

Previous abortions and exercise: Do they affect pregnancy?

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Women who have had two or more induced abortions have a reduced risk of pre-eclampsia by 60 %. It is not currently understood to what degree physical activity during pregnancy protects against pre-eclampsia, compared to previous studies. This is shown in two new studies from the Norwegian Institute of Public Health (NIPH) that use data from the Norwegian Mother and Child Cohort Study (MoBa).

The new results from MoBa were presented on Friday 7th November at 21st Norwegian Perinatal Days, a conference organised jointly with the 2008 International Stillbirth Conference. The NIPH chaired the conference and many researchers from the NIPH presented research about stillbirth and findings from the MoBa.

Reduced risk for pre-eclampsia among women who have aborted

One study shows that women who have had two or more induced abortions reduced their risk for pre-eclampsia by 60 percent. That is, they are as well protected against pre-eclampsia as women who have previously given birth to a child. Women who have had one termination previously, have an approximately 16 % reduced risk for pre-eclampsia compared with women who have never had an abortion. There was no protective effect linked to having had a miscarriage previously.

These results are from a new study in MoBa, where the link between

previously performed abortions, miscarriages and pre-eclampsia were studied. Information from 20 846 women was studied. All the women were first-time mothers, and some had previously had miscarriages or abortions.

The results indicate that every normal pregnancy, even if it ends before birth, to some degree will protect against pre-eclampsia in a later pregnancy, almost like a vaccination. The mechanisms for this effect are currently unknown, and more research is necessary. Miscarriages do not appear to protect against pre-eclampsia. This could be because pregnancies that end in miscarriage may have deficiencies which mean they cannot continue development but are rejected by the body. These deficiencies can be caused by many different conditions, amongst others problems in placenta formation. Perhaps miscarriage and pre-eclampsia are two related issues?

Found less protection from exercise than previous studies

The second study calculated the risk for pre-eclampsia if the pregnant woman was physically active during pregnancy. Information from 59 573 women in MoBa was studied. 1 in 4 reported that they were not physically active, whilst just under 1 in 10 women (7 percent) reported that they had taken part in more than 25 episodes of physical activity every month in the beginning of pregnancy.

By comparing these two groups, it was found that women who exercised had a 20 percent lower risk for pre-eclampsia. This was particularly relevant for women with BMI (Body Mass Index) under 25. Among women with BMI over 30, this study does not show any protection against pre-eclampsia despite physical activity.

Previous studies have shown significant exercise protection – from a 30 – 80 percent lower risk for pre-eclampsia among physically active pregnant women. This also applied to women with a BMI over 30.

The new study from MoBa emphasises that more research is needed before a conclusion on the link between physical activity in pregnancy and pre-eclampsia can be drawn.

In both studies, a range of factors have been taken into account that may affect results, e.g. smoking, age, mother's weight, education, infertility treatment, time between abortion(s) and next birth and change of partner.

What is pre-eclampsia?

Pre-eclampsia is a complication that affects 3-5 % of all pregnant women. The risk for pre-eclampsia is greatest for first-time mothers. For women who have previously given birth to a child the risk is approximately halved. It is unknown why previous childbirth protects against pre-eclampsia in subsequent pregnancies.

Pre-eclampsia appears in the latter half of pregnancy, and is recognised by high blood pressure and protein in the urine in the mother. In some cases, the mother can be unaffected by the condition, but in severe cases, pre-eclampsia becomes life-threatening for mother and baby, with organ failure and risk of convulsions in the mother. The child risks poor growth and development because of insufficient placental function. The only treatment is delivery of the baby and placenta. Pre-eclampsia is therefore an important cause of premature birth.

Placenta vital for normal development

The causes of pre-eclampsia are unknown, but involve the placenta. The placenta is vital for a normal development of the pregnancy. Problems in the formation or function of the placenta are thought to be an important mechanism in the development of pre-eclampsia. It is unknown why this happens.

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