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NO DIFFERENCE IN URINARY INCONTINENCE BETWEEN TRAINING AND CONTROL GROUP SIX YEARS AFTER CESSATION OF A RANDOMIZED CONTROLLED TRIAL, BUT IMPROVED SEXUAL SATISFACTION IN THE TRAINING GROUP

Hypothesis / aims of study
The aims of the study were to assess the long term effects of organised pelvic floor muscle training (PFMT) during first pregnancy (1).

Study design, materials and methods
The present study was a six year follow up study of a single blind, randomized clinical trial assessing the effect of PFMT to prevent and treat urinary incontinence (1). The training program between 20th and 36th week of pregnancy consisted of 12 weeks of intensive PFMT comprising weekly group training led by a physiotherapist and a daily home training program. The original trial concluded that the pelvic floor muscle training program did prevent and/or treat urinary incontinence during pregnancy and 3 months after delivery (1). Participants in the control group received a description of the training program after the results of the trial were published and were encouraged to train the PFM regularly. Primary outcome measure at six year follow up was self report of urinary incontinence registered on a questionnaire. Women reporting urinary leakage once weekly or more were classified as incontinent. Secondary outcome measures were self reported anal incontinence and sexual satisfaction.

Results
At the six year follow up test we were able to locate 280 of the 301 women included in the original randomised clinical trial. They received a postal questionnaire, and 188 women (62%) answered and returned the questionnaire. Because the number of participants attending the six year follow up varied considerably from the number in the original study, all longitudinal data on urinary continence status presented in this abstract are analysed by using a constant sample including the 188 women that attended all tests. Hence, the study group consisted of 188 women, 94 from the previous training group and 94 from the control group. We found no differences between groups in mean age, body mass index or parity at the six year follow up. The table shows the number (n) and percentage (%) of women with self reported urinary incontinence once per week or more in the former training group (TG) and the control group (CG), at 20 and 36 weeks of pregnancy, three months and six years after delivery.

Urinary incontinence	TG n (%)	CG n (%)	p-value χ^2 -test
20 weeks of pregnancy	32 (34)	26 (28)	0.343
36 weeks of pregnancy	30 (32)	45 (48)	0.025
3 months after delivery	17 (18)	29 (31)	0.042
6 years after delivery	22 (23)	16 (17)	0.276

Presently, PFMT were conducted at least weekly in about 45% of the women, both in the former training and control group. We found no statistically significant (p=1.000) difference in anal incontinence (solid/liquid stool) between groups. However, a significantly higher percentage of the women in the former training group (36%) reported improved satisfaction with sex after delivery than women in the control group (18%) (p=0.006).

Interpretation of results
The findings indicate that the effect of PFMT during pregnancy was not persistent in the long term. The lack of difference in urinary incontinence between groups may be due to the fact that the control group was doing the same amount of exercise in the follow-up period as the former training group. One interesting question is whether more frequent PFMT also in the follow up period might have changed the results. Due to the drop out rate in the follow up study, we could not calculate the effect of frequency of PFMT on continence status. Nevertheless, it seems to be important to implement strategies to encourage women to perform PFMT throughout their entire childbearing period.

Concluding message
The significant difference in urinary incontinence between the original training and control groups immediately after cessation of the training program and 3 months after delivery, did not persist at the six year follow up. However, sexual satisfaction was improved in the training group.

References
1. Obstetrics & Gynecology (2003)101;313-319.

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CLINICAL TRIAL REGISTRATION: This clinical trial has not yet been registered in a public clinical trials registry.
HUMAN SUBJECTS: This study was approved by the The Regional Committees for Medical Research Ethics, REK 5 and followed the Declaration of Helsinki Informed consent was obtained from the patients.