Table 1. BMI Category and Prevalence of Shoulder Dystocia by Diabetes Status in Singleton Gestations

BMI Category	Shoulder Dystocia with Pre-Existing Diabetes	Shoulder Dystocia with Gestational Diabetes	Shoulder Dystocia with No Diabetes	aOR (95% CI) by BMI
Underweight n = 63,486	7.4%	1.5%	1.0%	0.73 (0.67-0.80)
Normal weight n = 740,604	5.3%	2.0%	1.4%	1.00 (referent)
Overweight n = 347,855	8.4%	3.1%	1.9%	1.35 (1.31-1.40)
Obesity I n = 151,288	5.8%	3.3%	2.2%	1.54 (1.48-1.61)
Obesity II n = 54,942	6.2%	3.4%	2.4%	1.68 (1.58-1.79)
Morbid obesity n = 24,452	7.1%	4.1%	2.8%	1.86 (1.72-2.02)
Superobese n = 2,243	0%	5.9%	2.9%	1.89 (1.47-2.44)
aOR (95% CI) by Diabetes Status	3.04 (2.68-3.46)	1.50 (1.43-1.57)	1.00 (referent)	

414 High-normal 50-gram glucose challenge test and future metabolic diseases: a population- based study

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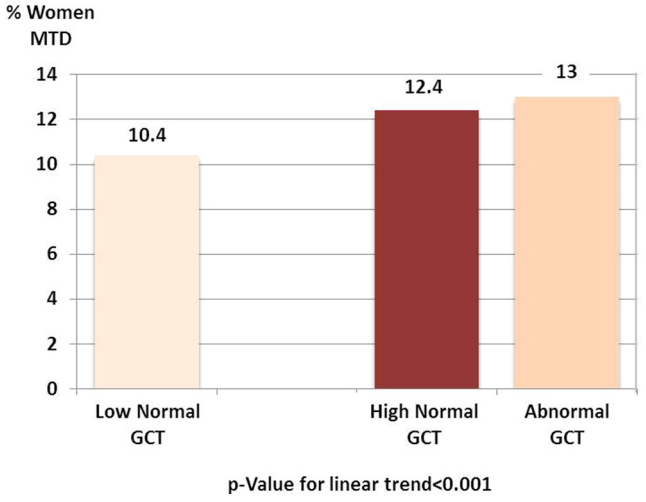
OBJECTIVE: A 1-hour 50-gram glucose challenge test (GCT) is the first step in the screening for gestational diabetes mellitus (GDM). Accumulating evidence show that women with high- normal GCT levels are at elevated risk for immediate obstetric complications such as large for gestational age newborns and greater likelihood for caesarean delivery. We sought to examine the risk for metabolic disorders later in life, among women with high-normal GCT levels, as compared to low normal and abnormal GCT.

STUDY DESIGN: This cohort study included all pregnant women who underwent GCT between the years 2005 to 2018 at the Central District of Clalit Health Services, the largest health maintenance organization in Israel. Rates of metabolic diseases (MTD) were compared between the three study groups: women with history of only Low-normal GCT (<124 mg/dL), High normal (125- 139 mg/dL) and abnormal GCT >140 mg/dL. Data on maternal ages and GCT results for each test performed, as well as MTD such as diabetes and obesity were collected and analyzed from the computerized database. Multivariable survival model was used to study the association between GCT levels and MTD risk, while adjusting for maternal age.

RESULTS: A total of 66,869 women performed 1 to 10 GCTs to a total of 117,435 tests during the study period; 23% of study participants (n=15,360) had at least one abnormal result; 11.3% (n=7566) of participants had a diagnosis of MTD. As compared to women with low normal GCT (only), women with a history of high normal and abnormal GCT were at higher risk for MTD (10.4% vs. 12.4% and 13.0%, p<0.001, age adjusted HR=1.18; 95%CI 1.09-1.24, and 1.18; 95%CI 1.11-1.25, for high normal and abnormal GCT, respectively). There was no significant difference in MTD risk between women with history of high normal and abnormal GCT results (age adjusted HR=1.02; 95%CI 0.94-1.10; p=0.67).

CONCLUSION: As compared to women with low normal GCT, women with high normal GCT, similarly to women with abnormal GCT, are at increased MTD risk. Although GCT is a screening test, it may be a predictor of MTD later in life, and women with high normal GCT results may benefit from close monitoring of their metabolic status.



415 Family history of diabetes mellitus and long-term endocrine morbidity of the offspring

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OBJECTIVE: Diabetes mellitus (DM) is associated with significant maternal and perinatal morbidity, including endocrine dysfunction, cardiovascular, and renal diseases. The aim of the present study was to determine whether being born to non-diabetic mother with family history of DM increases the risk for long-term endocrine morbidity of the offspring.

STUDY DESIGN: A population-based cohort study, comparing long-term endocrine morbidity of offspring of non-diabetic mothers with and without a family history of DM was conducted. All singleton deliveries between the years 1991-2014 in a tertiary medical center were included. Maternal DM or gestational diabetes mellitus (GDM), children with congenital malformations or chromosomal abnormalities and pregnancies without prenatal care were excluded from the study. The study groups were followed until they were 18 years of age for endocrine-related morbidity. Kaplan-Meier survival curve was used to compare cumulative incidence of long- term endocrine morbidity, and a Cox proportional hazards model was constructed to control for confounders.