

A cognitive and neuroprotective peptide with decades of clinical use abroad

Semax has something almost no research peptide can claim: three decades as an approved prescription medication in Russia, with a real-world clinical track record most compounds in this category will never have.

● In Plain English

Think of Semax as a signal telling your brain to build and protect more of its own wiring. Two natural brain chemicals — BDNF and NGF — act like fertiliser for brain cells: they help existing neurons survive stress and help new connections form. Semax raises production of both at once, which is why it has been studied for stroke recovery and for protecting memory as the brain ages.

What people use it for. Focus, mental stamina, cognitive recovery and mood. It is the closest thing in this category to a nootropic with a real clinical history, and it is most often paired with Selank to take the edge off.

What to know before you buy. Route matters enormously — Semax is taken intranasally because swallowing it does essentially nothing. If you are using a nasal spray, calibrate it: pump volumes vary by nearly threefold between bottle types, so “one spray” is not a dose until you have measured it. Semax is also the more activating of the Semax/Selank pair, so if something feels too intense, that is the one to adjust.

● What It's Used For

GOAL	WHAT THAT RESTS ON
Focus and mental stamina	A controlled study in healthy fatigued adults reported 71% memory-test accuracy versus 41% in controls
Cognitive recovery	Used clinically in Russia since 1994 for stroke recovery and cognitive impairment
Brain resilience	Raises BDNF and NGF — two growth factors central to neuron survival and new connections
Mood and drive	Widely reported; mechanistically consistent with its dopaminergic activity

The left column lists goals people commonly pursue with this compound; the right column states what that rests on. These are described uses and research findings, not proven outcomes or treatment claims. Individual results vary and no outcome is promised.

● Pricing & Sizes

PRICING

10mg vial \$35

Nasal spray, made to order \$50

Bulk pricing: 2-3 vials -5% | 4-6 vials -10% | 7-9 vials -15% | 10+ vials -20%

Vials ship sealed and lyophilized — reconstitute before use, or ask and it will be reconstituted free at the volume shown below. **Nasal sprays ship ready to use**, made to order with 4mL of bacteriostatic saline — the correct intranasal diluent. Bacteriostatic water is hypotonic, which is what causes the sting people report. **Free shipping on every order, no minimum.** Third-party COA available for every batch — HPLC purity and mass spec verification.

Reconstitution — bacteriostatic water: 10mg vial at 2mL = 5mg/mL, so 10 units on a 100-unit syringe draws 0.5mg; **Nasal spray** ships ready to use — 10mg in 4mL bacteriostatic saline = 2.5mg/mL. Pump actuation volume varies between bottle types (roughly 0.05-0.14mL), so calibrate your sprayer rather than assuming a per-spray dose. Concentrations are arithmetic from vial content and diluent volume, not a dosing recommendation.

● Also Available in These Blends

BLENDS CONTAINING SEMAX

Semax + Selank paired — adds Selank \$70

Bulk pricing: 2-3 vials -5% | 4-6 vials -10% | 7-9 vials -15% | 10+ vials -20%

Same peptide, supplied alongside others in a single vial. **Vials ship sealed and lyophilized** — reconstitute before use, or ask and it will be reconstituted free at the volume shown below. **Nasal sprays ship ready to use**, made to order with 4mL of bacteriostatic saline — the correct intranasal diluent. Bacteriostatic water is hypotonic, which is what causes the sting people report. **Free shipping on every order, no minimum.** Third-party COA available for every batch — HPLC purity and mass spec verification.

● At a Glance

CLASS	ACTH(4-7) analogue with a C-terminal Pro-Gly-Pro extension
MECHANISM	Upregulates BDNF and NGF — brain-derived and nerve growth factors — in hippocampus, frontal cortex and retina
ORIGIN	Institute of Molecular Genetics, Russian Academy of Sciences
REGULATORY (RUSSIA)	Approved prescription medication since 1994 for stroke recovery and cognitive impairment
REGULATORY (US)	Not FDA-approved. PCAC recommended for 503A listing 24 July 2026; no FDA action taken
REVIEWED FOR	Cerebral ischaemia, migraine and trigeminal neuralgia
ROUTE	Intranasal is the native route; oral bioavailability is essentially zero
FORMAT	10mg vial, or prepared nasal spray

30+ yrs

CLINICAL USE IN RUSSIA

8-5-1

PCAC VOTE

BDNF + NGF

DUAL MECHANISM

1994

RUSSIAN APPROVAL

REGULATORY STATUS — READ THIS FIRST

On 24 July 2026 the FDA Pharmacy Compounding Advisory Committee voted **8-5-1 to recommend** Semax (free base and acetate) for the Section 503A bulk drug substances list. That vote is **advisory only**. As of 4 August 2026 the FDA has taken no action on it, has not opened rulemaking, and has not moved the substance to the interim Category 1 list. FDA's own scientific reviewers had recommended *against* all seven peptides; the committee voted against staff on six consecutive votes, so the usual assumption that a PCAC recommendation predicts the agency's decision is weaker here than normal. Several outlets have reported this as the FDA "clearing", "approving" or "adding" these peptides to the bulks list. That is inaccurate. Nothing has been added and nothing is legally cleared.

● Why Semax Stands Out

Most research peptides have never been used in a real patient population. Semax has, for over thirty years, within an established clinical pharmaceutical system. That is a meaningfully different evidence tier from a peptide backed only by mouse studies — though it is not equivalent to FDA-standard evidence, and FDA said so directly at the hearing.

The dual growth factor mechanism

Semax drives multidirectional expression of both NGF and BDNF genes. BDNF is essential for neuron survival, the growth of new neurons and synapses, and neuroplasticity. Few single compounds engage both pathways at once, and that is the mechanistic core of the case for it.

● What the Research Shows

LINE OF EVIDENCE	DESIGN	REPORTED FINDING
Stroke recovery (Gusev, Martynov et al., 2018)	n=110, non-randomised, not placebo-controlled	Plasma BDNF rose; Barthel Index and MRC motor scale improved over ~5 months on 6,000mcg/day intranasal
Cognition in healthy fatigued adults	Controlled, single dose 16mcg/kg	71% memory-test accuracy vs 41% control, reported to persist up to 24 hours
Alzheimer's model (2025)	Transgenic mice, 3 behavioural tests	Improved cognition; reduced amyloid plaque inclusions in cortex and hippocampus
Spinal cord injury (2025, Br J Pharmacol)	Mouse model	Functional recovery via Oprm1; reduced neuroinflammation and oxidative cell death

The stroke data is real human outcome data rather than an extrapolation from animals, which matters. It is also neither randomised nor placebo-controlled, and effect sizes were not reported in the published abstract — real limits on how strongly it can be read.

● What FDA Said at the Hearing

FDA countered that much of the supporting literature is published in Russian and frequently omits the routes of administration, dosing and study detail needed to verify the reported outcomes. Acting PCAC chair Brian Serumaga also flagged a health-literacy risk: **Semax** is easily confused with **semaxanib**, an entirely different compound.

It passed 8-5 with one abstention, the second-strongest margin of the meeting.

THE BOTTOM LINE

An unusual profile: long-running real-world clinical use in one country paired with an active and growing preclinical base, but no Western randomised controlled trial. Among the compounds on the July 2026 docket, Semax has the strongest human track record — which is a statement about the others as much as about Semax.

● Also in the Range

Also available **paired with Selank**, which is the more common way it is run — Selank offsets the intensity Semax can produce.

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