

Manipulation of Gut Hormones to Treat Type 2 Diabetes

Researchers at SUNY Upstate Medical University have developed a method of manipulating gut hormones to treat Type 2 Diabetes.

Current problem

A causal factor of Type 2 diabetes in adults is the presence of obesity and morbid obesity. Obesity is a metabolic disorder characterized by excessive accumulation of fat stores in adipose tissue. In morbid obesity, the most effective method to achieve prolonged weight loss is via surgical intervention. One of the most effective surgeries is the gastric bypass, which limits the size of the individual's stomach, requiring less food to be consumed to induce satiety. Studies suggest that the hypothalamus, which regulates GI hormone secretion, plays a contributory role in decreasing food intake after gastric bypass. Studies of rat hypothalamus models consistently show resolution of Type 2 diabetes after gastric bypass, further suggesting that a hormonal component plays a contributory role in reducing food intake and facilitate protracted weight loss post surgery.

Detailed Description

Researchers at SUNY Upstate Medical University have developed a method for treating Type 2 diabetes by manipulating the gut hormones PYY and ghrelin. A novel treatment involving a combination of PYY and ghrelin (or analogs of them) has been developed that can be administered to morbidly obese individuals. This treatment can be administered. The two hormones work in tandem to reduce the feelings of hunger, but not to an extent that would cause harm to the patient. This treatment works to induce weight loss in the patient and as a result eliminate the presence of Type 2 diabetes.

Benefits

- Combination of hormones safely curbs appetite
- Effective treatment for Type 2 diabetes

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