

## **ABSTRACT**

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The Impact of Bariatric Surgery on Influenza Vaccination and Host Metabolism

(Under the direction of Melinda A. Beck)

Bariatric surgery is the most effective method for weight loss in obese individuals. This is significant because obesity is associated with several co-morbidities, many of which have metabolic dysfunction as an underlying cause. One major obesity-associated co-morbidity is a compromised response to the influenza vaccine. Several questions remain unanswered with regard to bariatric surgery's impact on obesity associated co-morbidities. In our study, we analyzed the impact of bariatric surgery on vaccine induced serum antibody levels and circulating nutrient and metabolic hormone/peptide levels. Our findings suggest altered serum antibody levels are not the mechanism through which obesity compromises the response to influenza vaccination. Additionally, our findings highlight the remedial effect of bariatric surgery on host metabolism.