KAMARAJ IAS ACADEMY
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Gestational Diabetes Mellitus (GDM)

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Gestational Diabetes Mellitus (GDM) is a condition in which a woman without diabetes develops **high blood sugar (glucose) levels** during pregnancy.

Etiology and Risk Factors

- **Cause:** The placenta produces hormones (e.g., estrogen, cortisol, human placental lactogen) that make the body's insulin less effective, a condition called **insulin resistance** (the "contra-insulin effect").
- This typically begins around 20–24 weeks. If the mother's pancreas cannot produce enough extra insulin to overcome this resistance, GDM develops.
- **Risk Factors:** Age over 25, obesity, family history of Type 2 diabetes, Polycystic Ovary Syndrome (PCOS), and being of South/East Asian, Latino, or Pacific Islander descent (making it highly relevant for India).
- **Recent Context (India):** Recent studies indicate a surge in **early-onset GDM** in India, with glucose intolerance being detected earlier than the typical 24–28 weeks of gestation.

Complications and Management

- **For the Mother:** Increased risk of **Pre-eclampsia** (high blood pressure in pregnancy), C-section delivery, and a **much higher long-term risk of developing Type 2 Diabetes** later in life.
- **For the Baby:**
- **Macrosomia** (excessively large birth weight), leading to complications during delivery.
- **Hypoglycemia** (dangerously low blood sugar) immediately after birth.
- Increased risk of childhood obesity and future Type 2 diabetes.
- **Treatment:** Involves dietary and lifestyle changes (exercise), daily blood glucose monitoring, and sometimes insulin injections.
- **Public Health Challenge:** GDM is a major public health concern in India due to the country's high prevalence of diabetes and associated risk factors. It affects maternal and child health outcomes.
- **National Health Programs:** GDM screening and management are integrated into national health campaigns (like the National Health Mission) to improve maternal mortality and morbidity rates.