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**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.890827>Available online at: <http://www.iajps.com>**Review Article****NUTRITION INTERVENTIONS AND GESTATIONAL
DIABETES- A REVIEW**Morteza Salarzaei¹, Mahmood Anbari², Fateme Parooei^{1*}¹ Medical student, Student Research Committee, Zabol University of Medical Sciences,
Zabol, Iran² Zabol University of Medical Sciences, Zabol, Iran**Abstract:**

Introduction: Pregnancy is a critical period in which maternal health plays a vital role in the health of the baby; so underlying conditions, illness and disorders caused during pregnancy or external factors can endanger the health of the mother, the fetus or both.

Methods: In this review article, the databases Medline, Cochrane, Science Direct, and Google Scholar were thoroughly searched to identify the studies investigating Nutrition interventions and gestational diabetes. In this review, the papers published until early January 2017 that were conducted to study the Nutrition interventions and gestational diabetes in women were selected. In searching for the articles, those English papers were selected that had Nutrition interventions and gestational diabetes.

Results: Nutrition interventions in the diet are considered as the most basic treatment for gestational diabetes. In all of the recent international workshops and conferences on gestational diabetes, MTN has been referred to as the cornerstone of treating gestational diabetes. Nutritional quantity and quality has an important effect on fetal growth and development.

Discussion and conclusion: With the global increase of gestational diabetes, the maternal and fetal complications of this kind of diabetes increase as well. Thus, with the increase prevalence of gestational diabetes, it seems necessary to conduct an integrated screening and diagnostic instruction and consider risk factors existing in this kind of diabetes.

Key words: Nutrition, interventions, gestational diabetes.

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INTRODUCTION:

Pregnancy is a critical period in which maternal health plays a vital role in the health of the baby; so underlying conditions, illness and disorders caused during pregnancy or external factors can endanger the health of the mother, the fetus or both. (1). Some problems during pregnancy, such as the presence of pregnancy blood pressure, the incidence of childbirth bleeding, premature rupture of the embryo, early childbirth and inappropriate weight of the fetus, can lead to unpleasant outcomes (2). The outcome of pregnancy is heavily influenced by the health of the mother and her physical condition as well, and issues such as medical problems or maternal surgeries will affect pregnancy outcomes. Pregnancy-related diabetes mellitus can be commonly cited in this period (4). Pregnancy is a common and prevalent medical condition in the field of carbohydrate intolerance which affects the phenomenon of pregnancy and can lead to undesirable outcomes and high-risk childbirth and affect the mother and the fetus (5). The adverse effects of motherhood include increased prevalence of hypertension and preeclampsia, increased cesarean section rate, Cardiovascular diseases and complications associated with dyslipidemia, abdominal obesity, hydramnios, pyelonephritis and long-term hospitalization (6). Possible fetal complications, also, include increased risk of fetal macrosomia, fetal growth restriction, unjustified death of the fetus, neonatal hypoglycemia, hyperbilirubinemia, cardiac hypertrophy, hypocalcemia, polycythemia, and obesity. Progressive prevalence of diabetes and its subsequent as a serious medical problem have been quite tangible in recent decades (7-8). The most important concerns are overgrowth of the fetus, maternal damage following fetal macrosomia, as well as other fetal and maternal complications, especially preeclampsia. The apparent outbreak of type 2 diabetes in the future is seen in women with diabetes mellitus and their offspring; half of these women will have diabetes over the next 20 years. Another important observed fact was the strong association between gestational obesity and childbirth obesity (9). On one hand, London et al study showed that although the treatment of A1 gestational diabetes in which, merely, GTT is affected and the rate of fasting blood glucose is normal, decreases the risk of preeclampsia and macrosomia, it is not that much different in other neonatal complications, such as hyperbilirubinemia and Intrauterine.

METHODOLOGY:

In this review article, the databases Medline, Cochrane, Science Direct, and Google Scholar were thoroughly searched to identify the studies

investigating Control and treatment of pregnancy diabetes. In this review, the papers published until early January 2017 that were conducted to study the Control and treatment of pregnancy diabetes in women were selected. In searching for the articles, those English papers were selected that had investigated Control and treatment of pregnancy diabetes.

FINDINGS:

Nutrition interventions in the diet are considered as the most basic treatment for gestational diabetes. In all of the recent international workshops and conferences on gestational diabetes, MTN has been referred to as the cornerstone of treating gestational diabetes (10). Nutritional quantity and quality has an important effect on fetal growth and development. The management of these patients include manipulating and limiting calories and nutrients as a strategy for normalizing blood glucose (11). MTN has been defined as designing dietary meals with controlled carbohydrate level for nutritional adequacy with natural weighing and normalized blood glucose level. In a review article on the effect of nutrition interventions, the lifestyle changes, and dietary supplements on the prevention of diabetes, it was concluded that in trials where only the participants' dietary intake entered the intervention, no positive results were achieved (12). However, when the dietary interventions were combined with lifestyle interventions, a better efficacy has been observed in reducing the prevalence of gestational diabetes. As it was stated, the cornerstone of the treatment is based upon correct nutrition. Calorie allocation is based on ideal body weight (13). The recommendations are as follows: 30 kilo calories per each kilogram of the physical weight in women with normal body mass index (BMI); 24 kilo calorie per each kilogram of the physical weight in overweight women; and 12-15 kilo calories per each kilogram of the physical weight in women suffering from obesity. The recommended ration of the received energy from the macronutrients is 33-40 percent of complex carbohydrates, 35-40 percent of fat, and 20 percent of protein (14).

DISCUSSION AND CONCLUSION:

The main cause behind the lack of proper blood glucose control in pregnant mothers is low adherence to recommendations on diets and the intake of more calories than needed (15). The general approach among these patients is further restriction or adjustments in calorie intake before one starts treatment with insulin. However, this dietary self-restraint can bring about unwanted effects on the pregnant mother's nutritional pattern

and weight. Receiving a diet without professional recommendations, despite appropriate design, will lead to gestational diabetes or type 2 diabetes in pregnant women due to the possibility of ketoacidosis during pregnancy that has a great risk for both mother and the fetus (16). For women with average amounts (more than normal for pregnant women and less than the diagnosed amounts for non-pregnant women) 9 two-hour 75-gram oral glucose tolerance tests must be conducted to diagnose gestational diabetes. If each of the amounts is higher than the new diagnostic amounts (that is fasting blood glucose of 5.1 mmol/liter is 10 mmol/liter one hour after glucose and 8.5 mmol/liter two hours after glucose) the desirable treatment should be initiated. In all of the women who are considered natural or have not been tested in the due time, a two-hour 75-gram oral glucose tolerance test must be given in week 24 and week 48 of the pregnancy (17). This is in addition to the present two-hour diagnostic test at which an initial screening is conducted to evaluate the risk factors or the screening is conducted with 50 grams of glucose, and if the screening is unnatural, the glucose tolerance test is conducted. Given the rise in obesity and diabetes, we must admit that the diagnosis and treatment of gestational diabetes is of great value. In summary, the findings of the present review article indicates that gestational diabetes is a serious medical, social, and economic concern. Given the increased inactivity, women's obesity, increased marriage age, and gestational diabetes in most of the developed and developing countries, the prevalence of gestational diabetes is regarded as one of the increasing problems of midwifery. With the global increase of gestational diabetes, the maternal and fetal complications of this kind of diabetes increase as well. Thus, with the increase prevalence of gestational diabetes, it seems necessary to conduct an integrated screening and diagnostic instruction and consider risk factors existing in this kind of diabetes.

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