**medox ABC®**

**VITAMIN TONIC Syrup – Coated Tablets**

**medox ABC® Syrup**

Every 5 mL contains:
- L-lysine Mono Hydrochloride equivalent to lysine ........................................ 100 mg
- Vitamin A palmitate equivalent to vitamin A .................................................. 1,500 UI
- Vitamin B1 (Thiamine hydrochloride equivalent to thiamine) ......................... 5 mg
- Vitamin B2 (Riboflavin 5-sodium phosphate equivalent to riboflavin) ......... 3 mg
- Vitamin B6 (Pyridoxine hydrochloride equivalent to pyridoxine) .............. 1.5 mg
- Vitamin B12 (Cyanocobalamin) ................................................................. 5 mcg
- Vitamin C (Ascorbic acid) ........................................................................... 200 UI
- Nicotinamide ............................................................................................... 3 mg
- Panthenol ....................................................................................................... 2.5 mg
- Calcium chloride dihydrate equivalent to calcium ................................... 19.5 mg
- Amino chelated iron equivalent to iron ......................................................... 1.5 mg
- Vehicle q.s.

**medox ABC® Coated tablets**

Each coated tablet contains:
- L-lysine Mono Hydrochloride equivalent to lysine .......................................... 200 mg
- Vitamin A acetate equivalent to vitamin A ...................................................... 3000 UI
- Vitamin B1 (Thiamine mononitrate equivalent to thiamine) ......................... 10 mg
- Vitamin B2 (Riboflavin 5-sodium phosphate equivalent to riboflavin) ........ 6 mg
- Vitamin B6 (Pyridoxine hydrochloride equivalent to pyridoxine) ............... 3 mg
- Vitamin B12 (Cyanocobalamin) ................................................................. 10 mcg
- Vitamin C (Ascorbic acid) ........................................................................... 60 mg
- Vitamin D3 ................................................................................................. 400 UI
- Nicotinamide ............................................................................................... 6 mg
- Panthenol ....................................................................................................... 5 mg
- Calcium ........................................................................................................ 39 mg
- Phosphorus ................................................................................................. 61 mg
- Amino chelated iron equivalent to iron ......................................................... 3 mg
- Zinc (Oxide) ................................................................................................. 10 mg
- Excipients q.s.

**DESCRIPTION:**

**medox ABC**® is a formula that contains lysine, vitamin from the B complex, amino chelated iron, calcium, vitamins A, D, B6, and C in the right combination that helps supplement the requirements of these elements during growth, in periods after infection, in cases of post-operative convalescence, pregnancy, breastfeeding, or simple as a restorative at any age.

**PHARMACOKINETICS:**

Vitamins A, D, B6, B12, and B2 are well absorbed orally in the gastrointestinal tube and are eliminated through urine. Vitamin A circulates as a complex with albumin. Vitamin B2 has enterohpatic circulation; it joins the intrinsic factor in order to be absorbed. Vitamin D is hydroxilated in the liver and in response to needs for calcium and phosphorus. Vitamin B12 is transformed into to hydroxocobalamin, which is its active form. Ascorbic acid acts as a coenzyme and under certain conditions as a reduction agent and antioxidant. Humans do not have the necessary enzyme to transform food into vitamin C, which is why it should be provided exogenously, especially when there are increase needs, for example during pregnancy, breastfeeding, infections and post-operative processes. Vitamin C deficiency causes scurvy. Nicotinamide is a component of NAD and NADP that participate as important cofactors in several biochemical reactions, like electron transfers in the respiratory chain, glycolysis and lipid synthesis. Its excretion is through urine, partly as nicotine but mostly as metabolites. Calcium is well absorbed orally and is stored in bones, dentin and tooth enamel. Iron, in organic or inorganic salts, is poorly absorbed. Only the bonding iron, or other metals, with amino acids to form chelates has allowed absorbing and using the metals. These aminochelated compounds protect the metallic compound from the chemical reactions, with good solubility and absorption. Also these compounds remain stable in both the acid pH of the gastric juice and the alkali pH of intestinal juice. Studies have shown that the absorption speed of chelates is considerably better than that of ferrous sulfate and iron oxide, causing less intense side effects. Once absorbed, iron goes into the blood increasing its concentration in the blood plasma. Then it goes to bone marrow to form hemoglobin and to other organs where it is stored, specially the liver and spleen. It is excreted mainly through feces, but small amounts are excreted through bile and desquamated of the intestinal epithelium, only 0.5 mg daily is eliminated through urine.

