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An Inside View of Barley Beta Glucan

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Barley has more beta glucan fiber than any other grain, and it has repeatedly established positive clinical results with regard to [diabetes](#) control. It not only boosts immune function by supporting macrophages and neutrophils, lowers blood pressure and [cholesterol](#) levels, and helps control obesity, but also attenuates postprandial glucose levels, improves [insulin](#) sensitivity, and promotes a feeling of satiety.

A Canadian research article points out that beta glucan fiber creates highly viscous solutions in the upper digestive tract, fermentation in the colon, and subsequent prebiotic effects by selective metabolism in the gastrointestinal tract. This biochemical cascade results in laxation, significant improvements in both serum lipid levels and postprandial glycemia, and increased satiety.

Researchers argue that the dosage, food form, interaction with satiety, and molecular weight of beta glucan determine the way in which glycemia is regulated in patients with diabetes. For example, a study showed that when individuals with abnormal cholesterol levels ingested five grams per day of beta glucan in [beverage](#) form, their glucose and insulin responses improved significantly after five weeks. On the other

hand, incorporation of beta glucan in pasta did not significantly reduce postprandial glucose levels.

Further, when researchers from a Swiss study compared a continental breakfast to three other beta-glucan-enriched breakfasts in differing dosages, levels of plasma glucose responded inversely to the amount of beta glucan in the breakfast.

A recent study reinforces the dose-related effect of soluble beta glucan fiber in favorably affecting glucose metabolism. The research confirmed the beneficial effects of a standardized dose of barley beta glucan in beverage form. It established a recommended dosage and time period that might improve insulin sensitivity in individuals who are hyperglycemic but have not been diagnosed with diabetes mellitus.

Global research and review papers consistently support the efficacy of barley beta glucan as a first-line intervention right from the prediabetes state. The challenge lies in incorporating beta glucan fiber into processed foods to increase intake.

A rule by the FDA acclaiming the beneficial effects of barley in reducing coronary heart disease was passed in 2006. Ever since, barley beta glucan has been incorporated into breakfast cereals, baked products, pasta, beverages, salad dressings, and a variety of food forms. Taste, texture, and shelf life, however, are basic impediments to consumer acceptance.

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