



IMPORTANCE OF FOLIC ACID FOR PREGNANCY

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<https://doi.org/10.5281/zenodo.10910222>

Abstract. Nutritious nutrition for women of reproductive age a necessary condition for a healthy pregnancy and normal intrauterine development of the fetus. Deficiencies of macro- and micronutrients during pregnancy are associated with the development of fetal malnutrition and an increased risk of congenital anomalies. The article provides information on the effect of folic acid on fetal development in pregnant women.

Keywords: Nutritious, Folic acid, fetal development, pregnant women, oncoprotective effect, optimal doses.

Relevance. Nutritious nutrition for women of reproductive age a necessary condition for a healthy pregnancy and normal intrauterine development of the fetus. Deficiencies of macro- and micronutrients during pregnancy are associated with the development of fetal malnutrition and an increased risk of congenital anomalies. Although drugs that correct micronutrient deficiencies during pregnancy and claim to be called essential have flooded the market, their quantitative and qualitative composition leaves much to be desired.

Folic acid is prescribed to millions of women, so the safety of folic acid dosing is extremely important. As a rule, folic acid is prescribed to young women preparing for pregnancy, or to women during pregnancy, especially in the early stages. Folic acid is often used as part of vitamin and mineral complexes. Physiological doses of vitamins A, D, folic acid, etc. have a clear oncoprotective effect. At the same time, the safety of using high and ultra-high (more than 5–100 daily norms) doses of vitamins has been little studied. High-dose vitamin therapy is justified only for a narrow circle of patients with severe vitamin deficiency.

Purpose of work: justify the need for folic acid for fetal development and indicate optimal doses.

Results: Folic acid (chemical name: pteroyl-glutamic acid) belongs to the B vitamins. It is also known as “folacin” and is one of the vitamers of the “BC” or B9 group. Vitamin B9 is necessary to prevent anemia in pregnant women and fetal development defects, including the development of neural tube defects (NTDs). It is well known that at the body level, folate is necessary for cell growth and for the detoxification of homocysteine. At the cellular level, folates are fundamentally important for nucleotide synthesis and NTDs methylation (i.e., maintaining genome structure).

Since an adequate supply of folic acid and folates ensure physiological division and normal cell growth, their level in the body must be optimal - necessary and sufficient. When there is a lack of folate, cell growth slows down, folate deficiency anemia occurs, and wound healing slows down.

. Plant raw materials and products with significant content folates and folic acid: Leafy dark green fresh vegetables (lettuce, spinach, broccoli), tomatoes, carrots, beets, avocados, liver, kidneys, eggs, cheese. In addition, folic acid is found in the following medicinal

plants: black currant fruits, wild strawberries. When cooking vegetables and meat, the loss of folic acid reaches 70–90%; when frying meat - 95%; when boiling eggs - 50%.

Pregnant and lactating women are recommended to consume 400-800 mcg/day, and for everyone else - 400 mcg/day of folate, the upper limit of physiological requirement is 1,000 mcg (Russian Federation Norms, 2008. Griffith, 2004). According to large studies involving tens of thousands of people, most adults consume less folate than recommended (Alaimo, 1994; Raiten, 1995). In particular, a study of folate consumption by the German population during 1997-2000 showed that the average folate intake among adults was 250 mcg/day, instead of the 320 mcg/day established for Germany. At the same time, in 25% of women of childbearing age, the folate content in erythrocytes and blood plasma is reduced (Gonzalez-Gross, 2002).

Despite the prevalence of folate deficiency, in recent years another extremely important problem has emerged - excessive consumption of folic acid in the form of pharmacological preparations in doses of 5,000 mcg per 1 tablet, prescription of folic acid at 1,000 mcg, 3-6 tablets per day.

Two directions of pharmacotherapy with folic acid should be clearly distinguished:

1. preventive, aimed at meeting daily needs;
2. high-dose vitamin therapy

Special cases in which increased doses of folic acid may be prescribed:

1. compensation of folate deficiency during chemotherapy with antifolate drugs;
2. deep hypovitaminosis and folic acid deficiency;
3. hyperhomocysteinemia;
4. alcoholism;
5. malabsorption in the gastrointestinal tract;
6. genetic predisposition to permanent folate hypovitaminosis: polymorphism 677

C>T of the methylenetetrahydrofolate reductase gene (MTHFR) and other polymorphisms of folate metabolism genes.

Accordingly, there are drugs designed to meet the physiological daily requirement (doses of 400-1,000 mcg/day), and drugs with extremely high folate content (3,000-5,000 mcg/day), intended for use in special situations.

Conclusion. Initially, high-dose folic acid therapy in obstetrics and gynecology pursued the good goal of preventing hyperhomocysteinemia in pregnant women and women with recurrent miscarriage. Subsequently, a dangerous trend emerged in the prescription of folic acid to an increasingly wider range of patients in the absence of clear indications for high-dose therapy.

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