

## Correspondence

### BMI and duration of breast feeding

SIR—We read with interest the study by Rutishauser and Carlin<sup>1</sup> which showed that, after adjusting for the effects of confounding factors, body mass index (BMI) had a significant independent effect on the rate of cessation of breast feeding. The authors further suggest that concern regarding the lack of weight loss while breast feeding may be the basis for the association found between BMI and the duration of breast feeding. We have recently<sup>2</sup> examined the effect of breast feeding on postpartum maternal BMI in 9428 women who gave birth in Jerusalem. Our results support earlier observations<sup>3</sup> that women who breast feed their children for long periods may tend to gain more weight. These findings also agree with reports pointing out that current recommendations for energy intake during breast feeding are higher than necessary, as the non-lactational components of maternal energy expenditure are reduced during breast feeding<sup>4</sup> and the calculated energy content of breast milk is substantially lower than that commonly reported when milk is obtained physiologically.<sup>5</sup> A recent study<sup>6</sup> found similar six month postpartum weight loss in both breast feeding and non-breast feeding mothers despite large differences in energy intake. Brewer *et al*<sup>6</sup> concluded that breast feeding does play a role in postpartum weight and body fat loss, but that the current recommended allowance may be too high to permit such losses.

Concern has been expressed that attitudes favouring slimmness may relate to lower maternal weight gains during pregnancy and thus adversely affect fetal outcome.<sup>7</sup> However, as we,<sup>8</sup> and others, have shown, weight gain during pregnancy may have a much smaller effect on fetal weight gain in women with a high BMI. We are therefore less concerned in obese women about the possibility that "dieting could compromise the ability to breast feed successfully".<sup>1</sup> Although more data are definitely needed, it seems that body conscious obese women could be allowed to reduce their energy intake or even choose a weight reducing diet after delivery without a substantial negative influence on prolonged breast feeding. Rutishauser and Carlin<sup>1</sup> have identified an important group at risk for early cessation of breast feeding. Careful dietary instructions and reassurance that breast feeding may actually aid in losing the extra body fat which has been laid down during pregnancy<sup>9</sup> may encourage overweight women to breast feed for longer.

DANIEL S SEIDMAN

Department of Obstetrics and Gynecology,  
Sheba Medical Center,  
52621 Tel-Hashomer,  
Israel

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### Reply

We are aware of the view expressed by Seidman and others<sup>1-4</sup> that current recommendations for energy intake during breast feeding may be higher than necessary because they do not adequately allow for a reduction in the non-lactational component of maternal energy expenditure at this time,<sup>5</sup> and are based on a level of energy output in human milk which seems to represent the upper limit of normal rather than the average.<sup>6</sup> We also fully endorse the need for more data which will give us a better understanding of the metabolic adjustments which occur during human lactation so that future recommendations for breast feeding can be more soundly based. Having said this, however, we would caution against recommendations that could have the effect of promoting the adoption of weight-reducing diets by women who wish to breast feed their infants successfully as well as to lose weight. This is not to say that we do not believe that breast feeding women should not lose any weight at this time, but rather that "dieting", interpreted in the sense of minimising energy intake, while breast feeding, may not only adversely affect the milk supply<sup>7</sup> but also compromise the intake of nutrients other than energy, such as calcium, which are required in larger than usual amounts to provide for their loss in the milk. Clearly appropriate dietary counselling of overweight and obese women is desirable to help them to lose weight while at the same time continuing to breast feed their infants successfully. This, however, is not the same as saying that the current recommendations for energy intake during lactation are too high, simply because women who are apparently consuming less energy than that currently recommended are not losing weight while breastfeeding.

Firstly, it is well recognised that self-reported energy intake may underestimate habitual intake, on average by as much as 20%,<sup>8</sup> and to an even greater extent in women who are overweight or obese.<sup>9</sup> Secondly, recommendations for energy intake, as for other nutrients, are only guidelines for group needs of healthy individuals of normal weight and are not intended to apply to specific individuals or groups with different needs such as obese individuals. Recent data obtained in 10 women using the doubly-labelled water technique to measure total energy expenditure in well nourished lactating women at four, eight, and 12 weeks of lactation, and when not pregnant and not lactating,<sup>10</sup> show that although different energy balancing strategies were observed in individual women, the energy cost of lactation in the group as a whole was met in two ways. An increase in energy intake contributed, on average, just over half the calculated energy cost of lactation (2675 kJ/day). The

remainder was met by a reduction in total energy expenditure, primarily by a reduction in physical activity, although there was also evidence of an adaptive decrease in BMR, which did not increase in line with the predicted cost of milk synthesis. In the group as a whole, body fat was not mobilised from four to 12 weeks of lactation, nevertheless most subjects reported that they had returned to their normal weight at the time of the "not pregnant—not lactating" measurement conducted three months after weaning.

Given that a return to the prepregnancy weight can be achieved by an appropriate reduction in energy intake once breast feeding has stopped, even if significant weight loss does not occur while breastfeeding, we believe that it is more appropriate to advise women that substantial weight loss may not necessarily occur in association with successful breast feeding than to recommend that breast feeding women, as a group, should restrict their energy intake while breast feeding in order to achieve weight loss at this time.

INGRID H E RUTISHAUSER  
School of Nutrition and Public Health,  
Deakin University, Geelong 3217,  
Australia

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### Mortality in forestry and construction workers in Finland

SIR—One of the findings of a recently reported follow up study of forestry and construction workers<sup>1</sup> in Finland was an increased risk of suicide in the forestry workers. Differences in socioeconomic status, marital status, or region of residence did not account for the high suicide rates observed. These findings parallel the results of our cohort mortality study of forestry workers at a Canadian public electrical utility in which an excess number of deaths due to suicide was found. The standardised mortality ratio for suicide of 210 based on 11 deaths observed in the study group compared with 5.25 expected was statistically significant (95% confidence interval 105, 375).<sup>2</sup>