BRING THIS TO YOUR DOCTOR · GREY PEPTIDES

Neuropeptide EI (NEI)

Also called: Neuropeptide EI; NEI; Neuropeptide glutamic acid-isoleucine; NEI-MCH

What it is

Neuropeptide EI (NEI) is a short amidated peptide (~13 residues) processed from prepro-melanin-concentrating hormone (PMCH gene, UniProt P20382), co-made and co-released with MCH in lateral-hypothalamic and zona-incerta neurons. It stimulates luteinizing-hormone release by acting on GnRH neurons and the pituitary (PMIDs 15501532, 17016031) and shapes behaviour — grooming and locomotion via dopaminergic/beta-1-adrenergic systems (PMID 17537427) and anxiety-like behaviour from the amygdala (PMID 21164371). Its own receptor is not established. It is an endogenous research neuropeptide, not an approved medicine, and has 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 neuropeptide EI (searched November 6, 2026). It is an endogenous neuropeptide; there is no therapeutic development of NEI itself, and no registered interventional trial of giving it to people. It is studied as a prepro-MCH-derived neuropeptide regulating LH release and behaviour.

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

No established human dose

Neuropeptide EI is an endogenous prepro-MCH-derived peptide that has never been given to people as a treatment. The work is in animals and cells, where NEI is injected 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

No human study is carded on the page; its 6 study cards are reviews, animal or cell work. The first 2:

• **Anatomy, function and regulation of NEI** (Review, 2008). A review of neuropeptide EI, produced by cleavage of prepro-MCH (probably amidated at its C-terminal glycine). NEI and MCH are extensively co-localised throughout the central nervous system, and NEI is also present in peripheral tissues. Beyond hormone release, NEI regulates grooming behaviour and locomotor activity; it stimulates luteinizing hormone (and, less, FSH) from pituitary cells, acts directly on gonadotropes and on GnRH neurons, and releases LH from the median eminence (a review). **PMID 18456371**

• **NEI increases serum LH in male and female rats** (Animal, 2004). Neuropeptide EI injected into the cerebral ventricles increased serum luteinizing-hormone levels in normal male rats and in chronically ovariectomised female rats primed with estrogen and a low dose of progesterone, compared with cerebrospinal-fluid controls. The authors note a likely inter-relationship between NEI, MCH and alpha-MSH, and raise the question of which receptors NEI uses (a preclinical result). **PMID 15501532**

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 NEI to people • In animals, central NEI raises LH and induces grooming, locomotion and anxiety-like behaviour (PMIDs 15501532, 17537427, 21164371) — preclinical signals, not a human safety profile • NEI's own receptor is not identified, so its mechanism is inferred from the systems it recruits (PMID 18456371) • Material sold online as 'neuropeptide EI' 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 NEI • It is a laboratory research neuropeptide, not a treatment • Its effects on reproductive hormones and on anxiety/behaviour warrant caution in any use

Five questions to ask

1. Neuropeptide EI (NEI) 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 Neuropeptide EI (NEI)? 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 nei 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.