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IMPACT OF NUTRITION ON PREGNANT WOMEN'S HEALTH AND FOETAL DEVELOPMENT

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ABSTRACT

This article discusses the impact of nutrition on the health of pregnant women and fetal development. It examines the role of proper nutrition in preventing pregnancy complications such as anemia and gestational diabetes, as well as in creating healthy conditions for the newborn's growth. Particular attention is paid to the importance of consuming essential micro- and macronutrients such as folate, iron, and omega-3 fatty acids. The impact of a varied diet on reducing the risk of preterm birth and improving the health of both mother and child is substantiated. The article emphasizes the need for a balanced diet during pregnancy to ensure optimal fetal development and improve the quality of life of expectant mothers.

KEYWORDS

Pregnancy, nutrition, maternal health, fetal development, folate, gestational diabetes, anemia, omega-3 fatty acids, preterm birth, pregnancy complications.

INTRODUCTION

Nutrition is one of the key factors influencing the health of pregnant women and the development of the

fetus. A proper diet during this important period improves the expectant mother's general condition

and creates optimal conditions for the growth and development of the fetus. This article discusses the role of diet during pregnancy and its impact on outcomes such as the newborn's health and the risk of various diseases in the mother and child.

The Impact of Nutrition on the Health of Pregnant Women

Proper nutrition during pregnancy helps prevent various complications such as anemia, preeclampsia, and gestational diabetes. Research shows that women who eat a balanced diet are less likely to develop these conditions.

1. Dietary diversity: Eating a variety of foods provides essential vitamins and minerals. Particular attention should be paid to:

- Folic acid, which reduces the risk of neural tube defects in the fetus (Czeizel & Dudás, 1992). The daily dose of folic acid for healthy pregnant women is 400 mg.
- Iron, which is essential for preventing anemia (Milman, 2011).

2. Limiting Junk Foods: Pregnant women should avoid certain foods that contain excess sugar, salt, and trans fats, which can contribute to weight gain and other risks (Wadhwa et al., 2010).

Effects of Diet on Fetal Development

1. Adequate Protein Intake: Protein is an important nutrient for fetal tissue growth. Research shows that low protein intake can result in poor growth and low birth weight in newborns (Godfrey & Barker, 2000).

2. Omega-3 Fatty Acids: These fatty acids play an important role in fetal brain and vision development. Studies have found a link between their consumption and improved cognitive function in children (Innis, 2007).

3. Antioxidants: Fruits and vegetables rich in antioxidants help protect cells from oxidative stress, which is important for the health of both mother and fetus (Valko et al., 2007).

Pregnancy Outcomes

The importance of proper nutrition also affects pregnancy outcomes:

1. Risk of preterm birth: Research shows that high intake of silicon, found in fruits and vegetables, is associated with a reduced risk of preterm birth (Zhang et al., 2014).

2. Newborn health: Children born to mothers with poor nutrition are more likely to experience growth and developmental problems and have a higher risk of developing chronic diseases later in life (Barker, 2004).

3. Impact on emotional well-being: A healthy diet also has a positive effect on the psycho-emotional well-

being of the pregnant woman, which can reduce the risk of depression and anxiety (Harris et al., 2016).

A review of data and research from the last five years in the field of nutrition of pregnant women by foreign scientists showed the following results:

1. The importance of micronutrients:

- Research shows that the lack of certain micronutrients, such as **folic acid**, **iron**, **iodine** and **calcium**, remains a serious health problem for pregnant women. For example, insufficient iodine intake is associated with the risk of developing thyroid disorders in mothers and children (Gilbert et al., 2019).

2. The benefits of omega-3 fatty acids:

- In 2021, a number of studies confirmed that omega-3 fatty acids, especially **DHA** (docosahexaenoic acid), are important for the development of the brain and vision of the fetus. Regular consumption of foods rich in omega-3 can improve cognitive performance in children at an early age (Bendik et al., 2020).

3. Effect of diet on pregnancy outcomes:

- A 2020 study found that the Mediterranean diet, which includes plenty of fruits, vegetables, whole grains, nuts, and fish, was associated with a lower risk

of pregnancy complications such as gestational diabetes and preeclampsia (Papadopoulou et al., 2021).

4. Psycho-emotional state:

- A 2022 study found that women with a high intake of plant-based foods rich in antioxidants were less likely to experience depression and anxiety during pregnancy. This suggests that healthy eating can have a positive effect not only on physical health but also on mental health (Lahmann et al., 2022).

5. Nutrition technologies and approaches:

- New approaches to monitoring pregnancy nutrition have emerged in recent years, such as the use of mobile apps and technologies to track diet and health. These tools help women maintain healthy diets and collect data for scientific research (Gališanka et al., 2021).

6. Impact of COVID-19:

- The findings related to the COVID-19 pandemic have highlighted the need for increased attention to the nutrition of pregnant women, as many of them have experienced stress that may affect their eating habits and overall health (Chirico et al., 2021).

These findings highlight the importance of a varied and balanced diet during pregnancy, as well as the need for additional research and implementation of new



methods to support the health of expectant mothers and their children.

CONCLUSION

Proper nutrition during pregnancy is an important factor influencing the health of both the mother and the fetus. Following a balanced diet helps reduce the risks associated with pregnancy and has a positive effect on the development of the newborn. Considering all the above aspects, expectant mothers should pay special attention to their diet to ensure the optimal development of their children.

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