



Dreamfields Pasta—Low Glycemic and a Whole Lot of Fiber

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Dietary fiber is acknowledged worldwide for its positive effects on general health, but most of us need to get more fiber in our diet. Experts from around the globe, including the National Cancer Institute, the US Department of Agriculture, the US Food and Drug Administration, the National Academy of Sciences and Institute of Medicine, and the American Dietetics Association recommend getting between 25 to 30 grams of dietary fiber every day (or at least 10 to 13 grams per 1000 calories of food consumed). However, most of the US population only consume between 10 to 15 grams per day¹¹. Fiber is generally accepted as providing many benefits for good health. Experts consistently agree that dietary fiber is an important element our daily dietary intake in the fight against heart disease, colon cancer, diabetes, and obesity^{2,3,4,5,6,7,8,9,10,12,13,14}. Most of these benefits are related to the unique properties of the various types of dietary fiber, but most specifically the ability of the fiber to thicken the digestive contents and be fermented in the colon. For this reason, the type of fiber consumed is as important as the amount consumed.

What is dietary fiber?

Dietary fiber — also known as dietary bulk— includes all parts of plant foods that your body can't digest or absorb. Fiber is often classified into two categories: those that don't dissolve in water (insoluble fiber) and those that do (soluble fiber). Although a better classification for fiber type is based on its thickening effects and its fermentability.

- **Insoluble fiber** is generally referred to as “roughage” and are typically not very fermentable. This type of fiber typically helps increase the movement of material through your digestive system and increases stool bulk by absorbing water like a sponge. For this reason it can be of benefit to those who struggle with constipation or irregular stools. Wheat bran, whole grain cereals, breads, and many vegetables are good sources of insoluble fiber. **Dreamfields has 1 gram of this type of fiber per serving.**
- **Soluble fiber** is recognized for providing health benefits to the body by lowering blood fats and normalizing blood sugar, while also helping to reduce risk of colon cancer, coronary heart disease, and helping to promote food digestive health. Like insoluble fiber, soluble fiber also helps reduce constipation or irregular stools and helps increase movement of material through your digestive system. However, unlike insoluble fiber, soluble fiber helps increase biomass as a bacteria food within the large intestine and promotes stool softening. **Dreamfields pasta is a good source of this type of fiber, providing 4 grams per serving.** You can find generous quantities of the various soluble fiber types in oats, peas, beans, apples, apricots, figs, mangos, carrots, barley, onions, garlic, and psyllium.

Soluble fiber typically dissolves in water and it made up of two general types: 1) **a gel-forming, thickening type**, and 2) **a highly fermentable, non-thickening type**.

- The **gel-forming type** helps reduce blood sugar spikes by slowing the rate a food leaves the stomach and by delaying the absorption of glucose following a meal. This type of soluble fiber also lowers blood cholesterol levels by binding with certain digestive enzymes (bile acids) made in the liver, and promote their removal as waste. As the liver uses cholesterol to make bile acids, it draws additional cholesterol from the blood to make more, resulting in a lower blood cholesterol level. Soluble fiber also reduces the amount of cholesterol manufactured by the liver through its fermentation in the colon. The thickening type also create a feeling of

fullness to reduce hunger pangs. **Dreamfields pasta contains about 1 gram of this type of soluble fiber per serving.**

- The **non-gel forming type** is also called low-viscosity or low thickening fiber. , Dreamfields pasta contains a special type of this fiber called inulin. This natural fiber, found in over 36,000 plants worldwide, helps promote proper digestion of foods in the diet and helps support the body’s ability to resist and fight disease through its positive health influences on the large intestine environment^{3,7,9,15}. Inulin further helps your body absorb more calcium from your diet to help the body build strong bones and teeth. By aiding the growth of only the health-promoting bacteria, while also helping to rid the intestine of bad bacteria, inulin can also help the body resist inflammatory bowel disorders, like ulcerative colitis, resist diverticular disease, and help promote electrolyte and water recycling for proper body hydration. **Dreamfields pasta contains high levels of the non-gelling type of soluble fiber, providing about 3 grams per serving, and more than 2 grams of inulin.**

Weight control and physiological support in diet programs.

