

Postpartum weight retention implications and interventions.

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Abstract

Getting back to shape after pregnancy is a mammoth task, a much sort after goal for most young mothers especially urban, educated and working. The task of reducing weight may be arduous and unachievable for few. In 2009, the Institute of Medicine (IOM), USA published guidelines for Gestational Weight Gain (GWG) based on pre pregnancy weight range. Most women, who gained the recommended amount of weight during pregnancy, remain 2 to 5 lbs above their pre pregnancy weight a year after giving birth. A sizable 15%-20% of women hold onto 10 lbs or more. Moreover, these recommendations were, based on American women and generalizing it to the other populations lacks clarity as maternal anthropometry parameters varies across different population. No such study has ever been attempted in India this article reviews the menace of obesity in Indian perspective and emphasis the need of study in Asian/Indian population for the benefit of the women at large. The article also enlists the causes of post partum weight retention, its implications and possible interventions which can help in overcoming this menace which has bearing on the health of the women.

Keywords: Postpartum weight retention, Pregnancy, Obesity.

Accepted on 17 August, 2021

Introduction

Getting back to shape after pregnancy is a mammoth task, a much sort after goal for most young mothers especially urban, educated & working.

The task of reducing weight may be arduous and unachievable for few.

The World health organization recognizes 6 classes of Body Mass Index (BMI). BMI is defined as weight in kilograms divided by height in meters squared; The 6 classes of weight category have been documented [1].

It is reported that 31% of reproductive age women are obese (BMI >30.0), and 58% of reproductive age women are at least overweight (BMI >25.0 kg/m²).

In 2009, the National Academy of Medicine published recommendations for appropriate weight gain in pregnancy.

Materials and Methods

These guidelines harkened a move to individualizing recommendations for gestational weight gain based on a patient's pre pregnancy weight.

The recommendations recognized different goals for underweight, normal weight, overweight, and obese patients.

These same guidelines also detailed trimester-specific weight gain recommendations for each BMI class and provide useful information when counseling patients on appropriate weight gain (Table 1).

Table 1. Institute of medicine recommended gestational weight gain.

Pre pregnancy weight Category	Body Mass Index Range Kg/m ²	Recommended weight gain (lb)	Recommended rates of weight gain in the second and third trimester (lbs / week)
Underweight	<18.5	28-40	1 (1-1.3)
Normal	18.5-24.9	25-35	1 (0.8- 1)
Overweight	25.0-29.0	15-25	0.6 (0.5-0.7)
Obese Class I	30-34.9	44136	0.5 (0.4-0.6)
Obese Class II	35.0-39.9	-	
Obese Class III	More than 40	-	

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Excessive gestational weight gain

Excessive gestational weight gain is defined as gaining more

than the IOM recommended weight during pregnancy. Approximately half of all women exceed the recommended gestational weight gain recommendations.

Excessive gestational weight gain has been associated with an increased risk of pregnancy complications, including pregnancy-related hypertension, cesarean delivery regardless of pre pregnancy BMI, and large-for-gestational-age infants. Beyond the acute risks to the pregnancy there also are future implications.

Excessive gestational weight gain is a major risk factor for short-term and long-term postpartum weight retention (PPWR). Risk factors for excessive gestational weight gain include pre pregnancy obesity, low income, and a variety of psychosocial factors, including depression, lack of social support, and stress.

Postpartum weight retention and the cycle of increasing body mass index

PPWR is the difference between postpartum weight and pre pregnancy weight. After excessive pregnancy weight gain, many women have increased difficulty losing this weight after pregnancy. Although the degree of PPWR is highly variable between women, patients with excess gestational weight gain retain the most weight postpartum. Women who are overweight and obese in the preconception period are more likely to experience PPWR, and only 11% of overweight and obese pregnant women return to their preconception weight within 5 years postpartum. Results have shown that women with excessive gestational weight gain retained on average an additional 3.06 kg, 3 years postpartum, and 4.72 kg, 15 years postpartum. It is this very PPWR that can lead to a cycle of increasing BMI in subsequent pregnancies and ultimately long term ill effects. Women who retain weight in the postpartum period obviously enter a subsequent pregnancy at a higher BMI than in the previous pregnancy, which, in turn, results in greater risk of excessive gestational weight gain and subsequent PPWR. Excessive PPWR during childbearing years is associated with the development of long-term adverse maternal health outcomes, such as cardiovascular diseases, metabolic syndromes, and long-term obesity in later life.

