

## MEGANEURO

### Instructions on medical use of the drug

**Tradename:** Meganeuro.

**International nonproprietary name:** Ethylmethylhydroxypyridine succinate.

**Dosage form:** solution for intramuscular and intravenous administration.

**Composition:** 1 ml of solution contains:

Ethylmethylhydroxypyridine succinate .....50 mg;

Excipients: water for injection..... 5 ml.

**ATX code:** N07XX (Other drugs for the treatment of diseases of the nervous system).

**Pharmaco - therapeutic group:** Antioxidant agent.

#### **Pharmacological properties:**

##### *Pharmacodynamics:*

It has antihypoxic, membrane-protective, nootropic, anticonvulsant, anxiolytic effects, and increases the body's resistance to stress. The drug increases the body's resistance to the effects of major damaging factors, to oxygen-dependent pathological conditions (shock, hypoxia and ischemia, cerebrovascular accident, intoxication with alcohol and antipsychotic drugs (neuroleptics)).

Meganeuro improves cerebral metabolism and blood supply to the brain, improves microcirculation and rheological properties of blood, reduces platelet aggregation. Stabilizes the membrane structures of blood cells (erythrocytes and platelets) during hemolysis. It has a hypolipidemic effect, reduces the level of total cholesterol and LDL.

Reduces enzymatic toxemia and endogenous intoxication in acute pancreatitis.

The mechanism of action of Meganeuro is due to its antihypoxic, antioxidant and membrane protective effects. It inhibits the processes of lipid peroxidation, increases the activity of superoxide dismutase, increases the lipid-protein ratio, reduces membrane viscosity, and increases its fluidity. Modulates the activity of membrane-bound enzymes (calcium-independent phosphodiesterase, adenylate cyclase, acetylcholinesterase), receptor complexes (benzodiazepine, GABA, acetylcholine), which enhances their ability to bind to ligands, helps preserve the structural and functional organization of biomembranes, transport of neurotransmitters and improve synaptic transmission. Meganeuro increases dopamine levels in the brain. Causes an increase in the compensatory activity of aerobic glycolysis and a decrease in the degree of inhibition of oxidative processes in the Krebs cycle under hypoxic conditions, with an increase in the content of ATP, creatine phosphate and activation of the energy-synthesizing functions of mitochondria, stabilization of cell membranes. Meganeuro normalizes metabolic processes in the ischemic myocardium, reduces the necrosis zone, restores and improves the electrical activity and contractility of the myocardium, and also increases coronary blood flow in the ischemic zone, reduces the consequences of reperfusion syndrome in acute coronary insufficiency. Increases the antianginal activity of nitro drugs. Meganeuro promotes the preservation of retinal ganglion cells and optic nerve fibers during progressive neuropathy, the causes of which are chronic ischemia and hypoxia. Improves the functional activity of the retina and optic nerve, increasing visual acuity.

#### **Indications for use:**

- acute cerebrovascular accidents;
- traumatic brain injury, consequences of traumatic brain injury;
- encephalopathy;
- autonomic dystonia syndrome;
- mild cognitive disorders of atherosclerotic origin;
- anxiety disorders in neurotic and neurosis-like conditions;
- acute myocardial infarction (from the first day) as part of complex therapy;
- primary open-angle glaucoma of various stages, as part of complex therapy;
- relief of withdrawal syndrome in alcoholism with a predominance of neurosis-like and vegetative-vascular disorders;
- acute intoxication with antipsychotic drugs;

- acute purulent-inflammatory processes of the abdominal cavity (acute necrotizing pancreatitis, peritonitis) as part of complex therapy.

#### **Contraindications:**

- acute dysfunction of the liver and kidneys;
- pregnancy and lactation;
- increased individual sensitivity to the drug.

#### **Directions for use and dosage:**

The drug is used intramuscularly or intravenously (stream or drip). When administered by infusion, the drug should be diluted in 0.9% sodium chloride solution. Meganeuro is injected slowly over 5-7 minutes, and drip-wise at a rate of 40-60 drops per minute. The maximum daily dose should not exceed 1200 mg. For acute cerebrovascular accidents, Meganeuro is used in the first 10-14 days - 200-500 mg intravenously 2-4 times a day, then 200-250 mg intramuscularly 2-3 times a day for 2 weeks.

For traumatic brain injury and the consequences of traumatic brain injury, Meganeuro is used for 10 - 15 days intravenously at a dose of 200 - 500 mg 2 - 4 times a day.

