Seglitide

Also called: MK-678; MK 678; L-363,586; L-363586; Seglitida

What it is

Seglitide (MK-678, L-363,586) is a cyclic hexapeptide somatostatin analogue from Merck, cyclo(N-Me-Ala-Tyr-D-Trp-Lys-Val-Phe), 50 to 100 times more potent than somatostatin at inhibiting insulin, glucagon and growth hormone (PMID 6143233). In people with type 1 diabetes an intravenous infusion suppressed meal-time hormones with a ~45-minute half-life (PMID 2872569), and a 600 µg nasal dose blunted the overnight growth-hormone surge (PMID 2892113). It reached phase 2 and was not developed further; it is approved nowhere, and octreotide became the somatostatin analogue used in the clinic.

Approval status

Discontinued. Never approved anywhere: Drugs@FDA and the openFDA label endpoint hold no record (searched November 5, 2026). ChEMBL records a highest clinical phase of 2 (CHEMBL311695); the published studies stop in the early 1990s and development was not continued. ClinicalTrials.gov holds 0 records (the registry postdates the studies).

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

Used in human trials

No manufacturer dose exists for this use: these are amounts given in published trials, not recommendations.

Protocol and source	Dose	Frequency	Duration	Route
Type 1 diabetes, intravenous infusion **[Human study]** PMID 2872569	2, 5, 10 or 40 µg/hr	Continuous infusion	5 hours	Intravenous
Dawn phenomenon, nasal **[Human study]** PMID 2892113	600 µg	Once at bedtime	Single dose	Intranasal

Educational information, not medical advice. Each dose above is tagged with its source: an approved label, a published human study, animal data, or amounts reported by users. 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 3 human studies carded on the page (7 study cards in all):

• **Infused in type 1 diabetes** (Human, 1986). Six people with insulin-dependent diabetes were given a five-hour intravenous infusion of the analogue (at 2, 5, 10 or 40 micrograms an hour), of natural somatostatin (200 micrograms an hour), or of placebo, with a standard meal. The analogue cleared about six times more slowly than somatostatin and its half-life was roughly 45 minutes against somatostatin's two. At 10 micrograms an hour it suppressed the post-meal rises in glucagon, growth hormone, glucose, xylose and triglyceride about as much as somatostatin did at 200 micrograms an hour. The authors concluded it was a long-acting, potent analogue with potential as an adjunct to insulin. **PMID 2872569**

• **Intravenous and intranasal in diabetes** (Human, 1988). A report of early clinical experience giving the analogue to people with insulin-dependent diabetes both intravenously and into the nose. Both routes reduced fasting and after-meal high blood sugar, and in patients kept on a closed-loop insulin pump the intranasal dose improved the early-morning glucose rise known as the dawn phenomenon. The authors suggested the analogue, added to standard insulin, could help control unstable diabetes. The abstract gives no milligram amount for the intravenous arm. **PMID 2900206**

• **A bedtime nasal dose for the dawn phenomenon** (Human, 1988). Six people with type 1 diabetes were given 600 micrograms of the analogue into the nose at bedtime, to see whether the overnight growth-hormone surge that drives early-morning hyperglycaemia could be blunted without an extra injection. Compared with saline nights, the bedtime nasal dose lowered overnight plasma glucose and growth hormone. The study used the molecule as a tool to test the role of nocturnal growth hormone in the dawn phenomenon. **PMID 2892113**

Interactions

A PubMed search for interaction studies of this compound with any drug (November 5, 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
• Suppression of growth hormone, glucagon and insulin — its intended actions, which also set its risks (PMID 2872569) • Because it suppresses insulin as well as glucagon, its net effect on blood sugar depends on the balance and on background insulin (PMIDs 2872569, 2900206) • No approved-label safety profile exists, because development stopped and no large trial was run	• Not an available medicine: approved nowhere and never marketed; supplied only for research • It suppresses several hormones at once (growth hormone, insulin, glucagon), so its effects have to be weighed together rather than singly (PMID 2872569) • No modern safety, interaction or pregnancy data exist, because development stopped decades ago • Octreotide and later somatostatin analogues, not seglitide, are the approved drugs of this class

Five questions to ask

1. Seglitide is listed here as "Discontinued". 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 Seglitide? This sheet records none published, which does not mean none exist.
3. Which side effects should make me stop and call you, for example suppression of growth hormone?
4. Do any of the cautions on this sheet apply to me, such as: Not an available medicine: approved nowhere and never marketed?
5. What should we check before I start and while I am on it (blood tests, blood pressure, weight), and how often?

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