

Probiotics for postpartum care

DIABETES is a major public health concern in Malaysia, but most Malaysians are not fully aware of the health complications and risks that come with the disease. The disease can cause long-term complications in individuals, such as developing heart diseases or chronic kidney disorders.

Diabetes can impact anyone, even expectant mothers. Gestational diabetes mellitus (GDM) is a type of diabetes that may develop during pregnancy in women who have previously never been diagnosed with diabetes. This happens when body changes include insulin resistance, which could result in GDM.

Recent studies have shown that women with GDM had 10 times the risk of developing type 2 diabetes (T2DM) than women with normal blood sugar levels. This is supported by data shown in the *National Diabetes Registry Report 2020*, where 5.213% of the Malaysian population have T2DM, and of these patients, 57.02% are women. The key risk factors include:

- Asian ethnicity
- Obesity
- Advanced maternal age
- Multiparity
- Family history of T2DM
- Early GDM diagnosis
- History of GDM recurrence
- Requirement for hypoglycaemic medicines during pregnancy

Efforts to prevent the advancement of the disease had been largely unsuccessful.



Prof Dr Norfilza Mohd Mokhtar is the principal investigator and the group leader of Gut Research Group, Faculty of Medicine, UKM.

However, a recent study by local researchers has found that including probiotics in women's postpartum diet can help decrease the likelihood of developing glucose intolerance and T2DM.

The study, titled *The Roles of Probiotics in the Gut Microbiota Composition and Metabolic Outcomes in Asymptomatic Post-Gestational Diabetes Women: A Randomized Controlled Trial*, was published in the journal *Nutrients*.

Members of the GUT Research Group, UKM, who analysed a 12-week probiotic supplementation regime for women in their postpartum period were Prof Dr Raja Affendi Raja Ali, Prof Dr Norfilza Mohd Mokhtar, Dr Zubaidah Hasain, Dr Hajar Fauzan

Ahmad and Prof Dr Tong Seng Fah. The research generated interest as it focused on the need for comprehensive postpartum care plans that include probiotics to protect post-GDM women from developing glucose intolerance and T2DM.

The research highlighted existing data where the glucose metabolism in pregnant women with GDM is directly associated with the gut microbiota that functions to help support energy harvesting, digestion and immune defence. Experts believe the changes or imbalance of a woman's gut microbiota (gut dysbiosis) may remain postpartum, which can delay or accelerate the onset of GDM.

The researchers' findings showed that the balance of gut microbiota and glucose metabolism for post-GDM women may be restored after receiving the multi-strain probiotics known as MCP BCMC strains for 12 weeks. These strains included *Lactobacillus acidophilus* BCMC 12130, *Lactobacillus casei subsp* BCMC 12313, *Lactobacillus lactis* BCMC 12451, *Bifidobacterium longum* BCMC 02120, *Bifidobacterium bifidum* BCMC 02290, and *Bifidobacterium infantis* BCMC 02129.

Findings also recorded a decrease in fasting blood glucose (FBG), waist circumference, total cholesterol, triglycerides (TG), and pro-inflammatory protein level

termed Interleukin-8 (IL-8). Plus, the high-sensitivity C reactive protein (hs-CRP) levels, associated with the risk of T2DM due to insulin sensitivity and cardiovascular disease (CVD) dropped by 25% from the baseline, potentially lowering the risk of GDM progressing to T2DM.

Nevertheless, it is important to note that only some probiotics work the same way, and a higher dosage does not necessarily mean better efficacy. It is also best to consult professional health specialists to know which probiotics are suitable for you.

Overall, it is important to understand that untreated GDM can develop into T2DM and know that a balanced lifestyle and probiotic supplementation can be beneficial to slow down the progression of the disease.



What is Gestational Diabetes Mellitus (GDM)?

It is a condition of high blood glucose level detected in pregnant women, also known as glucose intolerant.

*1 in 20 Malaysians have diabetes = **57%** of them are **WOMEN**



Women with GDM had a 10x greater risk of developing to Type 2 diabetes (T2DM)

To prevent and manage the disease:

Always check for:

- Body Mass Index (BMI).
- Blood pressure.
- Cholesterol level.
- Blood sugar level.

Always practice:

- Exercise and stay active.
- Balanced and healthy diet.
- Control alcohol and sugar intake.
- Avoid smoking.
- Enhance healthy gut microbiome.



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