BRING THIS TO YOUR DOCTOR · GREY PEPTIDES

NERP-2 (Neuroendocrine Regulatory Peptide-2)

Also called: NERP-2; Neuroendocrine regulatory peptide-2; NERP-1; Neuroendocrine regulatory peptide-1; NERP

What it is

NERP-2 (neuroendocrine regulatory peptide-2) is an amidated peptide cut from the VGF precursor (VGF gene, UniProt O15240; ~VGF 313-350), the bioactive lead of the NERP-1/NERP-2 pair and a sibling of TLQP-21. Acting upstream of the orexin system, central NERP-2 increases food intake, energy expenditure, locomotion and gastric acid/emptying — all orexin-receptor-dependent (PMIDs 20551287, 28213131) — and potentiates glucose-stimulated insulin secretion (PMID 23111332; chronically it blunts it, PMID 25529453). NERP-1 instead facilitates penile erection (PMID 22561139) and is altered in ALS plasma (PMID 39933412). C-terminal amidation is required for activity. They are endogenous research peptides, not approved medicines, and have never been given to people as a treatment.

Approval status

Research Chemical. Not a drug: Drugs@FDA and the openFDA label endpoint hold no record, and FDA GSRS and ChEMBL hold no substance record for NERP-2 or NERP-1 (searched November 6, 2026). They are endogenous VGF-derived peptides; there is no therapeutic development of the NERPs themselves, and no registered interventional trial of giving them to people. NERP-2 is studied as an orexin-pathway feeding/energy peptide and NERP-1 as a pro-erectile peptide and ALS biomarker, which remain preclinical and diagnostic research.

Dosing, as printed in the page's Recommended Dosing box

No established human dose

NERP-2 and NERP-1 are endogenous VGF-derived peptides that have never been given to people as a treatment. The human study measures NERP-1 as an ALS marker, and the functional work is in animals and cells, where NERPs are given into the brain at experimental amounts that do not carry over to people.

Educational information, not medical advice. None is a recommendation for you. An unapproved compound has no established safe or effective human dose, and products sold for "research use only" are not made or tested for people. Talk to a doctor before acting on anything on this site, including before you start, stop or change any medicine or dose.

Key human evidence

The 1 human study carded on the page (6 study cards in all):

• **NERP-1 is altered in ALS plasma** (Human, 2025). Measuring VGF peptides by ELISA in the plasma of amyotrophic lateral sclerosis (ALS) patients (n=46 early and advanced vs 46 controls), only NERP-1 immunoreactivity was changed (elevated) across all ALS samples, while Parkinson's-disease controls were unchanged. In a motor-neuron-like cell line, NERP-1 fell inside stressed cells but rose in the medium and did not protect against oxidative stress — proposing NERP-1 as a possible ALS blood biomarker (a human observational study). **PMID 39933412**

Interactions

A PubMed search for interaction studies of this compound with any drug (November 6, 2026, 0 records) found none in people. That is not evidence that it is safe to combine with anything.

Side effects and cautions

Reported side effects	Contraindications and cautions
• No human adverse-event data exist: no published study has administered NERP-2 or NERP-1 to people • In animals, central NERP-2 increases appetite, energy expenditure and gastric activity via orexin (PMIDs 20551287, 28213131) and alters insulin secretion (PMIDs 23111332, 25529453) — preclinical signals, not a human safety profile • Chronic NERP-2 can suppress insulin secretion and is increased in diabetic pancreas (PMID 25529453) • Material sold online as 'NERP-2' is an unregulated research chemical of unverified content	• Not a medicine: no FDA application or label, and no approval anywhere • No human dosing, interaction, pregnancy or long-term safety data exist for administered NERPs • They are laboratory research peptides, not treatments • NERP-2's effects on appetite, energy, gastric function and insulin warrant caution in any use

Five questions to ask

1. NERP-2 (Neuroendocrine Regulatory Peptide-2) is listed here as "Research Chemical". What does the evidence on this sheet mean for someone in my situation, and is there an approved treatment I should consider instead?
2. Here are the medicines and supplements I take. Do any of them interact with NERP-2 (Neuroendocrine Regulatory Peptide-2)? This sheet records none published, which does not mean none exist.
3. Which side effects should make me stop and call you, for example no human adverse-event data exist: no published study has administered nerp-2 or nerp-1 to people?
4. Do any of the cautions on this sheet apply to me, such as: Not a medicine: no FDA application or label, and no approval anywhere?
5. What should we check before I start and while I am on it (blood tests, blood pressure, weight), and how often?

Grey Peptides is a vendor-neutral encyclopedia: it sells nothing and names no seller. This sheet is educational, not medical advice, and is not a prescription.