

REVIEW ARTICLE

Obesity during The Pregnancy

Siti Zulaiha Umi Difinubun^{1*}

1. Department of Public Health Science, Faculty of Health Sciences, University of Muhammadiyah Prof. Dr. HAMKA, Jakarta, Indonesia

*Correspondence to Siti Zulaiha Umi Difinubun (quesera998@gmail.com)

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Introduction

Overweight and obesity can be very disturbing, with increased health risks exposed to hypertension, diabetes, stroke, heart disease and cancer for people with obesity¹. Obesity currently has become one of the global issues that have not been can be corrected and experiencing rapid increase every year. Obesity doesn't just happen in developed countries but also in developing countries. The United States, China, and India is the country with the number of people affected by obesity is highest in the world in the year 2017 and Indonesia are in the order of 15 States with the highest obesity rate in the world².

NCD Risk Factor Collaboration has researched population-based child-school age children ages 5-19 years and adults aged 20 years and above to estimate the trends the average BMI (Body-Mass Index) or a body mass index from the year 1975 until the year 2016 in 200 countries. Results

of from such research reveal that the number of adult women who are obese increased from 69 million in 1975 to become 390 million in 2016 and the number of adult men who are obese increased from 31 million in 1975 to become 281 million in the year 2016. While the number of girls who are obese increased from 5 million in 1975 to become 50 million in 2016, and the number of boys who were obese increased from 6 million to 74 million by the year 2016. Countries with the greatest increase in obesity in children is a State in East Asia, country in the Middle East, North Africa, South Asia and the high-income English-language³.

In Indonesia, national obesity numbers increase in the year 2016 a national obesity numbers are 38.5% rose to 40.4% in 2017. The prevalence of obesity in women is twice as big as the guy that is 45% 23.3% in women and men. On babies

and toddlers age 0-59 months, in 2016 was 4.3% up to 4.6% in 2017 ^{4,5}.

Women categorized according to WHO classification: Skinny (BMI < 18.50 kg/m²); normal weight (BMI at 18 – 24.99 kg/m²; reference group); overweight (BMI 25.00 – 29.99 kg/m²); obese class I (BMI 30.00 – 34.99 kg/m²); obese class II (BMI 35 – 39.99 kg/m²); and class III obesity (BMI ≥ 40 kg/m²) ^{6,7}.

Obesity is a growing health problem among pregnant women associated with a large number of pregnancies experience complications ⁸. Pregnant women who are obese have significant health implications, contribute to improving death on mother and baby ⁹.

Health Risks in Women Who Are Obese During Pregnancy

At the time of pregnancy, it is only natural when a mother experienced weight gain. In fact, it is recommended that a mother on while pregnant in order to consume food with balanced nutrition in accordance with body mass index or BMI of an individual in order to increase the weight at the time of the first half of the trimester, second, and third pregnancy is very influenced on the infant's weight at birth later ¹⁰. It is sometimes misconstrued interpret most pregnant women with eating as many, or eating more substantial

portions, assuming that at the time of the pregnancy, the mother is eating for two. It is this reason that usually results in a mother suffered the increase in obesity or excess weight at the time of pregnancy, and mothers who are obese during pregnancy are at risk of increasing the risk of obesity in offspring and years will then be able to become adults with obesity ¹¹.

Risk exposed diabetes mellitus (GDM), gestational hypertension gestational, thromboembolic vein, pre-eclampsia, and miscarriage increases when a pregnant woman is obese ¹². Obese was associated with childbirth, pregnant women who are overweight are experiencing decrease chance to do labor spontaneously, it is more likely to happen along labor induction, is less likely to achieve a vaginal birth, while can increase the risk of operation caesar. Most women obesity less successful breastfeeding, have a Christmas post is longer so that a longer stay in the hospital, and are at risk of infection postnatal. Obesity is also associated with a higher risk of sick at the time of birth, including neonatal death, congenital anomalies, neonatal intensive care, and neonatal death ¹³.

Pre-eclampsia

Pre-eclampsia premature as is the main contributor and as the cause of death of 50,000-60,000 pregnant women each

year. Pregnant women with obesity risk are three times more likely to experience a pre-eclampsia compared to normal. Pre-eclampsia is the presence of hypertension and proteinuria characterizes a health problem that occurs after 20 weeks of pregnancy. Pre-eclampsia can then develop into eclampsia which can cause maternal and fetal death ¹.

Diabetes mellitus gestational

Obesity is a significant factor and agent of the pregnant women with gestational diabetes mellitus. Visceral and subcutaneous fat on the body of the mother of a pregnant candidate with obesity will produce the hormone insulin work against adipocytokine. A history of overweight is also one of the factors that can contribute to indirectly on Genesis prediabetes/diabetes mellitus gestational. The results of statistical tests suggest that pregnant women who have a history of overweight risk 6.952 times suffer from prediabetes/diabetes mellitus gestational compared with pregnant women who do not have a history of overweight where great value those risks statistically meaningful ¹⁵.

