Semax®

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

Name in Cyrillic: Семакс

Active substance: Methionyl-glutamyl-histidyl-phenylalanyl-prolyl-glycyl-proline

Pharmachologic effect: nootropic, cerebroprotective, antihypoxic, antioxidant.

Pharmacodynamics:
Semax® has a pronounced neurometabolic effect, which manifests itself even when administered in very small doses. Higher doses of Semax®, while maintaining the neurometabolic properties of small doses, have a pronounced antioxidant, antihypoxic, angioprotective and neurotrophic effect. With intranasal administration, Semax® penetrates through the BBB after 4 minutes, and the therapeutic effect after a single injection lasts 20–24 hours, which is associated with its sequential degradation, in which most of the effects of the neuropeptide are retained by its fragments.

Neurometabolic
The drug affects the processes associated with the formation of memory and learning. Semax® enhances attention during learning and information analysis, improves the consolidation of a memorable trace; improves the body's adaptation to hypoxia, cerebral ischemia, anesthesia and other damaging effects.
Semax® has a stimulating effect on the population of cholinergic neurons in the basal nuclei of the forebrain.
The directed action of Semax® on cholinergic neurons is accompanied by a significant increase in the activity of the acetylcholinesterase enzyme of specific brain structures, which correlates with an improvement in learning and memory formation.

Neuroprotective
Semax® affects the processes of delayed neuronal death, including local inflammation, the formation of nitric oxide, oxidative stress and dysfunction of trophic factors. Powerful, comparable to the effect of NGF, trophotropic effect of Semax® on neurons of the cholinergic group both in a complete environment and under unfavorable conditions due to deprivation of glucose and oxygen. Semax® at the gene level includes the synthesis of neurotrophins - regulators of growth and differentiation of nervous tissue (BDNF factor).
Semax® has a direct effect on molecular trigger mechanisms, on the normalization of the balance of cytokines and on the increase in the level of anti-inflammatory factors, reducing the formation of nitric oxide, causing inhibition of lipid peroxidation (LPO), activation of the synthesis of superoxide dismutase (SOD) and a decrease in the level of cyclic guazine monophosphate (cGMP).).

Antioxidant, antihypoxic
Semax® has a positive effect on the body's adaptation to hypoxia. The ability of the drug to stop posthyperventilation EEG effects caused by a compensatory decrease in cerebral blood flow was found.
The drug is practically non-toxic with a single and long-term administration. Does not show allergic, embryotoxic, teratogenic and mutagenic properties. Does not have a local irritating effect.

Pharmacokinetics:
Semax® is absorbed from the mucous membrane of the nasal cavity, while up to 60-70% is absorbed in terms of the active substance. Semax® is quickly distributed to all organs and tissues, penetrates through the BBB. When it enters the bloodstream, Semax® undergoes fairly rapid degradation and excretion from the body with urine.

Side effects: With prolonged use, slight irritation of the nasal mucosa is possible.

Interaction:
Given the method of administration of Semax® (intranasal), intranasal administration of agents with a local vasoconstrictor effect is undesirable.

Indications:

Semax® nasal drops 0.1% (Blue box)

intellectual-mnestic disorders in vascular lesions of the brain;
conditions after TBI, neurosurgical operations and anesthesia;
encephalopathy;
transient disorders of cerebral circulation, as well as neurotic disorders of various origins, incl. after ionizing radiation;
recovery period after a stroke;
increasing the adaptive capacity of the human body in extreme situations;
prevention of mental fatigue during monotonous operator activity during the most intense periods of work in stressful conditions;
atrophy of the optic nerve;
neuritis of inflammatory, toxic-allergic etiology;
as a nootropic agent in children aged 5 years and older in the treatment of minimal brain dysfunctions (including attention deficit hyperactivity disorder).

Semax® nasal drops 1% (Red box)

Ischemic stroke (acute period).

Contraindications:

Semax® nasal drops 0.1%

hypersensitivity to the components of the drug;
pregnancy, lactation period;
acute psychoses;
disorders accompanied by anxiety;
history of seizures;
children's age up to 5 years.

Semax® nasal drops 1%

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Dosing and Administration:

Semax® nasal drops 0.1% (Blue box) :

One drop of the standard solution contains 50 mcg of the active substance. With a pipette, a solution of the drug in an amount of not more than 2-3 drops is injected into each nasal passage. If it is necessary to increase the dosage, the administration is carried out in several doses at intervals of 10-15 minutes.
A single dose is 200–2000 mcg (at the rate of 3–30 mcg/kg).
The daily dose is 500–5000 mcg (at the rate of 7–70 mcg/kg).
The drug is prescribed daily for 3-5 days, if necessary, the course of treatment is extended to 14 days.
In diseases of the optic nerve, the drug is instilled 2-3 drops into each nasal passage 2-3 times a day. The daily dose is 600–900 mcg. The course of treatment is 7-10 days.

In addition, the drug can be administered by endonasal electrophoresis. The drug is injected from the anode. Current strength - 1 mA, duration of exposure - 8-12-15 minutes.
The daily dose is 400–600 mcg. The course of treatment is 7-10 days.

In pediatrics: with minimal brain dysfunction, the drug is instilled 1-2 drops into each nasal passage 2 times a day (morning and afternoon). The daily dose is 200–400 mcg. The course of treatment is 30 days.

Semax® nasal drops 1% (Red box) :
The volume of one drop is 0.05 ml (50 mcg). One drop of the standard solution contains 500 mcg of the active substance.

In a moderate stroke, 2-3 drops are injected at a time into each nostril, which is 2000 mcg (4 drops or 0.2 ml) - 3000 mcg (6 drops or 0.3 ml). Instillation is carried out 3-4 times a day, with an interval between instillations of 3-4 hours. The daily dose is 6000 mcg (12 drops or 0.6 ml) - 12000 mcg (24 drops or 1.2 ml).

In severe stroke, 3-4 drops are administered at a time in each nostril, which is 3000 mcg (6 drops or 0.3 ml) - 4000 mcg (8 drops or 0.4 ml). Instillation is carried out 4–5 times a day with an interval between instillations of 2.5–3 hours. The daily dose is 12,000 mcg (24 drops or 1.2 ml) - 20,000 mcg (40 drops or 2.0 ml).

The drug is prescribed daily for 10 days.

Overdose:
The phenomena of drug overdose have not yet been identified even with a significant increase in a single dose.

Manufacturer: Peptogen (Russia)

Reliable supplier with fast Worldwide shipping:
RussianMeds Online Store
https://russianmeds.com

Storage:
In a place protected from light, at a temperature not exceeding 10°C (50°F). Do not freeze.