

ORAL MEDICATIONS VERSUS INSULIN IN PREGNANCY

Insulin Use in Pregnancy:

Insulin is a hormone that is released from the pancreas that regulates blood glucose levels. Insulin injections are used to control glucose levels of persons with gestational, type 1 and type 2 diabetes. Injectable insulin is the “Gold Standard” by the American Diabetes Association (ADA) and the first line of medication recommended by the American College of Obstetrics and Gynecology (ACOG) for use in pregnancy. Insulin does not cross the placenta; however, there is a risk for maternal hypoglycemia (low blood glucose) with use.

Oral Diabetes Medications used in Pregnancy:

Glyburide: (glibenclimide) is an oral drug that stimulates the pancreas to secrete more insulin in order to better control glucose levels. Glyburide has been a widely used oral medication in pregnancy for many years. However, new studies have shown glyburide crosses the placenta and can cause the following risks for the fetus:

- higher birth weight and macrosomia (large babies)
- neonatal hypoglycemia (low blood glucose)
- respiratory distress (difficulty breathing)
- jaundice (yellowing of skin due – can cause severe illness)
- increased admission to the neonatal intensive care unit (NICU)

Glyburide has also been associated with increased risk for maternal hypoglycemia (low blood glucose). Glyburide does have an increased failure rate leading to possible transition to insulin in later trimesters.

Metformin: (glucophage) is an oral medication that increases cells insulin sensitivity allowing for more appropriate glucose control. Recent studies have shown metformin crosses the placenta; however, there is no sufficient data demonstrating fetal risk. Metformin is generally introduced after the first trimester; however, if a patient is already on metformin prior to pregnancy physicians may continue the medication throughout the pregnancy due to the benefits outweighing the risk of hyperglycemia in pregnancy. Studies show metformin has less risk of neonatal hypoglycemia (low blood glucose) and lower total maternal weight gain compared to other treatments in pregnancy. Metformin also has demonstrated more favorable fat distribution in offspring of women treated during pregnancy. Metformin does have an increased failure rate leading to possible transition to insulin in later trimesters.