



# **Guidance for Healthy Weight Gain in Pregnancy**

2014

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The advice in this guidance is for health practitioners. Advice for pregnant women is available on the Ministry of Health's Your Health webpage ([www.health.govt.nz/your-health/healthy-living/pregnancy](http://www.health.govt.nz/your-health/healthy-living/pregnancy)).

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## Acknowledgements



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# Introduction

It is normal for women to gain some weight during pregnancy due to the growth of the fetus, placenta and amniotic fluid. However, too much extra weight during pregnancy can lead to adverse outcomes for the mother and/or baby. The amount of weight that a woman can expect to gain during pregnancy varies depending on the woman's existing weight and height. This document provides guidance to support optimal weight gain for the individual woman during pregnancy.

Healthy eating is especially important during pregnancy as it supports optimal fetal growth and development. Physical activity along with good nutrition will contribute to a healthy pregnancy weight. Advice for healthy eating and activity during pregnancy and throughout life is available in the Ministry's Food and Nutrition Guidelines series and is not repeated in detail here.

Links to useful guidelines, weight management tools and other relevant consumer information mentioned in this document can be found in Appendix 1: Useful resources about weight management and good nutrition during pregnancy.

## Background

Obesity is affecting an increasing number of women of reproductive age. Many women enter pregnancy already overweight or obese, and this is associated with a range of complications for both mother and baby. Losing weight during pregnancy is not recommended due to the increased risk it poses of having a low birth weight baby (Catalano et al 2014). However, the amount of weight gained during pregnancy can be modified.

In 2009, the Institute of Medicine (IOM) published updated guidelines for weight gain during pregnancy (IOM and NRC 2009), recommending that women who are obese should aim for lower weight gains than had been recommended in previous guidelines.

Achieving optimal weight gain during pregnancy is associated with improved outcomes for the mother and the baby regardless of the mother's existing body mass index (BMI). Excessive gestational weight gain (GWG) using IOM criteria increases maternal risks for:

- pre-eclampsia
- gestational diabetes
- caesarean section
- weight retention postpartum with associated long-term health consequences (Nehring et al 2011; Alavi et al 2013).

Excessive GWG has also been associated with lifelong consequences for the baby, including a fourfold increased risk of large-for-gestational-age (LGA) infants (Chung et al 2013) and a consistent increase in BMI and blood pressure and an ab

The limited evidence available suggests that ethnicity does not modify the association between GWG and the outcome of pregnancy, although further research is required (IOM and NRC 2009).

## Context

The advice in this guidance has been developed for health practitioners to update them on the IOM guidelines for weight gain during pregnancy.

Clinical management of obstetric or medical conditions affecting obese pregnant women is beyond the scope of this guidance.

In 2009, the Ministry of Health published clinical guidelines for weight management in adults and children (Ministry of Health and Clinical Trials Research Unit 2009a, 2009b). Guidance for pregnant women was not included in those guidelines.

The Ministry's *Food and Nutrition Guidelines for Healthy Pregnant and Breastfeeding Women* (Ministry of Health 2006) recommended GWG based on the IOM's 1990 advice. The IOM has since updated its advice based on a comprehensive review of the literature (IOM and NRC 2009). The updated advice now uses World Health Organization (WHO) cut-off points for the BMI categories and includes a specific, relatively narrow range in recommended weight gain for obese women.

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# Advice for health practitioners

Optimising a woman's nutritional status, fitness and weight before, during and between pregnancies (including while breastfeeding) has immediate and long-term benefits for the health of both the woman and her child/children. Weight gain is just one of many changes that a woman may experience during pregnancy. It is important to consider weight gain in the context of all factors in the woman's life. It is envisaged that health practitioners will tailor their advice with sensitivity to the woman's personal circumstances. healsit173-28 074 Tc 0.02t6n(i)2J -Tdagy-7( h)2(t

## **Practice points for pre-pregnancy**

All women of childbearing age should have their weight and height measured and documented and Body Mass Index (BMI) calculated as part of routine pre-pregnancy clinical practice, **and** advice should be given that is consistent with the Weight Management Guidelines for Adults (see Appendix 1 for a comprehensive list of useful resources, such as the Online Learning Tool, and Appendix 2 for an algorithm for weight management in non-pregnant women).

