

Prebiotic Guide

Make the connection between beneficial gut species and the prebiotics that nurture them.



Match the bacterial species with their prebiotic source

Associated with good health

Species name	Prebiotics to Increase Growth
Agathobacter faecis	FOS AX RS
Agathobacter rectalis	FOS INULIN AX RS
Akkermansia muciniphila	FOS PAC
Anaerostipes hadrus	FOS INULIN
Bifidobacterium adolescentis	FOS INULIN GOS PECTIN AX
Bifidobacterium angulatum	FOS GOS
Bifidobacterium animalis	FOS INULIN
Bifidobacterium bifidum	FOS INULIN GOS
Bifidobacterium breve	FOS INULIN GOS PECTIN AX RS
Bifidobacterium catenulatum	FOS GOS
Bifidobacterium infantis	FOS INULIN GOS AX
Bifidobacterium longum	FOS INULIN GOS PECTIN
Bifidobacterium pseudocatenulatum	GOS
Coprococcus_B comes	FOS INULIN
Coprococcus eutactus	FOS INULIN
Faecalibacterium prausnitzii_A	FOS INULIN PECTIN
Faecalibacterium prausnitzii_C	FOS INULIN PECTIN
Lactobacillus gasseri	GOS PECTIN
Roseburia hominis	FOS AX
Roseburia intestinalis	FOS AX RS
Roseburia inulinivorans	FOS INULIN RS
Ruminococcus_E bromii	GOS RS

FOS Fructooligosaccharides

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Asparagus	• •
Beetroots	
Blueberries	• • •
Bran, wheat	
Bread, pumpernickel	
Bread, wholemeal	****
Breakfast cereals (bran-based)	
Brussels sprouts	
Butter beans	• •
Cashews	
Chicory root	
Fennel bulb	
Garlic	
Leeks	
Lentils, red	
Mulberries	
Nectarines	
Onions	
Pistachios	
Raspberries	• •
Red kidney beans	
Rye	
Rye crispbreads e.g Ryvita	• •
Shallots (little onions)	
Snow peas	•
Spring onions (green and white)	•
Watermelons	•

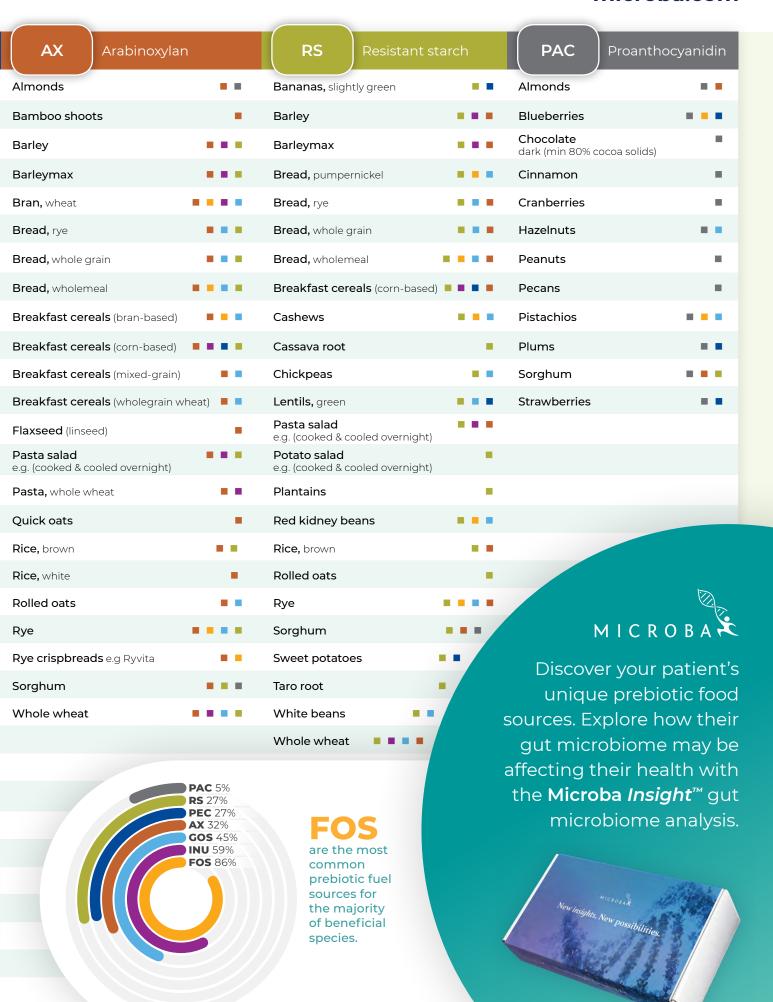
Associated with poor health

Species name	Prebiotics and dietary changes to inhibit growth
Bilophila wadsworthia	INULIN, REDUCE SATURATED FAT
Fusobacterium nucleatum	FLAVONOIDS



