FolateUltra (methyl-folate with B6&B12)

Code: FE2037 – 60 tablets

L-5-MTHF (L-5-methyltetrahydrofolate) helps reduce the risk of neural tube defects when taken before conception and during early pregnancy. It allows the body to metabolize and assimilate carbohydrates, fat and protein in order to use mitochondrial energy.
Folates contribute to normal amino acid synthesis and maternal tissue growth during pregnancy. Folates and vitamins B_6 and B_{12} contribute to proper immune and psychological function and homocysteine metabolism, and help decrease tiredness and fatigue.

This formula includes the bioactive forms of vitamins B_{12} and B_6, methylcobalamin and pyridoxal-5'-phosphate (P5P), which serve as cofactors for metabolic reactions throughout the body.
Folate supplementation has been proven to reduce levels of the amino acid homocysteine, high levels of which are related to atherosclerosis and reduced blood flow to the brain, which can contribute to depression.

FOLATE ULTRA is a fundamental supplement for a healthy pregnancy, as well as many other promising therapeutic applications.

Ingredients: Bulking agent: microcrystalline cellulose, carrier: sodium carboxymethylcellulose, anticaking agent: silicon dioxide, carrier: vegetable stearic acid, anticaking agent: vegetable magnesium stearate, pyridoxal 5'-phosphate (vit. B_6), calcium-L-methylfolate, methylcobalamin (vitamin $_{B12}$).

Nutritional information	**1 tablet (271 mg)**
Folate (calcium-L-methylfolate)	1 000 µg (500%*)
Vitamin B_6 (pyridoxal 5´-phosphate)	1,4 mg (100%*)
Vitamina B_{12} (methylcobalamin)	2,8 µg (112%*)

*NRV: Nutrient Reference Value in %

Size and format:
60 tablets

Recommended daily dose:
1 tablet daily.

Do not exceed the stated recommended daily dose.

Indications and uses:
Different studies have shown that the ingredients in FOLATE ULTRA contribute to the following:
Prenatal health, development of the embryonic nervous system and protection against neural tube defects. It invigorates amino acid synthesis, the growth of maternal tissue during pregnancy, normal immune function, and normal homocysteine metabolism, and helps decrease tiredness and fatigue.

Cautions:
It is recommended to consult a health-care practitioner before use if you are pregnant or breast-feeding, or if you are treated with medication.

FOLATE: This is a water-soluble B vitamin synthesized by the bacteria of the intestinal flora, and is also present in small amounts in some foods. It's a fundamental nutrient for preventing megaloblastic anemia and malformations in newborns, and is also a chemopreventive nutrient as well as cardioprotective, preventing the development of cardiovascular disease by preventing an increase in homocysteine and the development of some types of cancer. An adequate intake of dietary folate is therefore important[(1)].
The main function of folate is as a coenzyme in the transport of simple carbon fragments. Tetrahydrofolic acid (THFA) is a carrier of one-carbon formyl, hydroxymethyl or methyl groups. It has significant activity in purine synthesis (guanine, adenine, pyrimidine and thymine), compounds used for the formation of nucleoproteins: deoxyribonucleic acid (DNA) and ribonucleic acid (RNA), essential for cell division.
THFA participates in the interconversion of serine and glycine, the oxidation of glycine, the methylation of homocysteine to methionine with vitamin B_{12} as cofactor, and the methylation of ethanolamine, precursor to the vitamin choline.

Folate is essential for the formation of erythrocytes and leukocytes in the marrow and their maturation, and for its action as one-carbon transporter in the formation of the *heme* group. Its deficiency is the cause of megaloblastic anemia and other haematologic disorders (mainly in newborns)[1,2].

High blood homocysteine, or hyperhomocysteinemia, can be caused by a deficit of folate, vitamins B_6 and B_{12}, or transmethylglycine, as well as by a lack of exercise; however, folate seems to be the critical nutrient in determining this level. A meta-analysis has shown that folate reduces homocysteine by 25%, while vitamin B_{12} only decreases it by 7%, and B_6 causes no decrease[3,4].
High homocysteine is related to atherosclerosis, cardiovascular risk and reduced blood flow to the brain, which can contribute to depression. In addition, in research carried out on expectant mothers, high plasma homocysteine was related to miscarriage, genetic malformations, preeclampsia, restricted intrauterine growth and intrauterine foetal death[12].

As previously confirmed, folate is important for the synthesis of the purines guanine, adenine, pyrimidine and thymine, necessary compounds for the formation of nucleic acids, essential for cell division. Folate is fundamental for the formation of erythrocytes and leukocytes in bone marrow, and for their maturation. Folate deficiency is therefore directly related to changes in cell morphology, especially in rapidly multiplying cells such as leukocytes, stomach epithelial cells, and those of the intestine, the vagina and the uterine cervix[1]. Its importance in human embryogenesis can therefore be deduced, as well as in carcinogenesis. Folate deficiency is directly related to malformations of the neural tube, urinary tract, cardiovascular system, palate and limbs, as well as spina bifida in newborns[5,6]. Taking into account that neural tube closure occurs in the third week of gestation, folate supplementation is recommended for all women who might become pregnant as a way of preventing these defects[5,6,7].

VITAMIN B6: This is an essential vitamin for proper enzyme function. Vitamin B_6 also influences brain development during pregnancy and infancy, as well as the development of the immune system. It makes folate more readily absorbed by the body, therefore increasing its effectiveness[9].

VITAMIN B12: Folate and vitamin B_{12}, or cobalamin, have a tight metabolic interrelationship in the synthesis of purine and pyrimidine nucleotides and homocysteine methylation, where methionine is obtained. In the absence of vitamin B_{12}, a folate deficiency can occur upon the entrapment of the metabolically inactive form 5-methyltetrahydrofolate[10,11].

Numerous studies have shown that taking folate along with vitamins B_6 and B_{12} reduces blood homocysteine levels and congenital malformations by over 70%[8,9].

References:
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