

Diabetes & Pregnancy



Vitamin D And Lifestyle
Intervention for Gestational
Diabetes Mellitus Prevention





Diabetes Mellitus during pregnancy

When Diabetes Mellitus is first found during pregnancy it is called Gestational Diabetes Mellitus (GDM). Women with GDM have high levels of sugar in their blood. This can have severe consequences for mothers and their children. Possible complications are oversized babies that might cause problems at birth, and a disturbed development of the placenta. Also, both mother and baby are prone to diabetes mellitus type 2 and cardiovascular disease later in life. Therefore prevention of GDM will lead to major improvements in the health of the mother and child, not only during pregnancy and childbirth, but also in to the future.

The number of women affected by GDM in Europe is not exactly known. GDM is often without typical symptoms, and therefore difficult to diagnose. Screening for high sugar levels in blood is almost the only option to detect GDM. Since there are no Europe-wide standards for screening or diagnosis of GDM, determining the exact number of women affected is virtually impossible. However, it was found in some countries that almost 20% of pregnant women have GDM.

Although exact numbers are unknown, it is clear that the number of women with GMD is increasing.

Women who are obese are at high risk for GDM. Therefore, the rise in obesity world-wide is accompanied by an increase in GDM.

DALI-PROJECT

DALI is a European-funded project under the 7th Framework Programme for Research. This EU-project involves 13 partners from 11 countries cooperating in a Europe-wide and large-scale study with the aim of developing effective preventive measures for GDM.

Over four and a half years (until September 2014), DALI will tackle the problem of preventing GDM.

The main objective of DALI is to evaluate the effectiveness of three intervention strategies to prevent GDM. Another objective of the DALI project is to collect reliable data on GDM, so different countries within Europe can be compared.

In the first phase, appropriate recommendations for these intervention strategies – balanced diet, physical activity and Vitamin D – will be developed based on the latest evidence. Then, in a pilot phase, the recommendations will



be tested in a small group of obese pregnant women in each participating center. The main intervention study will follow: 880 obese pregnant women throughout Europe will be asked to volunteer. They will receive Vitamin D supplements or advice on diet or physical activity, or a combination of these strategies. Each centre will have specially trained coaches who support and motivate the pregnant women to change their diet or physical activity behaviour and researchers will be closely monitoring all women during their involvement in the study.

Who will benefit from DALI-project?

The primary motivation of all involved in this ambitious and large scale study is to help prevent GDM in pregnant women. This will result in better health among those mothers that participate, and their children, in the future.

Health professionals will benefit from the easy to use tools developed in DALI to help women improving their lifestyle during pregnancy. This is not only important for the prevention of GDM, but also for a range of other health outcomes.

Society in general will benefit from DALI if the tested interventions lead to healthier families, reductions in health care costs and costs associated with loss of work.

Facts & Figures

Project DALI

- ▶ Total project cost: EUR 4 million
- ▶ Project time: four and a half years
- ▶ Start of the project: March 2010
- ▶ 13 partners from 11 countries
- ▶ Objectives:
 - Analysis of the effectiveness of three intervention strategies
 - Collection of reliable EU-wide data
 - Calculation of costs for health care systems

What is Gestational Diabetes Mellitus (GDM)?

Gestational Diabetes Mellitus is diabetes mellitus that is first diagnosed in pregnancy. GDM is a severe disease with serious and possibly long term consequences for both mother and child. In some countries, almost 20 % of the pregnant women are diagnosed with GDM.

Complications resulting from GDM:

- ▶ High amniotic fluid levels
- ▶ Gain in weight and growth which might lead to problems during childbirth
- ▶ Disturbed development of the placenta
- ▶ High risk for diabetes type 2 and cardio-vascular diseases for both mother and baby



Coordinator of the DALI-project:

Gernot Desoye

Department of Obstetrics and
Gynaecology, Medical University of Graz
Auenbruggerplatz 14, 8010 Graz

gernot.desoye@medunigraz.at

PARTICIPATING COUNTRIES:

Austria, Belgium, Denmark,
Finland, Ireland, Italy,
Netherlands, Poland, Spain,
Switzerland, United Kingdom

www.dali-project.eu