Semax, also known as N-Acetyl Semax, is a heptapeptide well known for its nootropic and neurogenic properties.\textsuperscript{1,2,6} It is an analog of adrenocorticotropic hormone fragment (ACTH)\textsuperscript{4-10}, which is thought to be the reason for its effectiveness and stability.\textsuperscript{2} This allows it to be used for a wide range of pharmaceutical purposes, with the improvements in neurological, circulatory, gastrointestinal and immune system functions.\textsuperscript{1,3,10-14,23-25} Semax is particularly known for its use in the treatment of neurologic conditions. It has also been used in the prevention and treatment of circulatory disorder, and has been shown to improve brain circulation.\textsuperscript{12,14,18} It is also used to treat a wide variety of cognitive disorders and shown to have a wide range of neuro-rejuvenate and neuro- restorative properties, including traumatic brain injury and stroke.\textsuperscript{1-4,10,17,23-25} Semax also has notable anti-anxiety and anti-depressive effects.\textsuperscript{5,19,22} Furthermore, it has been shown to directly enhance cognitive function and improve memory, even in healthy individuals.\textsuperscript{6,7,20,23,24} The positive neurogenic impact of Semax on the central nervous system works in tandem with its immunomodulatory effects.\textsuperscript{10} Semax’s neurogenic ability is related to its modulation of the serotoninergic and dopaminergic systems, as well as its ability to increase expression of brain-derived neurotrophic factor (BDNF), a neuroprotective and restorative protein.\textsuperscript{5,8,9,11,16}

**Clinical Effects of Semax**

- Maximizes neuroprotective and neuro-restorative effects in the body by modulating serotonergic and dopaminergic systems\textsuperscript{8}
- Modulates the immune system and improves immune system function\textsuperscript{3,10}
- Improves brain circulation and function\textsuperscript{14}
- Improves circulatory system function and protects the cardiovascular system\textsuperscript{12,14,18}
- Drops can be used to treat ocular conditions, such as optic nerve disease and glaucoma\textsuperscript{4,25}
- Mediates symptoms of attention-deficit hyperactivity disorder (ADHD).\textsuperscript{23}
- Inhibits enkephalin-degrading enzymes and hydrolysis in a manner similar to endogenous opioids\textsuperscript{21}
- Used to treat peptic ulcers\textsuperscript{13}
- Acts as an analgesic\textsuperscript{24}
- Enhances learning and memory storage processes, as well as overall cognitive function\textsuperscript{6,7,20,24}
- Has anti-anxiety and anti-depressive effects\textsuperscript{5,19,22}

**Side effects:** Selank has an excellent safety profile and stability, with no reported toxicity. Side effects are minor and well-tolerated by all ages.\textsuperscript{1}

**Dosing protocol:** Semax is typically available as a lyophilized powder. Reconstitute with 5cc bacteriostatic water prior to use. Semax can then be administered nasally or subcutaneously. For nasal administration, insert the needle free access vial adaptor straight through the vial stopper and leave in until vial is empty. Push and twist the syringe into the adaptor and invert the vial. Withdraw the prescribed dose and untwist the syringe. Next push the intranasal device on the top of the syringe with the wide part of the cone onto the syringe. Place the intranasal device into your nostril and push syringe and sniff in Semax. Dosing can be administered in one session as Semax has a long half-life of 12 to 24 hours, or alternatively split up into two doses.

**Typical Dosing:** Typical dosing is usually 0.1(#10) to 0.3(#30) intranasally or sublingual.


