

PREBIOTICS

Prebiotic Foods

Prebiotics are non-digestible fibers and carbohydrates that serve as food for beneficial gut bacteria. They help promote the growth and activity of these microorganisms. They are present in most fruits and vegetables. Examples of Prebiotic Foods (not necessarily fermented) that are particularly high in these fibers are:

- **Garlic:** rich in inulin,, a type of prebiotic fiber that supports the growth of beneficial bacteria.
- **Onions:** contain fructooligosaccharides (FOS), which act as prebiotics and can enhance gut health.
- **Leeks:** similar to garlic and onions, leeks are high in inulin and other prebiotic fibers.
- **Jerusalem Artichoke:** Also known as sunchokes, Jerusalem artichokes are high in inulin and make for a great prebiotic food.
- **Oats:** contain beta-glucans and resistant starch, both of which can serve as prebiotics.
- **Apples:** are a good source of pectin, a type of soluble fiber that has prebiotic properties and can enhance gut health.
- **Sweet Potatoes:** are a good source of dietary fiber and contain resistant starch, which can act as a prebiotic.
- **Carrots:** contain soluble fiber and various antioxidants, contributing to gut health and providing prebiotic benefits.
- **Beets:** are high in fiber and contain betalains, which have antioxidant properties and may support gut health.
- **Fermented Foods (e.g., Kimchi and Sauerkraut):** While primarily known for their probiotic content, these fermented foods also contain prebiotic fibers that help nourish beneficial gut bacteria.

How Fiber is Good for the Management of Diabetes or Pre-diabetes

Fiber slows down the absorption of sugar through several mechanisms:

- **Delaying Gastric Emptying:** Fiber-rich foods take longer to digest in the stomach, which slows down the rate at which sugars are released into the small intestine for absorption. This delay in gastric emptying helps to prevent spikes in blood sugar levels after meals.
- **Increasing Viscosity:** Soluble fibers, such as pectin and beta-glucans, form a gel-like substance in the digestive tract when they come into contact with water. This gel slows down the movement of food through the digestive system, including sugars, which delays their absorption.
- **Slowing Down Enzyme Activity:** Fiber can also inhibit the activity of digestive enzymes that break down carbohydrates into sugars. By slowing down this process, fiber reduces the rate at which sugars are released into the bloodstream.
- **Fermentation in the Colon:** Some types of fiber, particularly soluble fibers, are fermented by gut bacteria in the colon. This fermentation process produces short-chain fatty acids, which can influence glucose metabolism and insulin sensitivity, leading to a more gradual release of sugars into the bloodstream.

Overall, the combination of these mechanisms helps to slow down the absorption of sugar from the digestive tract, leading to more stable blood sugar levels and providing various health benefits. Fiber therefore is good for individuals who are diabetic or pre-diabetic.