Results

Obesity and excessive gestational weight gain

Obese women are at increased risk of maternal morbidity, cesarean deliveries, failed trial of labor, wound complications, infection, and venous thrombosis. They also have higher rates of miscarriage and stillbirth. These adverse outcomes are complicated further by excessive gestational weight gain. Excessive gestational weight gain is associated with hypertensive disorders of pregnancy, including gestational hypertension and preeclampsia. Some studies also indicate an association between excessive gestational weight gain and the development of gestational diabetes but other studies have not found that association. One study indicated that the timing of

the gestational weight gain may have an impact on the outcomes. In a 2012 study, including 7985 nulliparous, low-risk women, early gestational weight gain (that is, weight gain exceeding the IOM recommended weight gain at 15–18 weeks’ gestation) was associated with increased odds of developing gestational diabetes compared with nulliparous, low-risk women who did not exhibit early gestational weight gain. Overall, given the varying diagnostic criteria for gestational diabetes, it is difficult to collate the existing studies of excessive gestational weight gain and gestational diabetes.

Implications of PMWR future maternal health

Adverse outcomes in pregnancy have implications for maternal future health. Women with hypertensive disease in pregnancy are twice as likely to develop cardiovascular disease (such as hypertension, myocardial infarction, and congestive heart failure), cerebrovascular events, peripheral arterial disease, and cardiovascular mortality later in life compared with women without hypertensive disease in pregnancy [3]. Similar observations have been made for other adverse pregnancy complications, including gestational diabetes, preterm delivery, fetal growth restriction, and placental abruption. The increased risk of cardiovascular disease can be observed as early as 3 years to 5 years after delivery. Given these associations, there has been a focus on using the inter pregnancy period to improve maternal health and address modifiable risk factors for cardiovascular disease, such as obesity.

Tools of interventions

Throughout time, several tools have been studied, with the goal of reducing pregnancy weight gain and PPWR. This section reviews some interventions and the evidence base for their effectiveness. Pre pregnancy/Inter pregnancy Interventions to prevent long-term pregnancy weight retentions should begin in the pre pregnancy period. Pre pregnancy counseling is a key tool used to reducing adverse outcomes for women and neonates (Table 2).

Table 2. Tools to limit gestational weight gain and postpartum weight retention.

	Pre pregnancy	Inter pregnancy	Prenatal	Post Partum
Counseling	R	R	R	R
Life style modification	R	R	R	R
Diet & Exercise	R	R	R	R
Bariatric surgery	R	R	-	R
Breast Feeding	R	R	-	R
Contraception	R	R	-	R

After childbirth, most patients in India are not scheduled for follow-up care. Furthermore, as many as 40% of all women do not ever attend a postpartum visit, especially those with limited

resources. Strategies that can be utilized to increase compliance with postpartum follow-up include counseling patients on the importance of postpartum care during preconception counseling and prenatal visits, postpartum discharge planners, scheduling postpartum appointments at prenatal visits (if a patient's delivery date is predetermined, as is the case for scheduled inductions of labor or cesarean delivery), scheduling postpartum appointments prior to hospital discharge. Chronic health conditions, including obesity, should be addressed at the postpartum visit. This visit should include coordination of care to primary care providers (if necessary) or other subspecialists, such as cardiologists, nutritionist, bariatric care providers, and endocrinologists, to promote health optimization in the postpartum state and/or prior to the next pregnancy.

Interventions for obesity

With regard to health, lifestyle refers to dietary habits; physical activity habits; the social use of substances, such as alcohol and tobacco; and exposure to other risky behaviors. Lifestyle interventions are effective in achieving 5% to 10% weight loss and improving outcomes in obesity-related diseases. Lifestyle interventions that target pregnancy-related weight recently have been focused on reducing gestational weight gain. The lifestyle interventions targeting diet, physical activity, and behavioral strategies in women with overweight and obesity would reduce excess gestational weight gain as defined by IOM recommendations. More so in Indian Perspective, the recommendations of balanced diet should be emphasized with a note that use of fat and oils alone does neither provide nutrition for the mother or the child and only adds to the post partum weight gain.

Exercise

Regular physical exercise was more likely to help prevent excessive gestational weight gain and postpartum retention of weight after birth than traditional medical care that did not include exercise. In a study, exercise only compared with no exercise was associated with less postpartum retention but the effect size is modest for both gestational weight gain and PPWR. The most benefit of exercise as an intervention is demonstrated among women who exercise 3 times per week or more. In pregnancies affected by gestational diabetes, it has been shown that the addition of physical exertion to dietary modification helps lower blood glucose and reduce insulin requirement. A significant limitation exists currently in the literature because most studies focused on women without underlying medical concerns or pregnancy complications. More studies urgently are needed to evaluate the role of exercise in women with underlying medical co morbidities or pregnancy complications. These populations are particularly in need of interventions on the inter pregnancy and postpartum periods to optimize their health. Nevertheless, it is imperative that health care providers emphasize the importance of appropriate physical activity in pregnancy and subsequent transition of pregnancy habits to lifelong lifestyle modification.

