

**DESIGN OF FITFOR2: THE EFFECTS OF AN EXERCISE PROGRAM FOR PREGNANT WOMEN AT HIGH RISK FOR GESTATIONAL DIABETES****M. van Poppel**<sup>1</sup>, N. Oostdam<sup>1</sup>, E. Eekhoff<sup>2</sup>, M. Wouters<sup>3</sup>, W. van Mechelen<sup>1</sup>

<sup>1</sup>VU University Medical Center, Dept. of Public and Occupational Health, Amsterdam, Netherlands, <sup>2</sup>VU University Medical Center, Department of Endocrinology, Amsterdam, Netherlands, <sup>3</sup>VU University Medical Center, Department of Obstetrics and Gynaecology, Amsterdam, Netherlands

**Background:** Studies suggest that moderate daily physical activity and exercise during pregnancy are associated with a reduction in the risk of gestational diabetes mellitus (GDM). However, at present, physical activity is not routinely advised to pregnant women at risk for gestational diabetes in the Netherlands.

**Objective:** To assess whether an exercise program can improve insulin sensitivity and fasting plasma glucose levels of women at high risk for gestational diabetes, assuming that this will lower their risk of gestational diabetes.

**Methods:** The FitFor2 study is a randomised controlled trial. Women who visit one of the participating hospitals or midwifery practices and who are at risk for gestational diabetes are eligible to participate. After baseline measurement they are randomly allocated to in the intervention or control group. The intervention group receives an exercise program twice a week in addition to usual care. The exercise program consist of aerobic and strength exercises and takes place under close supervision of a physiotherapist. Data are collected at 15, 24 and 32 weeks of pregnancy and 12 weeks after delivery. Primary maternal outcome measures are fasting plasma glucose and relative increase in insulin resistance. Primary neonatal outcome is birth weight.

**Discussion:** If the FitFor2 intervention program proves to be effective, obstetricians and midwives should refer women at risk for GDM to a special exercise program. Exercise programs for pregnant women under supervision of an experienced trainer are already available in the Netherlands, and these programs may have to be adjusted.