

Article

Macronutrients as a Key Component of Healthy Nutrition for Pregnant and Lactating Mothers

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Abstract: This article examines the importance of macronutrients in the healthy nutrition of pregnant and lactating mothers and emphasizes the need for their adequate presence in the daily diet. The study analyzes the obtained results and discusses possible approaches to overcome the identified deficiencies.

Keywords: cell renewal, enzymes, hormones, macronutrients, micronutrients, proteins, fats, carbohydrates.

Introduction

Ensuring the provision of safe and high-quality drinking water to the population is one of the priority tasks of sustainable development, particularly in regions that rely on surface water sources [1]. Under conditions of increasing anthropogenic pressure and changes in the hydrochemical regime of water bodies, the risk of supplying water contaminated with mechanical impurities, organic substances, mineral salts, and biological agents to drinking water systems increases. In this regard, assessing the performance of specific water treatment facilities that provide drinking water supply to the population is of particular relevance [2].

Introduction

The quality, type, amount of food consumed during pregnancy and lactation, in a timely manner and in moderation, is one of the important factors affecting their lives. According to scientific research in modern biology and medicine, it has been proven that the mental and physical development of a child is directly related to what the mother eats, drinks, and the amount, composition, how and when to eat[1].

The role of the amount of expended energy is constantly compensated by the breakdown of the main nutrients in the body - proteins, fats, carbohydrates, which the body receives from the external environment during daily food intake. This plays a decisive role especially in the lives of pregnant and lactating mothers[2].

Methods

Based on the above considerations, we noticed that during our observations, a group of pregnant and lactating mothers (women aged 18-29 years) received macronutrients, such as, proteins, fats and carbohydrates. The surveys were conducted using questionnaire method[3].

Result and Discussion

It is known that proteins in the body are primarily plastic, as well as nutrients that have energy value. Protein becomes especially important during pregnancy and lactation[4]. Therefore, a change in protein intake from the required rate to one degree or another will lead to significant negative changes. They are actively involved in the performance of vital functions, such as cell renewal, the formation of enzymes, hormones and other biological fluids, as well as a component of hemoglobin-forming elements in the blood[5].

In this regard, according to generally accepted norms, the daily protein intake for pregnant and lactating mothers should be 77.2 and 80.6 grams of protein, respectively, in our results these figures are 15.1% and 20.1% lower than the norm. In particular, the amount of animal protein is 34.2 grams and 41.7 grams, respectively, which satisfies their daily normative requirement for animal protein by 36.4% and 30.5%, respectively[6].

For pregnant and lactating women, fats are not only a source of energy, but also an important component of nutrients that are part of all tissues and cells. They also ensure proper absorption of fat-soluble vitamins, calcium and magnesium from minerals. In addition to fat-soluble vitamins, fats also contain essential substances such as phospholipids, sterols, arachidonic and linolenic acids[7].

Our observations show that the total amount of fat in the diet of pregnant and lactating mothers is much lower than normal. For example, in pregnant and lactating mothers, this figure is 69.4 and 77.1 grams, respectively, instead of the normal 67 (+12) and 67 (+20) grams. This indicates a reduction of -12,1% and -19,6% in pregnant and lactating mothers compared to the daily norm[8].

Of the basic nutrients in daily consumption, carbohydrates are the first in terms of quantity, and they are the main substances that provide energy to the body, and also partially serve as a plastic material[9].

The total amount of carbohydrates in the daily diet of pregnant and lactating mothers is close to normal. In pregnant women, for example, the figure was 289 (+30) grams in the norm, and the result was 315 grams[10]. In breastfeeding mothers, the norm was 289 (+40), and our result was 319.4 grams[11]. In understanding the results, it should be noted that in the Republic, especially in rural areas, the main nutrients in the diet of women living in rural areas are carbohydrates, i.e bread and flour products, although the total energy value is close to normal, but proteins, in particular, animal proteins were noted to be significantly lower than appropriate levels[12]. If such deficiencies are not remedied in time, defects in the normal course of the fetal process are inevitable. This condition can affect a child's body mass, physical and mental development[13].

Our results show that the ratio of the intake of essential nutrients in the daily diet of the respondents is disturbed. This, in turn, has a significant effect on plastic and energy metabolism[14]. In particular, the energy value of their daily diet is 2191.2 and 2301.1 kcal, respectively, instead of the normal 2000 (+320) and 2000 (+500) kcal[15].

Conclusion

It is important to emphasize that the timely correction of nutritional deficiencies in the diet of pregnant and lactating mothers plays a significant role in improving the physiological health of both the mother and the child. In addition, promoting healthy nutrition through mass media, as well as organizing question-and-answer sessions, seminars, and training programs for the general public, is essential for increasing awareness and ensuring proper dietary practices.

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