

From efficacy to effectiveness: Two randomized controlled trials of lifestyle intervention postpartum

Akademisk avhandling

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Avhandlingen baseras på följande delarbeten:

- I. Huseinovic E, Winkvist A, Bertz F, Bertéus Forslund H, Brekke HK. Eating frequency, energy intake and body weight during a successful weight loss trial in overweight and obese postpartum women. *European Journal of Clinical Nutrition* 2014; 68(1):71-6.
- II. Huseinovic E, Winkvist A, Bertz F, Brekke HK. Changes in food choice during a successful weight loss trial in overweight and obese postpartum women. *Obesity (Silver Spring)* 2014;22(12):2517-23.
- III. Huseinovic E, Bertz F, Leu Agelii M, Johansson Hellebö E, Winkvist A, Brekke HK. Effectiveness of a weight loss intervention among postpartum women: results from a randomized controlled trial in Primary Health Care. *American Journal of Clinical Nutrition* 2016;104(2):362-70.
- IV. Huseinovic E, Bertz F, Brekke HK, Winkvist A. Two-year follow-up of a weight loss intervention among postpartum women: results from a randomized controlled trial in Primary Health Care. *In manuscript*.

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From efficacy to effectiveness: Two randomized controlled trials of lifestyle intervention postpartum

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The overall aim of this thesis was to evaluate if, and how, weight loss can be achieved in women with overweight and obesity after pregnancy by combining results from two randomized controlled trials; LEVA and LEVA in Real Life. In the LEVA trial, a 12-wk diet intervention based on the Nordic Nutrition Recommendations produced a weight loss of 9%, which was sustained at 10% after 1 y, among 68 lactating women. However, important aspects of the dietary changes contributing to this weight loss remained to be examined. Therefore, in the first two papers, eating frequency and food choice in the LEVA trial are reported. In the following two papers, effectiveness of the diet treatment to produce weight loss among 110 postpartum women within a primary health care setting was examined through the LEVA in Real Life trial.

At baseline, LEVA women reported an eating frequency of 5.9 intake occasions/d (paper I). During the intervention, a positive association was found between change in eating frequency and change in energy intake. Also, women who received diet treatment reduced their eating frequency more during the intervention than did women not receiving it. Furthermore, results from paper II show that LEVA women had a high intake of sweets and salty snacks and an intake of fruit and vegetables below the recommendations at baseline. During the intervention, women receiving diet treatment reduced their intake of sweets, salty snacks and caloric drinks, and increased their intake of vegetables, more than did women not receiving it. At 1 y, only the difference in increased vegetable intake remained between the groups. Thus, findings from papers I and II suggest that dietary changes in line with current dietary guidelines can help women with overweight and obesity to achieve weight loss after pregnancy.

In the LEVA in Real Life trial, women randomized to the diet group achieved greater weight loss after 12 wk (6.7% vs 2.0%) and 1 y (11.6% vs 5.1%) compared to the control group (paper III). Preliminary data after 2 y show that the diet group has had a greater weight regain from 1-2 y compared to the control group such that the observed difference in weight loss at 1 y was not maintained at 2 y (7.5% vs 5.8%). In sum, the combined results from papers III and IV provide evidence that diet treatment delivered within a primary health care setting can produce clinically relevant weight loss among postpartum women with overweight and obesity. However, the results also highlight the difficulty of maintaining weight lost during the first year postpartum.

Keywords: postpartum, weight loss, RCT, diet intervention, women, eating frequency, food choice, efficacy, effectiveness

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