ul style="list-style-type: none"> 1/3 cup soup Once placed in serving dish, add 1 tbsp banana flour 	2 gm 3.3 gm 3gm
	Rice pudding <ul style="list-style-type: none"> 2/3 cup rice pudding (using cooked/ chilled rice to prepare) Mix in 1 tbsp banana flour Season as preferred Yogurt Parfait <ul style="list-style-type: none"> 1/2 cup yogurt Kiwi and berries Mix in 1 tbsp banana flour 	2.2 gm 3 gm 3 gm

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