

FEMSMART-XT[®]

(Ferrous Asparto Glycinate, L-methyl Folate Calcium, Zinc & Vitamin C Suspension)

Composition:

Each 5 ml contains:

Ferrous Asparto Glycinate eq. to
Elemental iron..... 30 mg
L-Methyl Folate Calcium..... 300 mcg
Vitamin C... 30 mg
Zinc Sulphate eq. to
Elemental Zinc..... 5 mg

Clinical Pharmacology:

Ferrous Asparto Glycinate:

Ferrous asparto glycinate is an effective iron – amino acid chelate in the management of IDA in pregnant women. It is reported that the intestinal iron absorption from iron amino acid chelate is significantly higher compared with inorganic iron salts. Asparagine and glycine not only emerged as the best absorbable amino acids, but are also known to enhance the transport of iron from the duodenum. In fact, absorption of iron-asparagine or iron-glycine chelate is more than double that of iron-ascorbate salt. Therefore, ferrous asparto glycinate (FAG; an iron-amino acid chelate) exhibit better GI absorption rate of iron than ferrous ascorbate and produce minimal GI consequences.

L-Methylfolate Calcium:

The term folate is typically used as a generic name for the group of chemically related compounds based on the folic acid structure. Folate, or vitamin B9, is thought of as one of the 13 essential vitamins. It cannot be synthesized de novo by the body, and must be obtained either from diet or supplementation. Dietary folate is a naturally occurring nutrient found in foods such as leafy green vegetables, legumes, egg yolk, liver, and citrus fruit. Folic acid is a synthetic dietary supplement that is present in artificially enriched foods and pharmaceutical vitamins. Neither folate nor folic acid is metabolically active. Both must be reduced to participate in cellular metabolism. L-5-Methyltetrahydrofolate (L-methylfolate) is the predominant micronutrient form of folate that circulates in plasma and that is involved in

biologic processes. To become metabolically active, folic acid must first be converted to dihydrofolate (DHF) and then tetrahydrofolate (THF) through enzymatic reduction, a process catalyzed by the enzyme DHF reductase (DHFR). Thereafter, THF can be converted to the biologically active L-methylfolate by the enzyme methylene tetra hydrofolate reductase (MTHFR). This key conversion is necessary to provide L-methylfolate for the one-carbon transfer reactions (methyl donations) needed for purine/pyrimidine synthesis during DNA and RNA assembly, for DNA methylation, and to regulate homocysteine metabolism.

Vitamin C:

Vitamin C plays an important role in many physiological processes in humans. It is needed for the repair of tissues in all parts of the body. The important functions of vitamin C include the formation of protein used to make skin, tendons, ligaments, and blood vessels for healing wounds and forming scar tissue, for repairing and maintaining cartilage, bones, and teeth and aid in the absorption of iron. It also produces osmotic effect in digestive tract, thus pulls water into intestines that helps to soften stool.

Zinc:

It is an essential trace mineral, is required for the metabolic activity of 300 of the body's enzymes, and is considered essential for cell division and the synthesis of DNA and protein. Zinc ions (Zn^{2+}) are closely involved in the normal development, differentiation, and function of immune cells, thus considered critical for generating both innate and acquired (humoral) antiviral responses. Zn is involved in various cellular processes and possesses a variety of direct and indirect antiviral properties. It was demonstrated that Zn deficiency is associated with reduced antibody production, affected function of the innate immune system (e.g., low natural killer cell activity), decreased cytokine production by monocytes, and the chemotaxis and oxidative burst of neutrophil granulocytes. It also results in thymic atrophy, altered thymic hormones production, lymphopenia, and defective cellular- and antibody-mediated responses that lead to increased rates and duration of infection. In particular, Zn deficiency reduces the number of peripheral and thymic T cells, their proliferation in response to phytohemagglutinin, and the functions of T helpers and cytotoxic T cells. In addition, Zn deficiency acts indirectly by reducing the levels of active serum thymulin, a zinc-dependent nonapeptide hormone that regulates the differentiation of immature T cells in the thymus and the function of mature peripheral T cells. On the other hand, Zn can affect several aspects of monocyte signal transduction and secretion of pro-inflammatory cytokines, and interfere with the binding of leukocyte function-associated antigen-1 to ICAM-1, thus suppressing inflammatory reaction. Zinc is also critical to tissue growth, wound healing, taste acuity, connective tissue growth and maintenance, immune system function, prostaglandin production, bone mineralization, proper thyroid function, blood clotting, cognitive functions, fetal growth and sperm production.

Indication:

- ❖ Iron deficiency Anemia.
- ❖ Rapid Growth and development.
- ❖ Pregnancy & Lactation.
- ❖ Chronic & acute blood loss.

Dosage and Administration:

As directed by the physician.

Contraindications:

Patients hypersensitive to ferrous asparto glycinate, L- Methyl Folate or to any other component of this formulation; Patients with porphyria cutanea tarda, haemochromatosis and haemosiderosis, and haemolytic anaemia.

Warnings and Precautions:

General: Do not exceed the recommended dose. The type of anaemia and the underlying cause or causes should be determined before starting therapy with this medication. Since the anaemia may be a result of a systemic disturbance, such as recurrent blood loss, the underlying cause or causes should be corrected, if possible.

Drug interaction:

The administration of the following results in decreased iron effectiveness: Aluminium hydroxide, aluminium phosphate, calcium , aluminium carbonate (basic), chloramphenicol, dihydroxyaluminium aminoacetate, dihydroxyaluminium sodium carbonate, magaldrate, magnesium carbonate, magnesium hydroxide, magnesium oxide, magnesium trisilicate, methacycline, minocycline, oxytetracycline, rolitetracycline, sodium bicarbonate.

Also following molecules decreased iron effectiveness: Cefdinir, cinoxacin, ciprofloxacin, enoxacin, gatifloxacin, gemifloxacin, grepafloxacin, levofloxacin, lomefloxacin, moxifloxacin, norfloxacin, ofloxacin, penicillamine, sparfloxacin, temafloxacin, trovafloxacin mesylate, levothyroxine.

NUTRITIONAL FOOD SUPPLEMENT**SHAKE WELL BEFORE USE.**

Dosage: As a Dietary Supplement, 5 ml (one teaspoonful) Twice Daily.

Flavour: Delicious Pineapple Flavour.

Storage: Store below 25°C in A Dry Place. Protect from light.

Route of administration: Oral

Presentation: FEMSMART-XT Suspension is available as 150 ml bottle.

Marketed By:



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