For discirculatory encephalopathy in the decompensation phase, Meganeuro should be prescribed intravenously or drip at a dose of 200 - 500 mg 1 - 2 times a day for 14 days. Then IM 100 - 250 mg/day over the next 2 weeks.

For course prophylaxis of discirculatory encephalopathy, the drug is administered intramuscularly at a dose of 200 - 250 mg 2 times a day for 10 - 14 days.

For mild cognitive impairment in elderly patients and anxiety disorders, the drug is used intramuscularly in a daily dose of 100 - 300 mg/day for 14 - 30 days.

In case of acute myocardial infarction, as part of complex therapy, Meganeuro is administered intravenously or intramuscularly for 14 days, against the background of traditional therapy for myocardial infarction, including nitrates, beta-blockers, angiotensin-converting enzyme (ACE) inhibitors, thrombolytics, anticoagulant and antiplatelet agents, as well as symptomatic drugs according to indications.

In the first 5 days, to achieve maximum effect, it is advisable to administer the drug intravenously; in the next 9 days, Meganeuro can be administered intramuscularly.

Intravenous administration of the drug is carried out by drip infusion, slowly (to avoid side effects) in a 0.9% sodium chloride solution or 5% dextrose (glucose) solution in a volume of 100 - 150 ml for 30 - 90 minutes. If necessary, a slow jet injection of the drug, lasting at least 5 minutes, is possible.

The drug is administered (IV or IM) 3 times a day, every 8 hours. The daily therapeutic dose is 6 - 9 mg/kg body weight per day, a single dose is 2 - 3 mg/kg body weight. The maximum daily dose should not exceed 800 mg, a single dose - 250 mg.

For open-angle glaucoma of various stages, as part of complex therapy, Meganeuro is administered intramuscularly at 100 - 300 mg / day, 1 - 3 times a day for 14 days.

For alcohol withdrawal syndrome, Meganeuro is administered in a dose of 200 - 500 mg intravenously or intramuscularly 2 - 3 times a day for 5 - 7 days.

In acute purulent-inflammatory processes of the abdominal cavity (acute necrotizing pancreatitis, peritonitis) it is prescribed on the first day both in the preoperative and postoperative periods. The administered doses depend on the form and severity of the disease, the prevalence of the process, and variants of the clinical course. Meganeuro should be discontinued gradually only after a sustained positive clinical and laboratory effect.

In case of acute intoxication with antipsychotic drugs, the drug is administered intravenously at a dose of 200-500 mg/day for 7-14 days. In acute purulent-inflammatory processes of the abdominal cavity (acute necrotizing pancreatitis, peritonitis), the drug is prescribed on the first day both in the preoperative and postoperative periods. The administered doses depend on the form and severity of the disease, the prevalence of the process, and variants of the clinical course. The drug should be discontinued gradually only after a stable positive clinical and laboratory effect.

For acute edematous (interstitial) pancreatitis, Meganeuro is prescribed 200-500 mg 3 times a day, intravenously (in 0.9% sodium chloride solution) and intramuscularly. Mild severity of necrotizing pancreatitis - 100 - 200 mg 3 times a day intravenously (in 0.9% sodium chloride solution) and intramuscularly. Moderate severity - 200 mg 3 times a day, IV drip (in 0.9% sodium chloride solution). Severe course - in a pulse dosage of 800 mg on the first day, with a double dose regimen; then 200 - 500 mg 2 times a day with a gradual reduction in the daily dose. Extremely severe course - at an initial dosage

of 800 mg/day until the manifestations of pancreatogenic shock are persistently relieved, when the condition stabilizes, 300 - 500 mg 2 times a day intravenously (in 0.9% sodium chloride solution) with a gradual decrease in the daily dosage.

**Side effects:**

Nausea and dry mouth, drowsiness, and allergic reactions may occur.

**Overdose:**

In case of overdose, drowsiness may develop.

**Drug interactions:**

Enhances the effect of benzodiazepines anxiolytics, anticonvulsants (carbamazepine), antiparkinsonian drugs (levodopa). Reduces the toxic effects of ethyl alcohol.

**Special instructions:**

In some cases, especially in predisposed patients with bronchial asthma with increased sensitivity to sulfites, severe hypersensitivity reactions may develop.

**Release form:**

Solution for intravenous or intramuscular administration of 50 mg/ml in ampoules of 5 ml No. 5 per package.

**Storage conditions:**

Store at a temperature not exceeding 25 °C.

**Best before date:**

Indicated on the packaging.

**Vacation conditions:**

On prescription.

**Made for:**

**MAXX PHARM LTD**  
**London, Great Britain**

