The Families Defeating Diabetes (FDD) study: documenting women's dietary choices at 3 months post-partum after Gestational Diabetes

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Abstract

Research has confirmed that Type 2 diabetes (T2DM) can be at least partially prevented. A diet rich in a variety of vegetables and fruits is associated with a lower incidence of T2DM. However, a major challenge is to effectively translate T2DM prevention messages to the at-risk population.

The Families Defeating Diabetes (FDD) intervention aimed to translate T2DM prevention messages to women with recent gestational diabetes (GDM) in the context of their family. A total of 178 women participated in FDD.

We report here pre-interventional diet results for 53 FDD women residing in London (Ontario) at 3 months postpartum. Women were 35.2 ± 5.0 (mean ± SD) years old with body mass index of 34.2 ± 6.8 kg/m^2. Participants had 1.0 ± 1.1 child and it was the first pregnancy for 38% of them.

Food intake records indicated that the mean intake of milk and alternatives (2.0 ± 1.4 servings) and meat and alternatives (2.6 ± 1.2 servings) of the women met Canada's Food Guide recommendations, while their intake of grain products was below recommendation (5.3 ± 2.9 servings). In addition, women consumed 4.4 ± 2.7 servings of vegetables and fruits. Only 19% of women were consuming the Canada's Food Guide recommended vegetable and fruit intake.

These results indicate the need for focused dietary intervention to assist women with recent GDM to adopt potentially-protective healthy eating patterns in the postpartum period.

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Background

Women with GDM are at greater risk for T2DM, and their offspring are more likely to be overweight and metabolically unhealthy[1-2]. Research has confirmed that T2DM can be at least partially prevented[2-3]. One important preventive measure is to eat a healthy diet[2,4-6]. A diet rich in a variety of vegetables and fruits is associated with a lower hazard of T2DM[4,6]. It has been shown that increasing the mean consumption of dark leafy vegetables by one daily serving could help reduce the incidence of T2DM by 14%[4]. According to Statistics Canada, less than 50% of women reported eating 5 or more daily servings of vegetables and fruits[7]. Various studies on post-GDM also report that less than one third of women eat 5 or more vegetable and fruit servings a day[6]. However, no population-appropriate resources exist to effectively translate T2DM nutritional prevention messages[2]. For this reason, there is some urgency to find effective, early metabolic interventions for both mothers and their offspring.

FDD is a Canadian diabetes prevention intervention study targeting overweight women with recent GDM within their family context, promoting activity, modest weight loss, and healthy dietary choices.

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Methods

Admission to this study was offered to overweight English-speaking women with GDM. Information was gathered from a total of 178 women and their consenting family members over three participating sites; London, Ontario; Calgary, Alberta; and Victoria, British-Columbia.

All participants had seen an RD CDE during their most recent pregnancy for advice on the GDM diet. Participants completed food intake records and questionnaires evaluating lifestyle habits at pre-delivery, 3, 6 and 12 months postpartum, while the FDD intervention started after completion of the third month study visit. Here we report the food intake analyses from 3 months postpartum for an initial cohort of 53 women, all from London (Ontario).

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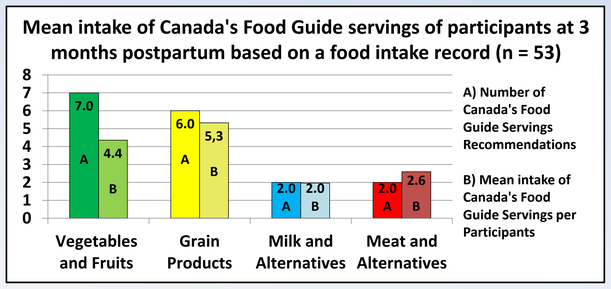
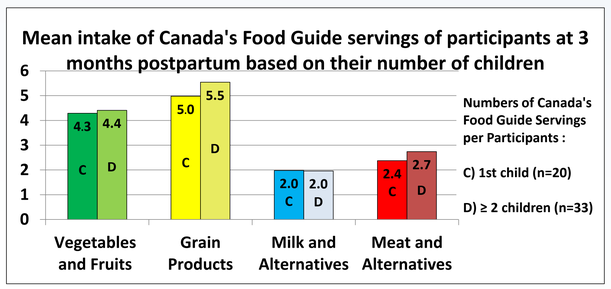
Results

Fifty-three FDD women residing in London (Ontario) were aged 35.2 ± 5.0 (mean ± SD) and had a body mass index (BMI) of 34.2 kg/m^2 at 3 months post-partum. Participants had 1.0 ± 1.1 child and 38% of them were in their first pregnancy. Analysis of 24 hour food intake records showed that the mean intake of milk and alternatives (2.0 ± 1.4 servings) and meat and alternatives (2.6 ± 1.2 servings) of the women met Canada's Food Guide recommendations, while their intake of grain products was below recommendation (5.3 ± 2.9 servings).

In addition, the mean daily consumption of vegetables and fruits of the participants was 4.4 ± 2.7. Their daily intake of vegetables was 2.5 ± 2.0 servings and their intake of fruits was 1.8 ± 1.8 servings. Eighty-one percent of women had a lower intake of vegetables and fruits then recommended by Eating Well with Canada's Food Guide.



No significant difference was found between the mean intake of Canada's Food Guide servings of participants who gave birth to their first child and that of participants who already had one or more children.



Conclusion

Women who participated in the FDD study at 3 months postpartum had lower than recommended consumption of vegetables and fruits as well as grain products based on food intake records.

These results indicate the need for focused dietary intervention to assist women with recent GDM to adopt potentially-protective healthy eating patterns in the postpartum period. Vegetables and fruits are important sources of dietary fiber, vitamins and minerals, as well as being low-fat choices, which may be beneficial for those women in the prevention of T2DM.

Further analyses of the dietary intake records from women from all three FDD study sites, as well as diet choices over the 12 months of the study will be of interest.

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Acknowledgments

This project is supported by BRIDGES. BRIDGES is an International Diabetes Federation program supported by an educational grant from Lilly Diabetes.

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