- Dietary fiber plays a key role in caloric intake control and reduced risk for development of obesity^{6,8,10,14}. Fiber’s role in caloric intake control is related to its unique physical and chemical properties that aid the body’s early signals of feeling full and its prolonged signals of hunger suppression. The feeling of being full is mainly related to fiber’s bulking effects, binding water and swelling to occupy more space, such as the insoluble and thickening soluble fibers. Prolonged signals of hunger suppression is more likely the outcome of certain soluble fibers, most notably the thickening-type dietary fibers and certain highly fermentable fibers, like those in Dreamfields, to enhance hunger suppression through their influence on the small intestine contents. These fibers slow a particular meal’s movement and delay absorption of sugar and fat from the diet, and are later fermented in the large intestine and provide effects on liver metabolism for hunger suppression.
- Certain fiber-types that gel can also absorb fat in the intestine, helping to prevent it from being transported to the body for storage in fat cells.
- Many weight control diets also promote high protein and low carbohydrates. High protein, low carbohydrate diets require a high water intake compared to a normal diet, often resulting in constipation. Fiber, particularly the soluble type types in Dreamfields pasta, help promote laxation (stool softening), relieving constipation. Another benefit of higher fiber intake in high protein diets relates to fiber’s ability to help manage the increased nitrogen from the digestion of a higher protein diet. Soluble fiber, particularly the highly fermentable type, helps promote proper protein digestion, and reduces the risk of potential harmful effects on kidneys that must clear excess nitrogen.

Make the Pasta comparison today!

Pasta Comparative Facts: 56 gram serving size

Pasta Serving Facts	Dreamfields Pasta	Whole wheat pasta	Standard Pasta
Glycemic Index (GI)	13	37	41
Fiber (Total)	5 grams	4.7 grams	2 grams
Insoluble Fiber	0.9 grams	4.0 grams	0.9 grams
Soluble Fiber	4.1 grams	0.7 grams	1.1 grams

References

1. AACC Report. 2001. The Definition of Dietary Fiber. *Cereal Foods World*. 46(3):112-126.
2. AACC Report. 2003. All Dietary Fiber is Fundamentally Functional. *Cereal Foods World*, 48(3):128-131.
3. Boeckner LS, Schnepf MI, Tunland BC. 2001. Inulin: a review of nutritional and health implications. *Adv in Food and Nutr Res*, 43:1-63.
4. Bornet FRJ and Brouns F. 2002. Immune-stimulating and gut health-promoting properties of short chain fructooligosaccharides (inulin). *Nutr Rev* 60(11):326-334.
5. Brennan CS. 2005. Dietary fibre, glycaemic reponse, and diabetes. *Mol Nutr Food Res.*, 49:560-570.
6. Burton-Freeman B. 2000. Dietary fiber and energy regulation. Symposium: dietary composition and obesity: Do we need to look beyond dietary fat? *J Nutr* 130:272S-275S.
7. Cani PD, Joly E, Horsmans Y and Delzenne NM. 2005. Oligofructose (inulin) promotes satiety in healthy human: a pilot study. *Eur J Clin Nutr*, pp. 1-6.
8. Dietary Reference Intakes: Energy, Carbohydrates, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids, Chapt. 7, Dietary, Functional and Total Fiber, pp. 339-421, Institute of Medicine of the National Academies, The National Academies Press, Washington D.C. 2005.
9. Kaur N and Gupta AK. 2002. Applications of inulin and oligofructose in health and nutrition. *J Biosci.* 27:703-714.
10. Ludwig DS, Pereira MA, Kroenke CH, Hilner JE, van Horn L, Slattery ML, Jacobs DR. 1999. Dietary fiber, weight gain, and cardiovascular disease risk factors in young adults. *JAMA*, 282(16):1539-1546.
11. Marlett JA and Slavin JL. 1997. Position of the American Dietetic Association. Health implications of dietary fiber. *J Am Dietetic Assoc.* 97:1157-1159.
12. Meyer PD, Tunland BC, Causey JL and Slavin JL. 2000. The immune effects of inulin in vitro and in vivo. *Agro-Food Ind Hi-Tech*, 18-20.
13. Saavedra JM and Tschernia A. 2002. Human studies with probiotics and prebiotics: clinical implications, *Br J Nutr*, 87(Suppl. 2):S241-S246.
14. Tunland BC and Meyer PD. 2002. Nondigestible oligo- and polysaccharides (dietary fiber): their physiology and role in human health and food. *Comp. Rev. Food Sci and Food Safety*, 3:73-92.
15. Zdunczyk Z. 2004. Physiological effect of low digestible oligosaccharides in diets for animals and humans. *Pol J of Food and Nutr Sci* 13/54, SI 1:115-130.