OBJECTIVE: The aim of this study is to evaluate and quantify the influence of body mass index in the choice of treatment for gestational diabetes (GDM).

DESIGN: Retrospective analysis of data from a validated database which included records from the major maternity in Joinville region.

SUBJECTS: A total of 208 patients with gestational diabetes were divided in three groups according to their pre-gestational body mass index (BMI kg/m2) in normal weight (18.5-24.9), overweight (25-29.9) and obese (>=30.0).

MEASUREMENTS: Different types of treatment (diet therapy, metformin and insulin) were compared according to the groups of BMI in which the patients were divided. Data were presented as raw frequencies and adjusted odds ratios (OR) with 95% confidence intervals (CI) following multinomial logistic regression analysis to account for confounding variables.

RESULTS: Compared to women with normal BMI, the obese group had a lower chance to be treated only with diet therapy (OR 0.249 (CI 95%, 0.121-0.512)), a greater chance to be treated with insulin (OR 6.498 (CI 95%, 2.738-15.421) and a greater chance to be treated with the association insulin-metformin (OR 3.194 (CI 95%, 1.095-9.319). The chances of success in treatment were lower in the obese group compared with normal BMI patients in both fasting blood glucose and one hour postprandial blood glucose levels (OR 0.208 (CI 95%, 0.102-0.425) and (OR 0.416 (CI 95% 0.214-0.809), respectively.

CONCLUSION: Maternal obesity in pregnant with GDM increases the chance of aggressive pharmacological treatment (insulin and insulin associated with metformin) and reduces the chances of achieving adequate levels of fasting blood glucose and one hour-postprandial blood glucose.