

Nutritional strategies to reduce the risk of Gestational Diabetes



Gestational Diabetes Mellitus (GDM) is condition in which blood sugar (glucose) levels become high during pregnancy and usually disappears after giving birth.

It can happen at any stage of pregnancy, but is more common in the second or third trimester.^{1,2,3}

Up to 28% of pregnancies are affected by GDM.⁴

Risk factors for GDM⁵

- Personal history of impaired glucose tolerance.
- Family history of diabetes.
- Hispanic American, Native American, South or East Asian, Pacific Islander, African American.
- Obesity before pregnancy.
- Polycystic ovary syndrome (PCOS).
- Previous birth of an infant ≥ 4000 g.
- Older maternal age (>40 years).

What are the short- and long-term effects of high blood glucose during pregnancy?⁵

Short-term effects at birth for the baby



- Macrosomia
- Low blood glucose levels
- Jaundice

Long-term effects

- Overweight/obesity
- Type-2 diabetes

Short-term effects at birth for the mother



- Hypertension
- Pre-eclampsia

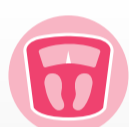
Long-term effects

- Type-2 diabetes
- Cardiovascular diseases

GDM Prevention



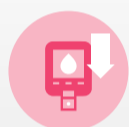
1 Diet modification: Increase fruit, vegetables, whole grains, and fish and decrease red and processed meat, refined grains.⁵



3 Managing gestational weight gain to not exceed standard recommendations.⁶



2 Exercising at the proper intensity and frequency throughout pregnancy.⁶



4 Monitoring the glucose blood level throughout the pregnancy.⁶

Myo-inositol and Probiotic supplementation: extra means for prevention?

Myo-inositol



An inositol naturally found in animal and plant cells, and can be found in many fresh fruits and vegetables.⁷



Has insulin-mimetic activities and improves insulin sensitivity, helping maintain normal blood glucose levels.⁷



Studies have demonstrated that myo-inositol can help lower the incidence of GDM by up to 57%.⁸

Probiotics *L. rhamnosus* and *B. lactis*⁹

- Probiotics are microorganisms which provide health benefits when consumed in adequate amounts.
- Some probiotics can influence gut microbiota composition and exert a beneficial effect on glucose metabolism and GDM by reducing gut permeability and helping to control low-grade inflammation.
- *L. rhamnosus* and *B. lactis* – have been shown to lower fasting blood glucose levels in pregnant women and help reduce GDM incidence.

Myo-inositol and probiotics have been shown to maintain healthy blood glucose and to reduce the incidence of GDM.

Together with a healthy lifestyle these supplements may be a potential strategy to reduce risk of GDM in at risk population

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