INULIN	GOS Galactooligosaccharides	PECTIN
Asparagus	Beetroots	Apples
Bananas, dried	Black beans	Apricots
Bananas, slightly green	Borlotti beans	Bananas, slightly green
Barley ■ ■ ■	Bran, wheat	Bananas, dried
Barleymax • • •	Bread, pumpernickel	Bananas, ripe ■ ■
Bran, wheat	Bread, rye	Beetroots
Breakfast cereals (corn-based)	Bread, whole grain	Blackberries
Chicory root	Bread, wholemeal	Blueberries ■■■
Garlic	Breakfast cereals (bran-based)	Breakfast cereals (corn-based)
Globe artichokes	Breakfast cereals (mixed-grain)	Butternut pumpkin (Winter squash)
Grapefruits	Breakfast cereals (wholegrain wheat)	Cabbage, common
Jerusalem artichokes	Butter beans	Carrots, raw
Leeks	Butternut pumpkin (Winter squash)	Eggplants
Onions	Cashews	Globe artichokes
Pasta salad e.g. (cooked & cooled overnight) ■ ■	Chickpeas	Grapefruits ■ ■
Pasta, whole wheat	Green peas	Green beans
Peaches, white	Haricot beans	Green peas
Shallots (little onions)	Lentils, green	Jerusalem artichokes
Whole wheat	Lentils, red	Kiwifruit
	Lima beans	Lemons
	Muesli, untoasted	Lentils, green ■ ■
	Mung beans	Oranges
	Pinto beans	Peaches, white
	Pistachios	Pears
	Quick oats	Plums ■ ■
	Red kidney beans	Potatoes
Metabolism of prebiotics	Rye	Pumpkin
FOS INULIN PECTIN	Soy beans	Raspberries
	Spelt	Strawberries • •
Asparagus Raspberries	Split peas	Sugar snap peas
Faecalibacterium prausnitzii_C	White beans	Sweet potatoes
Fermentation	Whole wheat	Tomatoes
Short chain fatty acids		Zucchinis (Summer squash)

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Research indicates that diets supporting low fibre consumption and excess protein consumption can shift the proportion of the gut microbiome to be in favour of protein-digesting species^{1,2}. In some cases, these species can release pro-inflammatory compounds, such as lipopolysaccharides¹, which promote negative health effects, including gut inflammation and chronic health issues.

The gut microbiome contains both fibre and protein-digesting microbial species. This prebiotic guide will help make the connection between beneficial microbes and the prebiotics which encourage their growth to best produce health-promoting SCFAs.

To maintain a healthy balance of microbial species and production of inflammation-suppressing compounds, such as short chain fatty acids (SCFAs)³, a high intake of prebiotics and plant-based fibres is shown to be the best course of action.

What's on the menu for *Faecalibacterium prausnitzii_C*?

FOS (Fructooligosaccharides): Pistachios, Pumpernickle Bread, Red Lentils

INULIN: Barley, Whole Wheat Pasta, Ripe Bananas

PECTIN: Butternut Pumpkin, Green Peas, Sweet Potatoes

Fos INULIN PECTIN Asparagus Raspberries Faecalibacterium prausnitzii_C Fermentation Short chain fatty acids

Metabolism of prebiotics

1. Vich Vila, A. Imhann, F. Jankipersadsing, S.A, Gurry, T., Mujadic, Z. Gut microbiota composition and functional changes in inflammatory bowel disease and irritable bowel syndrome. Science Translational Medicine, 10 (472)(2018). Doi:10. 1126/scitranslmed.aap8914 2. He, Q., Gao, Y, Jie, Z. Yu, X. Laursen, J.M. Two distinct metacommunities characterize the gut microbiota in Crohn's disease patients. 3. Singh, R. K. et al. Influence of diet on the gut microbiome and implications for human health. J. Transl. Med. 15, 73 (2017).