Where possible, women should have their height and weight measured with shoes off, standing erect. Their weight should be measured with them wearing light clothing.

Develop relationships that empower the women through respect and trust, seeking to understand and acknowledge their life situations, including social determinants, cultural imperatives and socioeconomic circumstances.

- Assess the clinical needs of the women.
- Identify opportunities with the women to address their clinical needs.
- Identify with the women options for actions that are realistic for them.
- Maintain appropriate contact and support.

Source: Adapted from *Clinical Guidelines for Weight Management in New Zealand Adults* (Ministry of Health and Clinical Trials Research Unit 2009a)

## **During pregnancy**

**The advice below applies to women with uncomplicated singleton pregnancies.**

A higher pre-pregnancy BMI is associated with an increased risk of excessive GWG in pregnancy regardless of education levels. However, women who have not had access to educational advantage have a higher risk of excessive GWG in pregnancy even with a healthy pre-pregnancy BMI. Tailoring the antenatal information to meet the needs of individual women is recommended (Hollowko et al 2014). Healthy weight women who overestimate and overweight/obese women who underestimate their pre-pregnancy body weights are also at higher risk of excess GWG (Herring 2008).

A recent New Zealand survey (Hooker 2013) found that over two-thirds of pregnant women (69.4%) incorrectly identified appropriate weight gain for pregnancy compared to IOM (2009) recommendations. Overweight and obese women were significantly more likely to overestimate appropriate weight gain compared to healthy weight women (Hooker 2013).

Height and weight should be measured at the booking or first visit. It is not sufficient to use self-reported measures of height and weight (National Institute for Health and Care Excellence 2010; Jeffs et al 2014).

# Optimal weight gain during pregnancy

Pregnant women should be made aware of the IOM's recommendations for GWG to assist them to make informed, healthy choices. The recommendations, based on available evidence from observational studies, have been widely adopted internationally. They should be used in combination with professional judgement and a discussion with the woman regarding nutrition and physical activity (IOM and NRC 2009).

**Table 1: Recommendations for total and average rate of weight gain during pregnancy, by pre-pregnancy BMI**

Pre-pregnancy BMI (kg/m<sup>2</sup>) 1.6165 0 Td ( .507C /P <- /MCI 0 Td [p]1(r)T4e8C 1.6165 0 Td ( .E67C /P <</

## Healthy eating during pregnancy

Encourage and support pregnant women to eat healthily. Refer to Appendix 1 for further resources particularly the *Food and Nutrition Guidelines for Healthy Pregnant and Breastfeeding Women* Ministry of Health 2006 (partially revised 2008), which provides detailed nutrition information.

### Practice points for pregnancy

- Health practitioners should advise all pregnant women on recommended weight gain according to the 2009 IOM guidelines.
- Body Mass Index (BMI) should be calculated from **measured** height and **measured** weight at booking/first visit (ideally before 10 weeks gestation) by the referring GP or the Lead Maternity Carer (LMC). If the woman presents after 10 weeks gestation, the BMI can still be calculated from measured height and weight and weight gain can still be advised based on best estimate of pre-pregnancy BMI.
- Women should be encouraged, where appropriate, to monitor (using the same scales each time) and record their own weight regularly (for example, monthly) during pregnancy and in the postpartum period and bring a copy of this information to antenatal visits for discussion as part of their care plan. If it is not possible for a woman to record their own weight, they can ask to be weighed at antenatal visits.
- Dieting to lose weight is not recommended during pregnancy (National Institute for Health Care Excellence 2010).

