FIBER AND PROTEIN:

A Dynamic Duo for Weight Management and Satiety

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As obesity rates continue to be a serious concern in populations around the world, consumers are seeking products that can help.[1] While there are still plenty of questions to be answered, scientific evidence is mounting that fiber and protein may play a key role in satiety and weight management. Manufacturers are now using both of these ingredients to formulate products that can help manage weight.

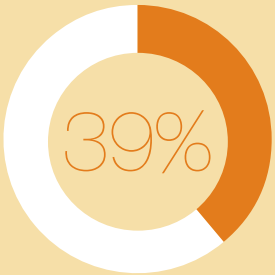
It's a welcome development for consumers who are looking to both improve the nutrient value of their diets, as well as manage their weight.[2,3]

In the weight loss space, fiber is rising to the status of nutritional superstar.[4] Research shows that it can play various roles in health, from increasing feelings of satiety, to helping manage weight, to the fringe benefit of supporting healthy heart function.[5,6] Also, the FDA has recognized that fiber has a potential role in energy balance and weight management, noting that this is one possible physiological benefit of dietary fiber.

But fiber has also been plagued with an old-fashioned image – being associated with gritty products made decades ago for digestive health. As a result, consumers are only now starting to embrace the trend, and may have some lingering confusion about what fiber is and how to best add it to their diet. But this is shifting… and consumers now report increasing interest in fiber intake, which remains low for many in the U.S.[7,8] According to data from Health Focus International, 76% of consumers want to get more fiber in their diet and more than one-third see a high-fiber claim as extremely or very important on products.

Part of the problem may be that consumers are confused about what fiber is, and how it is associated with carbohydrates. By definition, fiber is a carbohydrate found in fruits, vegetables and whole grains. However, fiber is different from other carbohydrates in that the body cannot break it down or absorb it – so it's unique from other nutrients.[9] These fibers have numerous roles, such as increasing laxation, delaying gastric emptying, increasing calcium absorption and lowering blood cholesterol levels. Scientific evidence now suggests that higher fiber intake can help to reduce body weight and appetite, although some studies show that not all fibers work equally well.[10,11]

Weight loss is among the most desired health benefits from food.



of consumers now indicate interest in foods for weight loss.

Source: IFIC Food and Health Survey, 2018

Not all fibers work the same

The difference in efficacy amongst fibers is due to the fact that not all fibers are the same, having different chemical and physical properties. There are basically two main forms of fiber: soluble and insoluble. The former dissolves in the body to make a gel-like substance, while insoluble fiber does not dissolve in the body, but does absorb water – adding bulk and moisture as it moves through the digestive tract.

Fiber-rich foods take longer to eat, increasing satiety and lowering the overall amount of food consumed. Prolonged chewing may also work to increase the saliva and gastric juices produced, slowing glucose absorption in the bloodstream and decreasing the rate of digestion to improve macronutrient absorption.[12]

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The rise of protein for weight loss

Protein is another nutrient that is associated with weight loss – and some studies even suggest that it may be even more effective than fiber in this regard.[13] The trend in protein consumption was first embraced by athletes and sports-oriented consumers who made it a priority to consume added protein to build muscle and enhance performance. However, as the concept of eating a more nutrient-rich diet gained acceptance, a broader consumer base now seeks more variety in their diet, consuming proteins from various sources.

According to Health Focus International data,

76%

of shoppers are interested in consuming more dietary protein.

Like fiber, protein has a variety of functions in overall health, helping to maintain muscle mass,[14] boosting energy and facilitating weight management or loss.[15,16] Proteins are amino acids linked together in chains, some of which are produced in the body, while others are not. The latter chains, called "essential amino acids," must come from our diet. Animal proteins have long been the protein of choice, because they replicate the right ratio of amino acids, but it is now recognized that too much animal protein may not be optimal for health.[17]

The science on protein and weight loss is well documented.[18] Some studies suggest that boosting protein by 25% to 30%, and spreading total intake across the day, is optimal for helping to increase metabolism, boost satiety and preserve muscle mass.[19]

These ideas are now broadly accepted by consumers, prompting them to seek out proteins from new and varied sources, ranging from plants to insects. According to *New Nutrition Business'* 10 Key Trends in Food, Nutrition and Health 2018, consumers are now motivated by several factors to get more protein, from building and preserving muscle to boosting energy. But eating protein to maintain a healthy weight is likely the top strategy because it is perceived as an attainable way to reduce snacking.[20]

Protein and Fiber in Products

Growing acceptance of protein and fiber is spurring companies to utilize these ingredients in new and innovative ways.

On the fiber front, **chicory root fiber** is one of the most well-studied[21,22,23] and versatile fiber ingredients suitable for a variety of product applications, including bakery, beverages, confectionery, dairy and snack foods. It is a naturally sourced fructan extracted from chicory root (inulin) which is a well-researched and positioned prebiotic fiber. Beyond weight management, chicory root fiber also offers benefits for bone health and has a negligible impact on glycemic index. In applications, it serves as a fat mimetic, a bulking or masking agent, a way to enhance product body and mouthfeel, texture and flavor, as well as displace full-calorie carbohydrates and sugars.

Plant-based proteins are also seeing strong momentum in product applications, as these versatile ingredients offer a cost-effective, easy way to add protein-value to many products. These ingredients have several advantages when it comes to product positioning. In addition to the health benefits of plant proteins, consumers are also looking for alternatives to animal-based proteins, as well as adding more protein variety to their diets.[24] Some of the most prevalent trends are added protein in bakery, ready-to-eat meals, snacks, meat, fish and eggs, cereals and even confectionery applications, according to data from Innova Market Insights.

Soy ingredients, for example, are providing a protein boost in products with the cost advantages of plant-based protein. Soy-based flours can help create better crumb structure and improve the elasticity of dough, increase water absorption and replace eggs in bakery applications, as well as improve shelf life. Likewise, textured soy flours may function better in products than other protein sources. In meat and meat analogues, for instance, they provide meat extension, improved juiciness, a higher processing throughput and reduced re-thawing loss.

True weight management may be the holy grail in better-for-you foods, but ultimately, the concept of adding protein and fiber to products seems destined to gain steam regardless, as these ingredients provide healthful and cost-effective solutions that are bolstered by many consumer trends, including the demand for overall good health and label-friendly products.

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