

# IMPACT OF GESTATIONAL DIABETES MELLITUS ON RECRUITMENT OF PELVIC FLOOR MUSCLES DURING HOLD CONTRACTION: COHORT STUDY



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## Hypothesis / aims of study

PFM function depends on the integrity and synergy of neuromuscular and metabolic system, connective structures altered by gestational diabetes mellitus (DMG). This study investigate and compare EMG activity in hold contraction of PFM in GDM women at 24–30 to 36–40 weeks of gestation.

## Study design, materials and methods

Prospective cohort study (2015 and 2016); Protocol Number 972.104.

Inclusion Criteria: nulliparous or primiparous women who had undergone 1 previous elective Cesarean delivery between 24-30 weeks of gestation divided in two groups: GDM and normoglycemic (NG) according to ADA 2015. Among the exclusion criteria were UI or previous IU, neurological diseases, dropouts, preterm birth.

EMG part of Glazer Protocol: 60 second preliminary followed by five repetitions of 10 second contractions, each contraction preceded by a 10 second rest period.(1) The RMS arithmetic mean was performed and normalize by the maximal voluntary contraction at 24–30 weeks of gestation (baseline)

## Results

Maternal age, gestational ages at two points, BMI, cesarean delivery were pared between groups. Concerning the glucose tolerance test as expected the values were different between groups.

Table 1. Normalized Root Mean Square (RMS) Values From Electromyography Activity of Pelvic Floor Muscles in Hold Contraction

		24-30 WG	36-40 WG	P*
		Median(Min,Max)	Median (Min,Max)	
Hold	GDM (26)	0.57 (0.14,5.85)	0.41 (0.12,5.42)	.049
Contraction	NG (26)	0.70 (0.07,2.16)	0.70 (0.1,3.10)	.571

## Interpretation of results

GDM decreases PFM activity at hold contraction instead NG group maintain the PFM activity. These findings and the homogeneity of our data may suggest that GDM were responsible for changes on PFM activity detected by EMG.

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