# Bemitil, Metaprot

translated from original Russian leaflet by RussianMeds Store <u>https://russianmeds.com</u>

Name in Cyrillic: Бемитил, Метапрот

Active substance: Ethylthiobenzimidazole hydrobromide (Metaprot)

Pharmachologic effect: antiasthenic, antihypoxic, psychostimulating, tranquilizing.

# Pharmacodynamics:

Metaprot is an adaptogenic drug. It has nootropic, regenerative, antihypoxic, antioxidant and immunomodulating activity.

The mechanism of action is to activate the synthesis of RNA, and then proteins, incl. enzymatic and related to the immune system. There is an activation of the synthesis of gluconeogenesis enzymes, which ensure the utilization of lactate (a factor that limits performance) and the resynthesis of carbohydrates - an energy source during intense exercise, which leads to an increase in physical performance. Increased synthesis of mitochondrial enzymes and mitochondrial structural proteins ensures an increase in energy production and maintaining a high degree of conjugation of oxidation with phosphorylation. Maintaining a high level of ATP synthesis in oxygen deficiency contributes to a pronounced antihypoxic and anti-ischemic activity.

Metaprot enhances the synthesis of antioxidant enzymes and has a pronounced antioxidant activity. It increases the body's resistance to extreme factors - physical activity, stress, hypoxia, hyperthermia; increases performance during physical activity.

Metaprot has a pronounced anti-asthenic effect, accelerates the recovery process after extreme exposure.

The maximum effect is achieved 1-2 hours after taking the drug, the duration of action is 4-6 hours. In a course, the effect usually increases in the first 3-5 days, then it is steadily maintained at the achieved level.

# **Pharmacokinetics:**

After oral administration, it is well absorbed from the gastrointestinal tract. After a single dose, it is found in the blood after 30 minutes. With long-term course continuous use, especially at high doses, there may be a tendency to cumulation of the drug with an increase in its concentration in the blood by 10-12 days of use.

# Indications:

- to increase and restore working capacity, incl. in extreme conditions (heavy physical activity, hypoxia, overheating);

- adaptation to the impact of various extreme factors;

- asthenic disorders of various nature (with neurasthenia, somatic diseases, after severe infections and intoxications, in the pre- and postoperative period during surgical interventions);

- as part of the complex therapy of traumatic brain injury, meningitis, encephalitis, cerebrovascular accidents, cognitive disorders.

# **Contraindications:**

- hypoglycemia;
- severe liver dysfunction;
- epilepsy;
- arterial hypertension;
- glaucoma;

- ischemic heart disease;
- arrhythmias;
- lactase deficiency, lactose intolerance, glucose-galactose malabsorption syndrome;
- pregnancy;
- lactation period;
- childhood;
- hypersensitivity to the components of the drug.

### Use with caution:

Pregnancy and breast-feeding: The use of Metaprot is contraindicated during pregnancy and lactation.

#### Side effects:

very often (> 10%), often (1-10%), infrequently (0.1-1%), rarely (0.01-0.1%), very rarely (<0.01%, including isolated cases with an unspecified frequency)

From the side of the central nervous system: very often - headache, sleep disturbance, anxiety; very rarely - paresthesia, convulsions.

From the side of the cardiovascular system: very rarely - increased blood pressure, tachycardia.

From the digestive system: rarely - nausea, vomiting, discomfort in the stomach and liver.

Allergic reactions: often - urticaria, allergic conjunctivitis, allergic rhinitis.

Other effects : very often - flushing of the face.

If adverse reactions occur, incl. not listed above, you should reduce the dose or stop using the drug, and also inform your doctor.

#### Interaction:

Inhibitors of microsomal liver enzymes CYP1A2, CYP2C9, CYP2D6, CYP3A4 (for example, cimetidine) can increase the concentration of the drug in the blood.

Metaprot enhances the positive effects of metabolic drugs (including inosine), nootropic drugs (including piracetam), antihypoxic agents (including trimetazidine), potassium and magnesium aspartate, glutamic acid, vitamins (in including  $\alpha$ -tocopherol), as well as antianginal agents (nitrates, beta-blockers).

#### **Dosing and Administration:**

Metaprot is administered orally, after meals.

Adults are prescribed 250 mg 2 times / day. If necessary, the daily dose is increased to 750 mg (500 mg in the morning and 250 mg in the afternoon), and for patients weighing over 80 kg - up to 1 g (500 mg 2 times / day).

The course of treatment is 5 days. Depending on the effect of therapy, an average of 2-3 courses are carried out (less often 1 or 4-6), in order to avoid cumulation of the drug between courses, it is recommended to take a 2-week break.

To improve performance in extreme conditions, the drug is taken 40-60 minutes before the upcoming activity at a dose of 500-750 mg. With the continuation of work, a second dose is made after 6-8 hours at a dose of 250 mg. The maximum daily dose is 1.5 g, and the next day - 1 g.

# Overdose:

Symptoms: irritability, disturbed night sleep. Treatment: gastric lavage, activated charcoal, if necessary - symptomatic therapy.

# Special instructions:

The drug should not be taken in the evening (possibly disturbed sleep). During treatment, a diet rich in carbohydrates is recommended.

# Manufacturer:

Bemitil : Belmedpreparaty (Belarus) Metaprot : AnviLab , Sotex Pharma (Russia)

# Reliable supplier with fast Worldwide shipping:

RussianMeds Online Store https://russianmeds.com

# Storage:

The temperature is not above 25 °C (77 °F) Keep out of the reach of children.