

Beyond dieting: Innovative dietetic management of obese pregnant women



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'If there was one time I didn't need to watch my weight and what I was eating, it was when I was pregnant. I ate what I wanted. I gained what I wanted.'

This is a comment often heard by our Mater Mother's Hospital dietitians and possibly stems from the inherited concept of 'eating for two'. Many women are unaware of the health implications of commencing their pregnancy at a high weight and additionally gaining excess weight during this time. Similarly, many health professionals are unaware of, or resistant to, the need to focus on weight management during pregnancy.

Implications of excess weight gain during pregnancy

Many see weight management during pregnancy as a controversial topic. However, the statistics disprove this belief. Women who gain weight in line with the American Institute of Medicine (IOM) guidelines have the lowest risk of pregnancy-delivery complications.¹

Table 1.

Recommended weight gain based on pre-pregnancy body mass index (BMI) (American Institute of Medicine, 1990).

Pre-pregnancy BMI (kg/m ²)	Recommended weight gain (kg)
< 19.8	12.5 - 18
19.8 - 26.0	11.5 - 16
26 - 29	7 - 11
> 29	about 6

An obese mother has an increased risk of hypertensive disorders, gestational diabetes mellitus (GDM) and caesarean deliveries for herself. There is an increased risk of birth defects, hypoglycaemia, premature delivery and jaundice in infants.^{2,3} This leads to longer hospital stays for both mother and baby.

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Weight gain guidelines awareness

It has been demonstrated that an awareness of weight gain guidelines may influence weight gained during pregnancy, whereas women who are not advised about weight gain are more likely to fall outside the recommended weight gain range.⁴ Women advised to gain less or more than the IOM weight gain guidelines are 3.6 times more likely to do so.⁴ Between 1988 and 2003, the percentage of American women achieving the recommended weight gain during pregnancy decreased from 76.9 per cent to 70.6 per cent.³ Over the same period, there was also a four per cent increase (from 15.5 per cent to 19.5 per cent) of gaining above and a 2.7 per cent increase (from 7.3 per cent to ten per cent) of women gaining weight below the guidelines. No data exist on Australian population weight gain during pregnancy. However, as approximately 50 per cent of Australian adult women are overweight or obese⁵ and a retrospective Queensland study revealed that over a third of the pregnant population are overweight, obese or morbidly obese at the beginning of pregnancy², similar patterns may be expected for Australia.

Dietitians don't support 'dieting' during pregnancy

We know that a healthy and varied diet that is rich in nutrients is the maternal diet that assists with positive pregnancy outcomes. There appears to be a concern that weighing women during pregnancy, or even addressing their nutrition needs to regulate weight gain, will lead to restrictive dieting or the development of an eating disorder at this time, ultimately causing harm to the growing fetus. There is no literature to support this notion and along the spectrum of eating behaviours, intakes that meet both the mother's and child's needs rest well in the middle of the extremes of excessive over or under-eating. Therefore, the approach taken to achieve good nutrition is to modify the types of foods in the diet, focusing on a healthy eating and lifestyle approach as opposed to any level of dieting behaviour. Often, goals to improve overall food intake can easily

be set. Our focus is on normalising serve sizes of meals and snacks and minimising foods high in fat and sugar. These are replaced with more nutrient dense and lower energy options, such as vegetables, salad and fruit. This may very well lead to weight loss, but with the guidance of an accredited practising dietitian (APD), the correct nutrition can be provided to ensure the best outcome for mother and baby.

A new approach for managing weight gain

Due to the large proportion of women who may require weight management support during pregnancy, an individual nutrition consultation and routine progress reviews are not a viable option within current staffing levels at many hospitals. An innovative, evidence-based approach is required to provide a dietetic service in which women optimise their nutritional status and gain appropriate weight throughout pregnancy. Screening should ensure that those women who require more specialised dietetic input receive this, while the remainder are still provided with the direction behaviour change tools and the appropriate level of support to optimise their outcomes.

'While a dietetic presence in the pregnant obese population is essential, it is the multidisciplinary approach, with embedded clinical pathways incorporating nutrition and weight change, that will lead to improved maternal and fetal outcomes.'

As highlighted in Wilkinson and Miller⁶, framing the effective delivery of healthy pregnancy behaviour change support is possible through the *Five As* model: assess, advise, agree, assist and arrange.⁶ This was in the context of the development and delivery of a personalised companion to the usual obstetric pregnancy handheld records to support healthy pregnancies. While this is a potential resource we could use at the Mater Mother's Hospital, our current practice has adapted the following approach for weight management during pregnancy.

While a dietetic presence in the pregnant obese population is essential, it is the multidisciplinary approach, with embedded clinical pathways incorporating nutrition and weight change, that will lead to improved maternal and fetal outcomes. Using a framework such as the *Five As* assists midwives, medical staff, or other health professionals to screen and provide basic advice, as well as initiate referrals to the dietitian when required. The following is an outline of the process being introduced by the Mater Mother's Hospital dietitians to manage overweight and obesity in our pregnant population.

How the *Five As* are applied: The Mater Mother's Hospital approach

1. **Assess:** At entry to the antenatal service, screening is recommended to identify women who may require additional support to change health-related behaviours. Specific to appropriate weight gain, assessment of a woman's body mass index (BMI), derived from height and pre-pregnancy weight, provides the detail of the recommended weight gain range during pregnancy.
2. **Advise:** Providing clear and specific weight gain targets has been strongly associated with actual weight gain. Therefore, after pre-pregnancy BMI is calculated, all women are advised of their individual recommended weight gain guideline.
3. **Agree:** Based on the recommended weight gain guidelines, it is important to reinforce this information with the women. Recent studies have shown that antenatal information distributed at appointments is often ignored unless midwives specifically indicate important sections to women.⁷
4. **Assist:** Nutritional information is an essential part of all antenatal care. Accurate and complete information is provided to all women at their first antenatal clinic appointment. To assist with meeting weight goals, a weight tracker, specific for the obese population group (where pre-pregnancy BMI is greater than 29.0 kg/m²), provides women with a tool to self-monitor their weight changes.
5. **Arrange:** Health professionals following women's weight tracker progress at subsequent appointments provide further support for healthy behaviour changes when required. Identification of weight change trajectories that are not consistent with expected and recommended weight gain also allows referral for specialised dietetic input. Additionally, information is provided for women to self-refer to the dietitian when they note their weight gain deviates from expected trends.

Once a dietetic referral is generated, adequate nutrition with appropriate energy balance is the goal. For women who gain weight too rapidly, the focus of the consultation takes a healthy lifestyle approach, steering clear of 'dieting' or 'trying to lose weight' during their pregnancy. Improving nutrient density of the foods being consumed often achieves both appropriate weight change and nutritional goals. For women who may lose weight too rapidly, the focus remains the same, though the modifications generally focus on meeting nutrient intake through more frequent snacking, with or without increased portion sizes of healthier foods.

The future beyond the antenatal clinic

An ongoing challenge in the management of obesity in the pregnant population will be to reach these women before they enter hospital antenatal services. Earlier input is essential for healthy nutrition and lifestyle advice during the first trimester of pregnancy. On a broader public health scale, decreasing the proportion of women who are obese when they become pregnant is an important longer term focus for all health professionals.

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