

Evidence Assessment: Summary of systematic review

Who is this summary for?

This evidence assessment is meant for clinicians, administrators of health facilities and decision makers.

Diet or exercise, or both, for weight reduction in women after child birth

Key findings

- Women who exercised did not lose more weight than women in the usual care group
- Women who took part in a diet or diet plus exercise programme lost significantly more weight than women in the usual care group.
- There was no difference in the magnitude of weight loss between diet alone and diet plus exercise group
- The interventions seemed not to affect breastfeeding performance

Background

There is evidence suggesting that retention of weight gained during pregnancy contributes to female overweight and obesity. In women, being overweight or obese substantially raises the risk of serious diet-related chronic disorders, including diabetes mellitus, heart disease and hypertension. It is unclear which interventions are best suited to promote weight reduction in women after delivery.

Question

Does diet or exercise, or both, contribute to weight reduction in women after childbirth?

Weight reduction in women after childbirth in Cameroon: Cameroon is also affected by the epidemiologic transition, and many non-communicable diseases are on the rise, especially obesity. No studies in Cameroon have studied strategies to reduce weight in women after delivery.

Summary of systematic review		
	What the review authors searched for	What the review authors found
Studies	All published and unpublished randomised controlled trials (RCTs) and quasi-randomised trials of diet or exercise or both, among women during the postpartum period	Fourteen trials were included, but only 12 trials involving 910 women contributed data to outcome analysis
Participants	Postpartum women	Postpartum women
Interventions	The study considered interventions in postpartum women involving diet or exercise, or both	The nutritional interventions included in this review were: (a) dietary advice intended to produce weight reduction delivered through group meetings, by telephone calls or by mail correspondence; (b) individualised dietary counseling; (c) prescription of a calorie-restricted diet Exercise interventions included in this review were: (a) any type of exercise counseling that encouraged women to engage in regular recreational exercises (for example, walking, jogging, sports) in order to promote weight loss or improve physical fitness (b) structured/individualised exercise programs or interventions in which women participated in supervised exercise sessions
Controls	Randomized controlled trials and quasi-randomized trials of diet or exercise or both, with a concurrent comparison group, in women during the postpartum period	The study compared <ul style="list-style-type: none"> • Diet versus usual care; • Exercise versus usual care; • Diet plus exercise versus usual care; • Diet versus exercise; • Diet plus exercise versus exercise alone; • Diet plus exercise versus diet alone
Outcomes	The review sought to include: <ul style="list-style-type: none"> • Change in body weight (kg) • Percentage of women who returned to pre-pregnancy weight or lost weight retained after childbirth; • Percentage of women who achieved healthy weight • Change in percentage of body fat (%); • Change in fat-free mass (kg); • Change in cardiorespiratory fitness (VO₂ max, mL/kg/minute); • Change in basal plasma prolactin concentration (µg/mL); • Change in milk volume (g/day); • Milk immunoglobulin (Ig) A concentration (µg/mL); 	Primary outcomes gotten included <ul style="list-style-type: none"> • Change in body weight (kg) • Percentage of women who returned to prepregnancy weight or lost weight retained after childbirth • Percentage of women who achieved healthy weight

	<ul style="list-style-type: none"> • Number of mothers who stop breastfeeding; • Duration of breastfeeding in months (exclusive or predominant, according to WHO 1991 definitions); • Percentage of partial or exclusive breastfeeding by the end of the intervention; • Infant length gain (cm); • Infant weight gain (g); • Maternal morbidity (for example, anaemia, readmission to hospital); • Adverse events (for example, exercise-induced injuries, side effects of very low-calorie diets); • Maternal satisfaction with interventions; • Compliance with interventions 	
Date of the most recent search: [Month and Year] –21 June 2012		
Limitations: This is a good quality systematic review with only minor limitations related to the methodological shortcomings of some trials and the small sample sizes.		
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Summary of Finding

Comparison	Outcomes	Mean difference (95% CI)	No of participants (studies)
Diet plus exercise versus usual care	Change in body weight	-1.93 (-2.96, -0.89)	573(7)
Diet versus usual care	Change in body weight	-1.7 (-2.08, -1.32)	45 (1)
Exercise versus usual care	Change in body weight	-0.10 (-1.90, 1.71)	53 (2)

Applicability

The trials were primarily conducted in the United States (Dewey 1994a; Ferrara 2011; Kearney 2006; Krummel 2010; Leermakers1998; Lovelady 2000; Lovelady 2009; McCrory 1999; O'Toole 2003; Ostbye 2009); two were conducted in Australia (Armstrong 2003; Armstrong 2004); one in the UK (Craigie 2011) and one in Tawian (Huang 2011).

Conclusions

Preliminary findings suggest that exercise alone improves cardio-vascular fitness, but does not increase the rate of postpartum weight loss. Furthermore, diet combined with exercise compared with usual care enhance weight loss during postpartum and play a role in preventing future maternal obesity. Diet or exercise, or both, appear safe for breastfeeding women.

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