Birth of the dead

Obesity in pregnant women is undeniable is a risk factor for birth death. The reported risk of stillbirth 2-5 times higher in pregnant women who are obese,

compared with pregnant women with healthy body weight. Birth-death risk associated with obesity increases with gestational age. Among 2,868,482 single births, the risk of stillbirth as a whole was 3.1 per 1000 births (n = 9030). Comparison of pregnant women with a healthy body weight, the ratio of danger for stillbirth was 1.36 for pregnant women with overweight, 1.71 times for pregnant women who are obese class I, 2 times for pregnant women with obesity class II, 2.48 times for pregnant women who obese class III, and 3.16 times for pregnant women with a BMI ≥ 50 kg/m². The fetus at risk of experiencing the birth of death increases after 39 weeks gestational age for each class of obesity, the risk increased more rapidly with increasing BMI. Women with a BMI ≥ 50 kg/m² are at risk of 5.7 times more likely than women with healthy weight at 39 weeks of pregnancy and 13.6 times greater at 41 weeks of gestation. Almost 25% dead births that occurred between the ages of 37 and 42 weeks of pregnancy associated with obesity ¹⁶.

Pregnancy risk action and post-term cesarean section

Women with obesity or a high body mass index (BMI) or obesity may be at high risk of experiencing pregnancy preterm pregnancy or prolonged, i.e., pregnancy

over 40 weeks. More than 40 weeks of gestation also increases the risk of the occurrence of critical conditions of the fetus. To avoid the risk of induction of labor is required to accelerate the process of childbirth. Labor induction process itself is not without risk, pregnant women who perform labor induction will be at high risk get the actions of cesarean section, postpartum hemorrhage, thrombosis and the risk of maternal death is but if not made the selection will increase the risk of perinatal death ^{17,18}.

Management of Pregnancy for Women Obesity

Pre-pregnancy Care

Essential care services should ensure that all women of fertile age have the opportunity to optimize their weight before pregnancy. Give guidance and information about weight loss and lifestyle during consultation for family planning, and pressure, body mass index and waist circumference should regularly be monitored. Fertile women age with a BMI ≥ 30 should get information and advice about the risks of obesity during pregnancy and childbirth, and supported for losing weight before conception of.19 women with a BMI ≥ 30 who want to become pregnant should be advised to drink folic acid supplements equivalent to 400 μg per day before of pregnancy ²⁰.

Treatment During Pregnancy

Integrated women's treatment services with the management of obesity during pregnancy should into all antenatal clinics, with policies and guidelines is the solid foundation of treatments available. All pregnant women are encouraged to consume vitamin D supplement of 10 μg per day ²⁰. All pregnant women should measure their height and weight with the appropriate equipment, use Microsoft and their body mass index calculated on service visits antenatal. Give accurate information about the risks associated with obesity in pregnancy and how they minimize it for all pregnant women with a BMI ≥ 30 ¹⁹.

Labor Planning

Women with a BMI ≥ 30 should discuss to get information on antenatal services about the possibility of complications after childbirth is associated with a high BMI and risk they should have individual decisions about birthing usually or caesar after discussions with all considerations about relevant clinical factors. Another important thing in planning delivery for pregnant women who are obese is to consult the anesthetic have theoretical knowledge and experience in handling the high-risk group ²¹.

Treatment Time Give birth

Women with a BMI ≥ 35 should give birth in obstetric units led or accompanied by doctor consultancy with appropriate neonatal services. If there are no other medical or obstetric indications, obesity alone is not an indication to perform labor induction, and healthy births should be discouraged. Women with a BMI ≥ 30 who get cesarean action section have an increased risk of wound infection, and antibiotic prophylaxis should receive at the time of the operation. Women with a BMI ≥ 40 who in labor should continuously receive care obstetrics¹⁹.

Care about delivery and follow-up after pregnancy women with a BMI ≥ 30 must receive specialist advice and support as appropriate antenatal and postnatal about benefits, initiation of breastfeeding and care. They should take the advice of nutrients after birth from a trained professional, with the goal to lose weight. Those with undiagnosed gestational diabetes glucose tolerance test should be getting about six weeks after giving birth^{19,21}.

Conclusion

Crucial nutritional status monitoring is done of mothers/mothers-to-be before and since the beginning of the pregnancy, to avoid obesity during

pregnancy. Pregnant women who are obese it is recommended that the health check periodically to the obstetrician to get counseling about weight gain appropriate body mass index and nutrition and the right food for consumption, get a description of the risk of medical complications and congenital abnormalities that occur during pregnancy. Consultation or examination not only during pregnancy and childbirth but it also recommended that persist after birth, especially for mothers who have medical indications during pregnancy and childbirth due to obesity.

Conflict of Interest

The authors have no potential competing interest.

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