Panthenol, administered orally, easily becomes pantethenic acid, which is its physiological active form. Pantethenic acid is found in coenzyme A in all living tissues. It acts as a cofactor for different reactions of enzymatic catalysis, as well as in acetylation reactions in the synthesis and degradation of fatty acids and in the synthesis of steroids and prophymins. Thus it is evident that the lack of pantethenic acid may reduce both carbohydrate and lipid metabolism.

Lysine is an essential protein element easy to assimilate; it is excreted through the urine, feces and other natural emunicitors.

**INDICATIONS:**

Vitamins from the B complex (Thiamine, Pyridoxine, Riboflavin, Cyanocobalamin) play a key role in the conversion of carbohydrates, proteins and fats in tissues. Thiamine acts as a coenzyme in carbohydrate metabolism. When there’s deficiency from this vitamin, pyruvic and lactic acid accumulate in tissues resulting in fatigue, anorexia, gastrointestinal complaints, tachycardia, irritability and neurological symptoms. Pyridoxine is essential in the metabolism of amino acids. In patients, both adults and children, with pyridoxine deficiency, there have been reports of convulsions, hypochromic anemia, as well as lesions in skin and mouth. Some peripheral neuritis and neuritis associated to treatment with INH may be caused by pyridoxine deficiency. Riboflavin deficiency is a well defined syndrome, composed of angular stomatitis, glossitis, red and shiny lips, follicular sebemorphic keratoses of the nasolabial folds, nose and forehead. Cyanocobalamin is essential in the synthesis of nucleic acids and for the normal maturation of red blood cells. Its deficiency causes anemia, and gastrointestinal symptoms like glosstis, and subjective symptoms like lassitude, and neurological defects that improve when cyanocobalamin is taken.

Vitamin C or ascorbic acid is essential in synthesis of collagen and intercellular material. It is involved in the conversion of folic acid to folinic acid in the process of electron transfer and it is thought to intervene in thyraxon metabolism. Its deficiency causes scurvy, which is rarely observed in adults, but frequently in infants. Ascorbic acid intake is important during pregnancy and breastfeeding.

Vitamin D regulates calcium and phosphorus metabolism in its intestinal absorption and deposits in bones and teeth. Calcium deficiency causes rickets in children and osteomalacia in adults.

Nicotinamide intervenes in enzymatic processes related to cellular oxidation and its presence is necessary for the functional integrity of skin, digestive mucosa and central nervous system. Nicotinamide deficiency (PP factor) causes pellagra with inflammatory and ulcerous lesions in skin, oral mucosa, and intestine.

Panthenol is a racemic mixture of dextrorotatory and levorotatory isomers of pantethenic acid. Lysine is an essential amino acid needed in the protein synthesis that takes place in the human body.

**PRECAUTIONS:**

Vitamin complexes cross the placental barrier and go into breast milk.

**SIDE EFFECTS:**

In sensitive patients, vitamins and minerals can occasionally cause nausea, vomiting, skin rash or gastric irritation. In some cases and in high doses, vitamin A can cause anorexia, weight loss or brain disorders.

**CONTRAINDICATIONS:**

In cases of hypersensitivity to one of the ingredients of the formula. Panthenol is contraindicated in hemophilia.

**DRUG INTERACTIONS:**

Some medicines antagonize with vitamin B6: ioxanid, clofisomer, hydralazine and penicillamine. Phenoxythiazine, Tricyclic antidepressants and anovulatory agents increase the need for riboflavin (vitamin B12). Salioclates, atropine, ammonium chloride and barbiturates increase vitamin C excretion. High doses increase levels of ethinyl estradiol and can give false negative results of enzymatic glucosuria, glucose strips, and false positives in clenristest. It also gives false positives for hidden blood in feces. Panthenol should not be combined with parasympathomimetic drugs.

**DOSE AND ADMINISTRATION ROUTE:**

**medox ABC® Syrup**

Administration route: Oral

Dose: Under the age of 2: 1/2 teaspoon 2 times a day. 2 to 6 years old: 1 teaspoon 2 times a day. 7 to 12 years old: 1 teaspoon 3 times a day. Adults: 1 teaspoon 4 times a day.

**medox ABC® coated tablets**

Administration route: Oral

Dose: one coated tablet a day, or in the dose recommended by the physician.

**MUSCULAR PRODUCT**

**KEEP OUT OF THE REACH OF CHILDREN.**

**STORE IN A COOL, DRY PLACE.**

**SOLD UNDER MEDICAL PRESCRIPTION.**

**PRESENTATION:**

medox ABC® Syrup: Box with 120 or 240 mL bottle, with measuring cup.

medox ABC® coated tablets: Box with 30 coated tablets. Dispenser with 100 coated tablets.

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