

Maternal Obesity**Assessment of obesity in pregnancy**

Obesity in pregnancy can be defined as:

- BMI \geq 30 @ 10-12 weeks (Trimester 1)
- BMI \geq 32 @ 18-20 weeks (Trimester 2)

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Incidence

Using data collected in the Western Australian Midwives Perinatal Dataset ("STORK"), the following table describes the incidence of maternal obesity and the increasing proportion of women entering pregnancy with morbid obesity, that is, a BMI greater than 40. Older data available from the West Australian Birth Cohort is used for comparison of incidence nearly 20 years ago.

Maternal BMI	STORK 2007	STORK 2006	WA Birth Cohort 1989-91
<30	74.07	75.55	77.59
30 - 34.9	12.96	12.55	13.26
35 - 39.9	6.75	6.52	5.11
40 - 44.9	3.53	3.21	2.44
45 -49.9	1.85	1.45	1.22
\geq 50	0.84	0.74	0.38

Obstetric Care

- Preconception and periconception issues.
 - Fertility is significantly affected by obesity and weight loss can dramatically improve achievement of both assisted and unassisted pregnancy with much reduced cost compares with fertility treatments (Clark,1998).
 - Higher risk for congenital birth defects may be ameliorated with folate supplementation.
 - Obese women need information on risks associated with pregnancy and delivery.
- Morbidly obese women are almost universally referred to a tertiary obstetric centre and are placed in a complex care case category for multidisciplinary care plan and management.
 - Hospitals costs are higher related to the increased occasions of service for obese women, more ultrasound scans and fetal tests, bariatric equipment, OSH. (Chu, 2008)
- Gestational weight gain
 - Evidence supports a lower gestational weight gain (approximately 6 kilograms) associated with reduced risk of gestational diabetes, caesarean section, induction of labour. (Jensen, 2005)
 - Programs/ interventions need to be evaluated
 - Motivation is high and information needs to be delivered sensitively
- Previous bariatric surgery
 - This intervention is becoming more common and can result in malabsorption 2° bypass surgery, nutrient deficiencies and poor diet
 - Pregnant women with gastric bands will need adjustments to cope with pregnancy complications and & increased nutrient requirement
- Post natal
 - Lower prevalence of initiation and successful breastfeeding requires research on interventions. (Jevitt, 2007)

- There needs to be a family focus to interventions and prevention of obesity in offspring.

Therapeutic approaches

- Motivation requires sensitive but factual information on risks associated with obesity and the benefits of managed weight preconception and during pregnancy.
- Health promotion to enhance knowledge and positive approach to pregnancy or avoidance of pregnancy.
- Lifestyle/diet/nutrition advice (meal preparation, cooking, shopping, budgeting)
- Behavioural aspects with family focus
- Emphasis on long term lifestyle changes

Clark AM, Thornley B, Tomlinson L, Galletley C and Norman RJ. Weight loss in obese infertile women results in improvement in reproductive outcome for all forms of fertility treatment. *Human Reproduction* 1998; 13 (6):1502-1505.

Jensen DM, Ovesen P et al. Gestational weight gain and pregnancy outcomes in 481 obese glucose tolerant women. *Diabetes Care* 2005;28(9):2118-2122.

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Waller K, Shaw G, et al. Prepregnancy obesity as a risk factor for structural birth defects. *Arch Paediatr Adolesc Med* 2007;161(8):745-750.

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