Implementation of weight loss programs

The complexity of weight loss means that there is no one clear solution for effectiveness. Multicomponent approaches, including a balanced diet with low glycemic load and light to moderate intensity physical activity, 30 minutes to 60 minutes per day for 3 days to 5 days per week, seem more effective than using just one component. A review of the existing studies of postpartum interventions indicates that health professional-delivered interventions were associated with greater weight loss than those delivered by non health professionals. Diet and physical activity combined were associated with greater weight loss compared with physical activity-only intervention. Interventions also were more likely to be successful if objective goals were used, such as the use of heart rate monitors or pedometer and exercise combined with intensive dietary intervention. There is benefit from overall lifestyle interventions on weight loss in postpartum women, and exercise plus intensive diet and objective targets are the most effective intervention strategies. These components should be considered when formulating an intervention plan with patients.

Bariatric surgery

Bariatric surgery presents an opportunity for effective weight loss among obese women. Pregnant women with a pregnancy within less than 12 months of bariatric surgery compared with women who have had surgery greater than 12 months prior to pregnancy have less gestational weight gain and PPWR. The impacts of pregnancy on long-term weight loss are less clear and challenged by differences in bariatric surgery technique and duration of follow-up. One study of 591 women who had undergone a laparoscopic gastric band or a Roux-en-Y procedure found that women who had a pregnancy compared with women who did not have a pregnancy had a slower rate of weight loss. At the 5-year follow-up period, however, both groups had similar rates of excess weight loss.

Discussion

The 2016 Centers for Disease Control and Prevention data indicate a majority of women (83%) initiate breastfeeding. At 6 months and 1 year postpartum, however, breastfeeding rates decline substantially to 57% and 36%, respectively. In addition to providing benefits to infant health and improving maternal-infant bonding, breastfeeding has been associated with a return to normal weight in the postpartum period. From 0 to 6 months postpartum, breastfeeding women expend an extra 300 kcal per day compared with non-breastfeeding women; from 7 months to 12 months postpartum, breastfeeding women expend an extra 400 kcal per day compared with non-breastfeeding women. Although women who breastfeed are more likely to return to a normal weight, it has been difficult to prove causation. Increased caloric expenditure and decreased cost (as women do not have to pay for breast milk) can greatly facilitate postpartum weight loss by potentially allowing patients to spend money on healthy foods as opposed to infant formula.

Motivational interviewing

Motivational interviewing, a technique recommended by American College of Obstetricians and Gynecologists (ACOG), has been demonstrated to help limit gestational weight gain. It is “a directive, patient-centered counseling style for eliciting behavior change by helping patients explore and resolve ambivalence.” It relies heavily on identifying the stages of readiness for change and helping patients move through the stages of change to achieve a desired behavior using techniques to help patients develop new thought patterns [4].

Patient navigation

Patient navigation is the use of community based service delivery intervention by trained personnel like AASHA workers, Community health workers, auxiliary health workers, to promote health care access and utilization. The use of patient navigation in the postpartum period has been associated with improvements in depression screening, contraception uptake, and vaccination. Given the unique stressors of the postpartum period and the success of patient navigation, it has been suggested as a mechanism for improving postpartum weight loss.

Birth spacing

Approximately 45% of all pregnancies in the India are unintended. Given that pre pregnancy obesity is one of the top risk factors for excessive gestational weight gain, a logical point of impact in addressing this public health problem is preconception counseling and health optimization prior to pregnancy. Necessary to this is access to contraception and abortion services, especially within the inter pregnancy period. In January 2019, the ACOG released an Obstetric Care Consensus, which made recommendations for inter pregnancy care for women who desired future pregnancies [5].

Conclusion

PPWR is the foremost cause of excessive weight gain and long term obesity of women in India. Although preconception and prenatal counseling are essential for helping women achieving healthier weight in pregnancy, postpartum and inter pregnancy care remains important as well. Lifestyle interventions have been successful in reducing gestational weight gain. Postpartum interventions that can help women achieve a healthier weight include contraception counseling and access,

encouragement of breastfeeding, and referral to nutrition and dietary services. Beyond the examination room, obstetricians and gynecologists can work as advocates for patient health and organize for policies that promote broader health coverage beyond pregnancy and expand avenues to better health in women after the completion of family.

Conflict of interest

Nil

Sources of funding

Nil

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