## Examples of healthy weight-gain tips that you could discuss with pregnant women

- In the first 12 weeks, you don't need to eat any more food than you would usually eat when not pregnant, but it is important that you eat nutritious food.
- If you are of healthy weight, the total amount of extra food you need each day after the twelfth week of your pregnancy is about the same energy value as a wholegrain cheese and tomato sandwich, or a wholegrain peanut butter sandwich and a banana. If you were obese before pregnancy, the extra energy you require is about one slice of wholegrain bread or two apples per day.
- Drink water rather than sweetened drinks, fizzy drinks or fruit juices.
- Drink low-fat (trim (green top)) or calcium-extra (yellow top)) or light blue milk instead of full-fat (blue or silver top) milk.
- Eat wholegrain bread instead of white bread.
- Eat a healthy breakfast every day, such as wheat biscuits or porridge with low-fat milk or two slices of wholegrain toast.
- Have at least four servings<sup>1</sup> of vegetables and two<sup>2</sup> servings of fruit every day. Buy vegetables and fruits that are in season, or buy frozen vegetables to help reduce cost, wastage and preparation time.
- Prepare and eat meals at home. Have takeaways no more than once a week.
- Choose healthy snacks such as unsweetened low-fat yoghurt, fruit, cheese and crackers, a small bowl of cereal, home-made popcorn or a small wholegrain sandwich.
- Aim to do at least 30 minutes of moderate intensity activity five or more days a week, for example, brisk walking or swimming (or as advised by your doctor, midwife or physiotherapist).

(Adapted from the Canterbury District Health Board *Healthy Weight Gain in Pregnancy* record (Jeffs 2013) and the *Food and Nutrition Guidelines for Healthy Pregnant and Breastfeeding Women* (Ministry of Health 2006).)

<sup>1</sup> Examples of vegetable and fruit serving sizes: ½ cup of peas, broccoli or carrots; one medium sized potato, banana, orange, or apple, or a large kiwifruit.

<sup>2</sup> If vegetable/fruit juice or dried fruit is consumed, it contributes a maximum of only one serving of the total recommended number of daily servings for fruit/vegetables.



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# Glossary

Body mass index (BMI)	An indicator of body fatness, calculated from the formula: weight divided by height squared, where weight is in kilograms, and height is in metres.
Gestational diabetes mellitus (GDM)	A form of diabetes found in pregnant women. It occurs when the pregnant woman's body cannot produce enough insulin, resulting in high blood sugar.
Gestational weight gain (GWG)	The average weight gain in pregnancy.
Healthy weight	Having a BMI greater than or equal to 18.5 and less than 24.9.

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# Appendix 1: Useful resources about weight management and good nutrition during pregnancy

*Weight Management Guidelines for Adults* (Ministry of Health and Clinical Trials Research Unit 2009a) [www.health.govt.nz/system/files/documents/publications/weight-management-adults-guidelines.pdf](http://www.health.govt.nz/system/files/documents/publications/weight-management-adults-guidelines.pdf)

Weight management website (includes recent research, tools, information and services)  
<http://weightmanagement.hiirc.org.nz/section/8958/weight-management/>

Quick reference guide (includes algorithm in Appendix 2)  
<http://weightmanagement.hiirc.org.nz/section/15130/fab-tools/?tab=4058>

Online learning tool (for weight management) <http://learnonline.health.nz/course/view.php?id=48>

The Ministry of Health Food and Nutrition Guidelines series  
[www.health.govt.nz/our-work/preventative-health-wellness/nutrition/food-and-nutrition-guidelines](http://www.health.govt.nz/our-work/preventative-health-wellness/nutrition/food-and-nutrition-guidelines)

*Food and Nutrition Guidelines for Healthy Pregnant and Breastfeeding Women: A background paper* (Ministry of Health 2006: published (online) April 2006; reprint and revisions November 2008, update to recommendations March 2009)

[www.health.govt.nz/publication/food-and-nutrition-guidelines-healthy-pregnant-and-breastfeeding-women-background-paper](http://www.health.govt.nz/publication/food-and-nutrition-guidelines-healthy-pregnant-and-breastfeeding-women-background-paper)

Healthy Weight Gain in Pregnancy (consumer information)  
[www.health.govt.nz/your-health/healthy-living/preer](http://www.health.govt.nz/your-health/healthy-living/preer) Hbition





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