

# Israeli Medical Achievements

## Landmark Israeli-led study to improve diagnosis of diabetes

The World Health Organization, the US National Institute of Health and others are expected to change their definition of gestational diabetes, based on an international study led by an Israeli medical team.

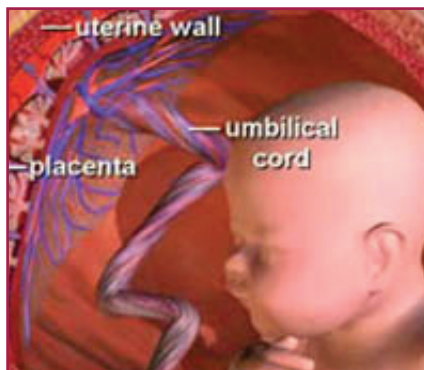
Gestational diabetes can cause serious complications in infants. The researchers, who studied 25,000 pregnant women, found that the level of glucose currently defined as indicating gestational diabetes has been set too high.

It has long been known that the condition – a form of diabetes that begins during pregnancy and often goes away after delivery – is harmful to both mother and infant. Prof. Moshe Hod, head of the maternal and fetal medicine unit at the Rabin Medical Center – Beilinson Campus in Petah Tikva, will soon publish the findings in the *New England Journal of Medicine*. But he lectured on the subject at a meeting of the American Diabetes Association in Chicago arousing much interest among gynecologists and pediatricians.

He said many women suffering from diabetes during pregnancy were not diagnosed because the mechanism for measuring sugar was not accurate and standards around the world were inconsistent.

Hod and his colleagues found a definite connection between glucose levels that have long been considered normal and undesirable results of pregnancy such as overweight babies.

Abnormal exposure of the fetus to



large amounts of sugar can be harmful in the long term. "A baby who is overweight at birth is liable to suffer as an adult from metabolic syndrome including diabetes, hypertension and high blood cholesterol," he said. "Thanks to this research, healthy babies will be born and grow into healthy adults, and pregnancies will be safer."

In addition, more women will be treated in time and there will be fewer Caesarean sections due to overly large babies. Large babies who are delivered vaginally are at risk for shoulder damage, which could be avoided if they are not oversized.

Women who are at high risk – those who are obese, have a family history of diabetes or have had gestational diabetes during a previous pregnancy – are usually tested when the fetus is between 24 and 28 weeks old. Women at low risk are generally not tested.

The check has conventionally been carried out using a fasting plasma glucose level test or an oral glucose tolerance test, which involves drinking

a solution with 100 grams of sugar and undergoing four blood tests. Until now, a result of less than 95 milligrams per deciliter was considered normal, said Hod, who on the basis of the study thinks the maximum glucose standard should be lowered, to about 90.

The study was carried out among women at 15 medical centers in 10 countries around the world – including the Rabin Medical Center and Soroka University Medical Center in Beersheba – over seven years, with \$20 million in funding from the US National Institute of Health. Among the countries outside Israel and North America were Britain, Thailand, Barbados, Australia, Singapore and Hong Kong.

It was the largest study ever conducted on this subject. The number of fetuses oversized for fetal age, the number of Cesarean sections, the weight of the babies at birth, the number suffering from overweight, and the babies' glucose and insulin levels after birth were all compared with their mother's glucose levels.

The higher the pregnant woman's blood glucose level, the greater the risk was to her infant, whether she herself had diabetes or not, according to the researchers. Women with gestational diabetes are treated with diets that restrict simple carbohydrates and include high-fiber foods in frequent, small meals. They sometimes are instructed to inject insulin or to take oral medications to reduce blood sugar levels.

Hod said that in the near future, more women around the world would be diagnosed with gestational diabetes during pregnancy, and it will be diagnosed with a simple blood test instead of the unpleasant glucose tolerance test. This will bring about major benefits to infants and savings to health systems around the world, he said. ■

*Excerpts By Judy Siegel-Itzkovich,  
The Jerusalem Post*

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