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**Current progress in metabolomics of gestational diabetes mellitus**

Progress in metabolomics of GDM

Qian-Yi Wang, Liang-Hui You, Lan-Lan Xiang, Yi-Tian Zhu, Yu Zeng

### Abstract

Gestational diabetes mellitus (GDM) is one of the most common metabolic disorders of pregnancy and can cause short- and long-term adverse effects in both pregnant women and their offspring. However, the etiology and pathogenesis of GDM are still unclear. As a metabolic disease, GDM is well suited to metabolomics study, which can real-time monitor the changes in small molecular metabolites induced by maternal

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Women with a history of gestational diabetes mellitus (GDM) have a 7-fold higher risk of developing type 2 diabetes (T2D) later in life, and an estimated 35%–50% of GDM cases will progress to T2D within 10 years postpartum. Biological pathways and metabolites influencing progression from GDM to T2D have not been elucidated in humans.

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Gestational Diabetes

Medical Condition

A condition in which women develop diabetes (high blood sugar) during pregnancy. Initially, it may not cause any symptoms. Excessive thirst, sweating and frequent urination may be noticed as it progresses.

- Common (More than 200,000 cases per year in US)
Rarely requires lab test or imaging
Treatable by a medical professional
Can last several months or years

Hormonal variations during pregnancy is one of the major cause. Overweight and fatigue are a few early symptoms. It can be managed with nutritious diet and exercise. Medication is necessary only if sugar level is uncontrollable with diet and exercise.

Symptoms

This condition shows no or almost negligible symptoms in many women. For some the symptoms may include:

- Increased thirst
Frequent urination
Excessive sweating
Overweight
Fatigue

Treatments

It can be managed with nutritious diet and exercise. Medication is necessary only if sugar level is uncontrollable with diet and exercise.

Medication

- Hormonal therapy: To regulate blood glucose levels. The most recommended is insulin injection. Insulin
Antidiabetics: To control the amount of blood glucose level. During pregnancy, the first choice would be Insulin injection, however, the recent studies have shown that the oral medications may be safe. Follow your doctor's advice. Metformin · Glyburide

Self care

- Monitoring the level of blood sugar at regular intervals will help regulating and avoid complications.
Intake of Healthy diet- consult the doctor to recommend a healthy diet which suits.
Regular Exercise - Regular, simple exercise helps lowering blood sugar level and provide more energy. It also relieves common symptoms during pregnancy like low back pain, constipation, swelling of legs, etc.
Close monitoring of the baby- a close monitoring on the developments of the baby is also essential and hence advised repeated ultrasound tests.

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Purpose of review: The purpose of this review is to describe ways in which **metabolomics** may enhance understanding of **gestational diabetes mellitus (GDM)** etiology and refine **current** diagnostic criteria. Recent findings: **Current** clinical recommendations suggest screening for GDM between 24 and 28 of **gestational** weeks using an oral glucose tolerance test.

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**Gestational diabetes mellitus (GDM)** refers to the first sign or onset of **diabetes mellitus** during pregnancy rather than progestation. In recent decades, more and more research has focused on the etiology and pathogenesis of GDM in order to further understand GDM **progress** and ...

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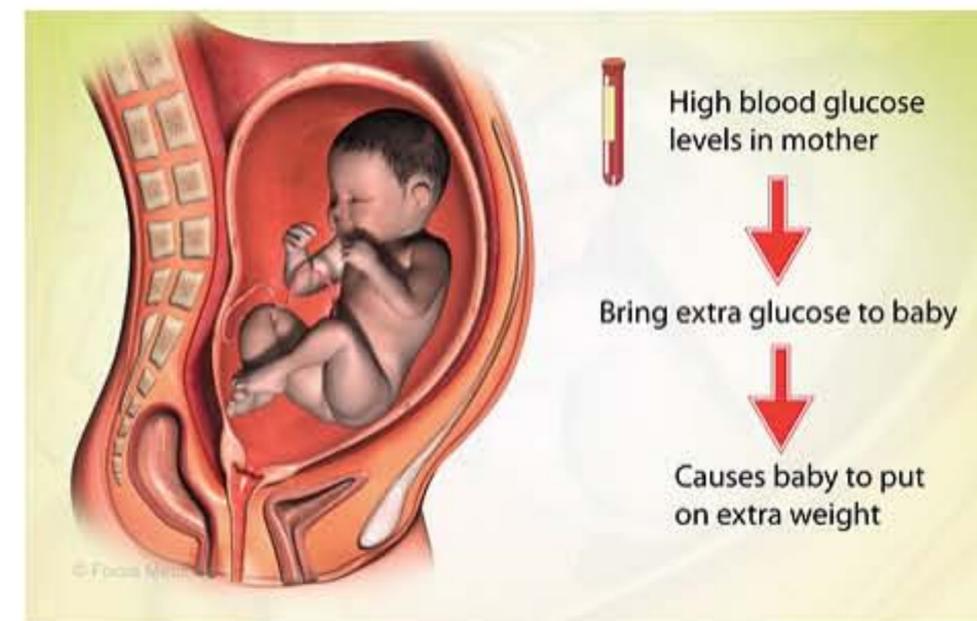
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**Gestational diabetes mellitus (GDM)** is a common pregnancy complication, characterised by carbohydrate intolerance with onset or first recognition during pregnancy. It develops during pregnancy in women whose pancreatic function is insufficient to overcome the insulin resistance associated with the pregnant state, resulting in hyperglycaemia

## Gestational Diabetes

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- 👨‍⚕️ Treatable by a medical professional
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