Eat what you want while staying healthy? Here's how scientists are working to transform the sugar that you eat into fiber

Recognizing the difficulty of changing people's eating habits, UK food tech startup Zya thinks it has a solution to make sugary foods healthier without compromising on taste. The London-based company, which came out of stealth mode [February 23], says it has developed an enzyme that can convert sugar into fiber. The idea is that this enzyme would transform sugar into fiber inside a person's digestive system after they've eaten.

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Zya isn't looking to sell a supplement though. Instead, it's hoping food manufacturers will be interested in adding its enzyme directly to food products, such as cereals and sugary snacks.

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The enzyme Zya is developing comes from a family called inulosucrases, and is naturally made by a strain of bacteria found in the human microbiome that's capable of converting sugar to fiber in the gut environment. This enzyme acts on sugar before it can be broken down and absorbed by the body. It works by rearranging sugar molecules into inulin fiber, a type of soluble fiber found in plants such as chicory root that fosters the growth of beneficial gut bacteria.

In the human gut, the enzyme isn't expressed in amounts to be useful. In addition to scaling up its production, Zya has modified the enzyme to improve its stability and performance in the GI tract.

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