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A randomized controlled trial investigating the effects of a low glycemic index diet on pregnancy outcomes in gestational diabetes mellitus

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Recommended Citation

Louie, Jimmy Chun Yu; Markovic, Tania P.; Foote, Deborah; Perera, Nimalie; Ross, Glynis; and Brand-Miller, Jennie, "A randomized controlled trial investigating the effects of a low glycemic index diet on pregnancy outcomes in gestational diabetes mellitus" (2012). *Faculty of Science, Medicine and Health - Papers: part A*. 551.

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Abstract

Abstract of paper that presented at The 16th International Congress of Dietetics, 5-8 Sep, 2012, Sydney.

Disciplines

Medicine and Health Sciences | Social and Behavioral Sciences

Publication Details

Louie, J., Markovic, T. P., Foote, D., Perera, N., Ross, G. & Brand-Miller, J. 2012, 'A randomized controlled trial investigating the effects of a low glycemic index diet on pregnancy outcomes in gestational diabetes mellitus', The 16th International Congress of Dietetics,

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A randomized controlled trial investigating the effects of a low glycemic index diet on pregnancy outcomes in gestational diabetes mellitus

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The prevalence of gestational diabetes mellitus (GDM) is rising. There is little evidence to demonstrate the effectiveness of one dietary therapy over another. We aimed to investigate the effect of a low glycemic index (GI) versus a conventional high fiber diet on pregnancy outcomes, neonatal anthropometry and maternal metabolic profile in GDM. Ninety-nine women (age: 26 – 42 y; mean \pm SD pre-pregnancy BMI: 24 ± 5 kg/m²) diagnosed with GDM at an average of 26.0 (SD 4.2) wks gestation were randomized to follow either a low GI (LGI, $n = 50$; target GI ≈ 50) or a high fiber, moderate GI diet (HF, $n = 49$; target GI ≈ 60). Dietary intake was assessed by 3 day food records. Pregnancy outcomes were collected from medical records. The LGI group achieved a modestly lower GI than the HF group (mean \pm SEM: 47 ± 1 vs 53 ± 1 ; $p < 0.001$). At birth, there was no significant difference in birth weight (LGI 3.3 ± 0.1 vs HF 3.3 ± 0.1 kg, $p = 0.619$), birth weight centile (LGI 52.5 ± 4.3 vs HF 52.2 ± 4.0 , $p = 0.969$), prevalence of macrosomia (LGI 2.1 vs HF 6.7%, $p = 0.157$), insulin treatment (LGI 53 vs HF 65%, $p = 0.251$) or adverse pregnancy outcomes. There was no significant difference in GDM-related adverse pregnancy outcomes between low GI diet and high fiber diet. This study was registered at anzctr.org.au as ACTRN12608000218392.

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