

Moblo

(Mecobalamin)



COMPOSITION

Moblo 500mcg IM/IV Injection:
Each ampoule contains: Mecobalamin 500mcg

Moblo 500mcg Tablet:
Each coated tablet contains:
Mecobalamin JP 500mcg

DESCRIPTION

Vitamin B₁₂ is a water-soluble vitamin, occurs in the body mainly as methylcobalamin (mecobalamin) and as adenosylcobalamin (cobalamide) and hydroxycobalamin. Mecobalamin and cobamamide act as coenzymes in nucleic acid synthesis. Mecobalamin is also closely involved with folic acid in several important metabolic pathways.

MECHANISM OF ACTION

Moblo contains Mecobalamin which is a Vitamin B₁₂ coenzyme, a water-soluble vitamin, It is a synthetic and active form of vitamin B₁₂ that can cross the blood brain barrier without biotransformation. The only homologue of vitamin B₁₂ that takes part in transmethylation in the brain is mecobalamin. Mecobalamin functions as a cofactor in the production of methionine from homocysteine and is more readily delivered to nerve cell organelles than cyanocobalamin. It also aids in the production of thymidine from deoxyuridine, which promotes the synthesis of nucleic acids and proteins. It restores skeletal protein axonal transport to normal in sciatic nerve cells. Mecobalamin increases methionine synthetase activity, which in turn stimulates myelination (phospholipid synthesis), which in turn promotes the synthesis of lecithin, the primary component of medullary sheath lipid. Mecobalamin increases nerve fibre excitability, which results in the restoration of end-plate potential induction and also restores the reduced acetylcholine levels in brain tissue. Mecobalamin stimulates the bone marrow's production of nucleic acids.

PHARMACOKINETICS

Vitamin B₁₂ substances bind to intrinsic factor, a glycoprotein secreted by the gastric mucosa and are then actively absorbed from the gastrointestinal tract. Absorption is impaired in patients with absence of intrinsic factor, with a malabsorption syndrome or with disease or

abnormality of the gut or after gastrectomy. Absorption from gastrointestinal tract can also occur by passive diffusion; little of the vitamin present in the food is absorbed in this manner although the process becomes increasingly important with larger amounts such as those used therapeutically. After intranasal dosage, peak plasma concentration of cyanocobalamin has been reached in 1 to 2 hours. The bioavailability of intranasal preparation is about 7 to 11 % of that by intramuscular injection. It is extensively bound to specific plasma proteins called transcobalamin; transcobalamin II appears to be involved in rapid transport of the cobalamins to tissues. Vitamin B₁₂ is stored in the liver, excreted in the bile and undergo extensive enterohepatic recycling; part of the dose is excreted in the urine, most of it in the first 8 hours; urinary excretion, however, accounts for only a small fraction in the reduction of total body stores acquired by dietary means. It diffuses across the placenta and also appears in the breast milk.

INDICATIONS AND USAGE

- Used in the treatment and prevention of Vitamin B₁₂ deficiency
- Neurological involvement
- Prophylaxis of anaemia associated with Vitamin B₁₂ deficiency resulting from gastrectomy or malabsorption syndromes
- Vitamin B₁₂ deficiency of dietary origin

DOSAGE AND ADMINISTRATION

It can be taken with or without food. The dosage may be adjusted depending on patient's age and symptoms.

- In patients without neurological involvement doses are 250 to 1000 micrograms intramuscularly on alternate days for 1 to 2 weeks, then 250 micrograms weekly until the blood count returns to the normal. Maintenance doses of 1000 micrograms are given every 2 to 3 months.
- In patients with neurological involvement, it may be given intramuscularly in doses of 1000 micrograms on alternate days and

continued for as long as improvement occurs. Maintenance doses of 1000 micrograms are given every 1 to 2 months.

- Prophylaxis for the treatment of anaemia associated with vitamin B₁₂ deficiency, it may be given in doses of 1000 micrograms intramuscularly every 2 to 3 months.
- For vitamin B₁₂ deficiency of dietary origin doses of 50 to 150 micrograms orally may be given daily between meals

CONTRAINDICATIONS

Hypersensitivity to the active substance or to any of the excipients.

ADVERSE REACTIONS

Allergic hypersensitivity reactions have occurred rarely after mecobalamin and hydroxycobalamin and include skin reactions such as rash, itching and anaphylaxis. Injection site reactions include pain, erythema, pruritus, induration, swelling, and necrosis can occur.

Other reported adverse effects of mecobalamin are; gastrointestinal disturbances, fever, chills, hot flushing, dizziness, malaise, acneform, bullous eruption, tremor, headache, paraesthesia and chromaturia.

DRUG INTERACTIONS

Absorption of vitamin B₁₂ from the gastrointestinal tract may be reduced by neomycin, amino salicylic acid, histamine H₂-antagonists, omeprazole and colchicine. Serum concentrations may be decreased by concurrent administration of oral contraceptives. Many of these interactions are unlikely to be of clinical significance but should be taken into account when performing assays for blood concentrations. Parenteral chloramphenicol may attenuate the effect of vitamin in B₁₂ in anaemia.

WARNINGS AND PRECAUTIONS

- Patients who are hypersensitive to mecobalamin injection may be take mecobalamin oral tablet.
- Mecobalamin should not be used for Leber's disease or tobacco amblyopia since these optic neuropathies may degenerate further.

- Arrhythmias secondary to hypokalaemia may occur at beginning of the parenteral treatment with mecobaalmin.
- For pernicious anaemia, an adequate dose must be used and the blood picture must be examined regularly at least every three months for 18 months until stabilised, and then annually.

PREGNANCY AND LACTATION

It is not recommended in pregnant and lactating women. Vitamin B₁₂ is distributed into breast milk and its use to be usually compatible with breast feeding.

DOSAGE AND INSTRUCTIONS

To be sold and used on the prescription of a registered medical practitioner only. Keep out of reach of children. Do not store above 30°C. Keep in a dry place. Protect from light.

PRESENTATION

Moblo 500mcg IM/IV Injection
Alu. PVC Blister Pack of 1mL x 10's

Moblo 500mcg Film-coated Tablets
Alu. PVC Blister Pack of 3 x 10's

موبلو
(میکیو بالامین)

خوراک و ہدایات:

صرف مستند ڈاکٹر کے نسخے کے مطابق ہی دوا فروخت اور استعمال کی جائے۔
بچوں کی پہنچ سے دور رکھیں۔ 30°C سے زیادہ درجہ حرارت پر نہ رکھیں۔
خشک جگہ پر رکھیں۔ روشنی سے بچائیں۔

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