Horse Before the Carriage: Does Insulin Resistance Really Cause Type 2 Diabetes?

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ABSTRACT

For decades it has become accepted and taught in medical schools that insulin resistance (IR) is the cause of type 2 diabetes mellitus.

- Longitudinal studies, which followed 488 bariatric patients for 7 years, have shown that hyperglycemia disappears within 1 week while IR remains (Pories et al, 2021).

RESULTS

The findings suggest that not only was the original idea that IR causes type 2 diabetes mellitus faulty, but that the opposite seems to be true according to the data:

![Graph showing changes in glucose, insulin, and insulin sensitivity index (ISI) after Roux-en-Y (RYGB).](image)

DISCUSSION

- A new hypothesis has come to light. Deleterious signaling originating from the gastric fundus causes a malfunction in the metabolic pathway, damaging the mitochondria, which operates as the "generators" of cells.
- It appears the failing generators of cells cause widespread damage to most cell types in the body. Beta cells are not exempt.
- If this is true as the research suggests, damage to the beta cells in the pancreas results in the inability to control blood glucose levels as the pancreas cannot secrete enough insulin.
- A more extensive literature review needs to be conducted to further investigate the validity of the accepted causes of type 2 diabetes mellitus.

INTRODUCTION/BACKGROUND

- Type 2 diabetes (T2D) is a leading cause of death. Not only that, T2D causes a multitude of comorbid diseases that lead to poor prognosis, higher healthcare costs, and poor quality of life.
- This research is uncovering new ways to look at the disease process of T2D.
- By looking at T2D the proper way more treatment methods and preventative methods could potentially be invented, which in turn will drive the cost of healthcare down.

MATERIALS & METHODS

![Diagram of metabolic pathways and gut signal](image)

Above is an illustration and table of the different variations of Gastric bypass surgery and their effectiveness in weight loss and the remission of Type 2 Diabetes.

REFERENCES


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