



DESCRIPTION:

A new generation of folate derivative, namely (6S)-5-methyltetrahydrofolate glucosamine salt (Quatrefolic®), endowed with a long lasting stability and a peculiarly high water solubility as well as an improved bioavailability and a well established safety

COMPOSITION:

Quatrefolic® 300mcg Tablets **Quatrefolic® 600mcg Tablets**
 Each film coated tablet contains: Each film coated tablet contains:
 Folate [Quatrefolic® 600mcg as (6S)-5-MTHF, Folate [Quatrefolic® 1200mcg as (6S)-5-MTHF,
 glucosamine salt] (Vegetarian Source)...300mcg glucosamine salt] (Vegetarian Source)600mcg

GENERATIONS OF FOLIC ACID:

1st Generation – Food Folate
 Refers to the various tetrahydrofolate derivatives naturally present in foods

2nd Generation – Folic acid:
 It is a synthetic oxidized molecule, that does not occur in nature but can be utilized by the human body as a precursor to form natural folates that are biologically active

Folic acid lacks coenzyme activity and must be reduced to the metabolically active form within the cell, through a series of biochemical steps before it can be used by the body's cells in vital metabolic pathways such as DNA production, cell reproduction and homocysteine metabolism

3rd Generation – (6S)-5-methyltetrahydrofolate calcium salt:
 The calcium salt of (6S)-5-methyltetrahydrofolate is available commercially and represents the 3rd generation of folic acid. Until now, (6S)-5-methyltetrahydrofolate calcium salt was the only folic acid derivative available in the market, and able to penetrate the body cells without needing further metabolism

4th Generation: Quatrefolic®, (6S)-5-methyltetrahydrofolate glucosamine salt:
 Quatrefolic® is the glucosamine salt of (6S)-5-methyltetrahydrofolate and is structurally analogous to the reduced & an active form of folic acid

Quatrefolic® represents the 4th generation folate endowed with long lasting stability as well as a peculiarly high water solubility, improved bioavailability and well established safety

HOW DOES Quatrefolic® WORK:

The mechanism of action of Quatrefolic® is related to the action of 5-methyltetrahydrofolate the active part of the proprietary ingredient. 5-methyltetrahydrofolate derives from tetrahydrofolic acid through a series of metabolic reactions. Tetrahydrofolic acid acts as a coenzyme in several vital metabolic reactions participating in the transfer as acceptors and donors of various one-carbon fragments, involved in the biosynthesis of nucleotides purines and pyrimidines and in the metabolism of several important amino acids. In concert with vitamin B₁₂, folate coenzymes allow the conversion of the amino acid homocysteine to methionine, the lack of this conversion has been associated with various pathologies and diseases

Conversion of tetrahydrofolic acid to 5-methyltetrahydrofolate is mediated by the action of the enzyme methylenetetrahydrofolate reductase. In individuals with a genetic defect of methylenetetrahydrofolate reductase enzyme conversion is limited, predisposing these individuals for an increased risk for certain disease conditions. Supplementation with 5-methyltetrahydrofolate might be preferable to folic acid, being it is immediately available to react with homocysteine to avoid the possibility of hyperhomocysteinemia

SUPPLEMENTATION BENEFITS:

Humans need to maintain an adequate dietary intake of folate during various stages of their lives. Folate plays an essential role in cell division and DNA synthesis and is involved in human growth and development. Folate deficiency has far-reaching negative health consequences at all stages of life and has been implicated in the etiology of a variety of disorders including but not limited to neural tube defects (NTDs), anemia, various forms of cardiovascular diseases, Alzheimer's disease and osteoporosis, all of which have become pervasive health issues around the world in the 20th century

It is recommended:

- During pregnancy and lactation
- As dietary supplement in adults and older people
- In risk of spontaneous abortions
- For treatment of macrocytic anemia depending on the medical condition of the patient
- In hyperhomocysteinemia
- In depression, cognitive impairment, dementia and Alzheimer

DOSAGE AND ADMINISTRATION:

Quatrefolic® (6S)-5-methyltetrahydrofolate glucosamine salt has been accepted for use as an alternative to folic acid for dietary supplementation, according to the NDI (New Dietary Ingredient) notification submitted to FDA. The intended uses of Quatrefolic®, (6S)-5-methyltetrahydrofolate glucosamine salt and use levels will be same as that of folic acid, expressed on the bases of the "Recommended Dietary Allowance" for Folate for Children and Adults

AGE (Years)	MALES AND FEMALES (µg/day)	PREGNANCY (µg/day)	LACTATION (µg/day)
-	Folate	-	-
1-3	150	-	-
4-8	200	-	-
9-13	300	-	-
14-18	400	600	500
19+	400	600	500

OR
 As directed by the Healthcare Professional

ADVERSE REACTIONS:
 Allergic sensitization has been reported rarely following oral and parenteral administration of folate

CONTRAINDICATIONS:
 This product is contraindicated in patients with a known hypersensitivity to any of the ingredients

DRUG INTERACTIONS:
 Fosphenytoin, methotrexate, phenobarbital, phenytoin, primidone, pyrimethamine

WARNINGS AND PRECAUTIONS:
 Foliates when administered as a single agent in doses above 0.1mg daily may obscure pernicious anemia in which hematologic remission can occur while neurological manifestations remain progressive

STABILITY:
 See expiry on the pack. Should not be used after expiry date

PRESENTATION:
 Quatrefolic® 300mcg tablets in a pack of 30's
 Quatrefolic® 600mcg tablets in a pack of 30's

INSTRUCTIONS:
 For oral use only
 Keep out of reach of children
 Avoid exposure to heat, light and humidity
 Store below 30°C

Dietary supplement; As per Drug Act 1976, this product is not an allopathic drug

Quatrefolic® is Regd. trademark of Gnosis, S.P.A. (Italy).

کوآڈرو® ٹیبلٹ
کوآ ٹرفولک

خوراک: ڈاکٹر کی ہدایت کے مطابق استعمال کریں
 صرف کھانے کے لئے ہے
 بچوں کی پہنچ سے دور رکھیں
 دوا کو دھوپ، گرمی اور نمی سے محفوظ رکھیں؛ گرمی پھینچنے سے گریز کریں؛ گرمی سے دور حرارت پر رکھیں

DRAP Enlistment No. 00174
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