

Neurogenic / Neurostorative

Cerebrolysin

Cerebrolysin is a synthetic nootropic drug which consists of low-molecular peptides and possesses neuroprotective and neurotrophic repair properties. The active fragment of cerebrolysin is made of proteins with very low molecular masses that do not exceed 10,000 daltons. This means they can penetrate the blood-brain barrier and reach neurons directly. Cerebrolysin has been proven to have neurotrophic action similar to nerve growth factors, which cause peripheral and central neuronal stimulation. It improves efficiency within the brain's aerobic metabolic processes and improves intracellular peptide synthesis. The neuroprotective properties of this nootropic agent help to shield neurons from lactacidosis to prevent formation of free radicals. It has been used for treating stroke, traumatic brain injury, dementia, and Alzheimer's disease.

Benefits of Cerebrolysin:

- Protects brain cells and preventing their death due to harmful conditions (Stroke and Brain injuries). Cerebrolysin improved the recovery and outcome of patients after stroke and traumatic brain injury in 6 studies (including two DB-RCTs and over 600 subjects). It also improved communication skills in infants after severe brain injury (DB-RCT with 158 patients).
- Promotes the growth of new brain cells
- Improves brain cell communication, which enhances learning capacity
- Increases brain energy (by increasing glucose uptake by brain cells) and protein production in cells
- Decreases brain levels of beta-amyloid deposits, which are linked to Alzheimer's disease. A review of 15 clinical trials including 2,446 subjects found that high doses of this drug reduced psychological symptoms and slowed disease progression in patients with Alzheimer's disease and dementia.
- In a study of 60 children with ADHD, cerebrolysin **improved symptoms in 70 to 86% of subjects**
- Lowers inflammation in the brain
- A combination of cerebrolysin with antidepressants was more effective in improving symptoms in patients with treatment-resistant depression than antidepressants alone

Cerebrolysin is safe and generally well-tolerated by patients, side effects are usually mild and temporary and may include:

- Headache/dizziness
- Insomnia
- Sweating
- Weight loss
- Anxiety
- Fatigue
- Flu-like symptoms
- Diarrhea
- Nausea

Conclusion:

A few small clinical trials have reported that cerebrolysin can improve cognitive function in older people with memory problems and in those with schizophrenia, although the effects are modest. In a trial with schizophrenia patients, cerebrolysin treatment improved cognition and memory. Another trial of older adults with memory loss found that a peptide preparation derived from cerebrolysin improved memory performance but not verbal fluency. The effect on memory was lower than that of currently approved drugs for Alzheimer's disease. An uncontrolled clinical trial reported that healthy elderly people had better memory performance after one dose of cerebrolysin but this result could have been caused by the placebo effect.

No clinical studies have tested whether cerebrolysin can prevent dementia, but some preclinical research supports the idea. In preclinical studies, cerebrolysin protected neurons and brain slices from damage, reduced inflammation, promoted the formation of new neural connections (synapses), lessened cognitive impairment and reduced the plaques and tangles common in Alzheimer's patients.

Cerebrolysin treatment was well tolerated and resulted in significant improvements in the global score two months after the end of active treatment.

Epithalon

Epithalon (also known as Epitalon or Epithalone) is the synthetic version of the polypeptide Epithalamin which is naturally produced in the pineal gland.

It was discovered by the Russian scientist Professor Vladimir Khavinson, who then conducted epithalon-related research for the next 35 years in both animal and human clinical trials.

Epitalon's primary role is to increase the natural production of telomerase, a natural enzyme that helps cells reproduce telomeres, which are the protective parts of our DNA. This allows the replication of our DNA so the body can grow new cells and rejuvenate old ones. Younger people produce a relatively large amount of telomerase and longer telomeres. The longer the telomere strands are, the better cell health and replication they provide. However, as people age, the production of telomerase falls and consequently cell replication and health decline. This is the main reason that people age.

It also plays a role in regulating metabolism, increasing the sensitivity of hypothalamus to its natural hormonal influences, normalizing the function of the anterior pituitary and regulating the levels of gonadotropins and melatonin in the body.

Benefits of Epitalon:

As a result of Epitalon's effect on telomerase production, the benefits are unique and far-reaching and include:

- An increase of human lifespan by lengthening telomeres in human cells
- Promotion of deeper sleep
- Delay and prevention of age-related diseases such as cancer, heart disease, and dementia
- Acts as an anti-oxidant by reducing lipid oxidation and ROS (Reactive oxygen species) along with normalizing T cell function.
- Improvement of skin health and appearance
- Healing of injured and deteriorating muscle cells
- Restores and normalizes melatonin levels in older people who have lost some pineal function due to aging
- Can increase resistance to emotional stress

Conclusion:

Numerous studies have shown the importance of telomerase production and telomere rejuvenation in fighting the symptoms of aging. As Epitalon has been shown to increase the production of telomerase which in turn strengthens and lengthens telomeres, this means that Epitalon can play a vital role in decreasing the aging process and thus extend human longevity.