The Dose Record

65 compounds · 26 with no published human dose to compare against · every figure traced to its source

THE LONGEVITY DESK · DESK GUIDE N° 6 · 2026 EDITION · VERSION 1.9

THELONGEVITYDESK.ORG

About The Longevity Desk

The Longevity Desk is a research publication covering 65 compounds sold on the grey market. For each one we read the primary record: the trials, the labels, the regulator filings, and the independent lab tests. Then we report what that record actually says, including when the honest answer is that nobody knows yet. Every figure in this guide traces to a named source. Where a number has no source, we say so plainly instead of inventing one.

We hold ourselves to the standard we apply to everyone else. Every factual error we publish and then fix is logged publicly at **thelongevitydesk.org/corrections**: what we said, what is true, and how the mistake happened. If you find an error in this guide, it goes there too.

Educational material, not medical advice. Consult a qualified clinician before making decisions about your health.

Read this page first

You have seen the other guides. A protocol box per compound: dose, route, frequency, cycle. “Best starter.” An example range with arrows in it. Those pages read like prescriptions because they are built like prescriptions, written by people with no authority to prescribe, for compounds nobody has approved.

This guide contains every piece of information those boxes contain. The difference is what each number is allowed to claim.

What trials or labels gave is the published record: the amounts actually administered to human beings in studies, or printed on a real label somewhere in the world. This is the only class of number with evidence behind it, and every one names its source. Where a trial escalated doses on a schedule, that schedule is reported as what the trial did, not as what you should do.

What circulates is observation: the amounts reported in common practice, recorded because they are what happens. Not endorsed, not recommended, not safe by virtue of being common.

Where the circulating number comes from is the section nobody else prints, and the reason this guide exists. For most compounds here, the confident figure on a vendor’s chart does not trace to a study. It traces to a vial size, a misread unit, another molecule’s trial, or nothing at all. We followed each number back and wrote down what we found.

What this guide will never do is close the loop with “so take this much.” That sentence is the one thing the record cannot support, for 26 of these 65 compounds there is no published human dose at all, and a recommendation built on nothing is not information, it is confidence in costume. If you

want a number to follow, this is the wrong document, and honestly, for those 26, no honest document exists.

The mixing arithmetic, how any amount translates to marks on a syringe, is Desk Guide Nº 3, and the calculator at thelongevitydesk.org/tools/reconstitution shows every step of the division.

Recovery and tissue repair

Compounds used for tendon, ligament, muscle and gut repair. The most searched category, and the one with the widest gap between confidence and evidence.

BPC-157

The most sold recovery peptide, and no receptor for it.

GIVEN TO HUMANS · TRIAL OR LABEL

About 117 mcg per day

Allometric scaling from the 10 µg/kg rat arm, FDA body surface method

WHAT CIRCULATES

250 to 500 mcg per day

Observed, not endorsed

As a medicine	Never an approved medicine. And FDA moved in 2026 to keep it out of compounding pharmacies.
How they compare	People take more than was ever given in a study
Route studied	In rats, injected into the abdominal cavity. In the two human reports, into the knee joint or into a vein. One unpublished trial gave it by mouth.
Route used	Injected under the skin, at home.
How long it lasts	Under 30 minutes, and that figure comes from animals. I could not find a measurement of how long it lasts in a person, by any route.
Vial sizes seen	5, 10, 15 mg

Where the circulating number comes from. The convention sits above every scaled figure and has no published derivation. It is also exactly one twentieth and one tenth of a 5 mg vial.

The mistake that costs people. The standard 250 to 500 mcg daily figure is not a research finding. It appears in no published study in any species, and those two amounts happen to be exactly one twentieth and one tenth of the 5 mg bottle it is sold in, which are the easiest marks to read on a syringe.

Full cited entry: thelongevitydesk.org/compounds/bpc-157

Compare vendor prices for BPC-157: biohackblueprint.ai/compound/bpc-157: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

TB-500

Seven amino acids cut from a 43 amino acid peptide.

GIVEN TO HUMANS · TRIAL OR LABEL

No human dose has ever been published

FDA found no article administering it to a human

WHAT CIRCULATES

2 mg twice weekly, then weekly

Observed, not endorsed

As a medicine	Never an approved medicine. The human record cited for it belongs to thymosin beta-4, a different substance.
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	No published human use by any route. The larger natural version was given into a vein.
Route used	Under the skin, at home
How long it lasts	I could not find a measurement of this in a person. In rats it came apart fast, with one breakdown piece dominant in the first six hours and another still detectable at 72 hours.
Vial sizes seen	5, 10 mg

Where the circulating number comes from. There is nothing to compare against. Every mg/kg figure in circulation belongs to thymosin beta-4, which FDA states is not the same substance.

The mistake that costs people. That TB-500 and thymosin beta-4 are the same substance. They are two different molecules, and borrowing the larger one's research history and its clean human safety record for the seven building block piece is the error that gets printed on the label and paid for at checkout.

Full cited entry: thelongevitydesk.org/compounds/tb-500

Compare vendor prices for TB-500: biohackblueprint.ai/compound/tb-500: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

GHK-Cu

Every human study is a cream. It is sold in a vial..

GIVEN TO HUMANS · TRIAL OR LABEL

No injection into a person that I could find

Every published human study applied it to skin, and the 1994 gel's strength is not stated

WHAT CIRCULATES

1 to 2 mg a day under the skin, some say 3

Observed, not endorsed

As a medicine	Never an approved medicine. A cosmetic cream ingredient; no injectable form is approved anywhere.
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	On the skin, as a cream or a gel, in every published human study. In animals, the only dose figure that names both a species and a route is 15 milligrams for every kilogram of body weight, in aged mice.
Route used	Injected under the skin, from a powder mixed with liquid.
How long it lasts	I could not find one published. I could find no measurement of how long it lasts in a person by any route, and no published study putting it into a person by injection.
Vial sizes seen	50, 100 mg

Where the circulating number comes from. There is nothing to compare against, because I could not find a published study injecting it into a person by any route. The human evidence that does exist is a cream on a wound, and even the 2 percent strength quoted for it on vendor pages is not in the paper. The circulating numbers do match the syringe: at 25 mg/mL, 1 mg is 4 units, 2 mg is 8, 3 mg is 12.

The mistake that costs people. Buying a vial on the strength of a cream. The one controlled trial that worked applied a gel to diabetic foot ulcers in 1994, closing wounds by a median of 98.5 percent against 60.8 percent for the same base with nothing added, and that study is on every vendor page. The two controlled trials that measured nothing, on leg ulcers in 1992 and on skin after laser resurfacing in 2006, are on none of them. Even the 2 percent gel strength quoted for the positive one is not in the paper, which never states its concentration. And the amounts people inject were not derived from any of that: mix a 50 milligram bottle with 2 millilitres of liquid and you get 25 milligrams in every millilitre, which makes 1 milligram 4 marks on an insulin syringe, 2 milligrams 8 marks and 3 milligrams 12. The amounts that circulate are the easiest marks to read.

Full cited entry: thelongevitydesk.org/compounds/ghk-cu

Compare vendor prices for GHK-Cu: biohackblueprint.ai/compound/ghk-cu: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

KPV

A gut treatment for rodents, sold as an injection.

GIVEN TO HUMANS · TRIAL OR LABEL

No human dose has ever been published

The only figure in the literature is 16 mcg/kg/day in mice, by feeding tube

WHAT CIRCULATES

200 to 400 mcg a day injected, 250 mcg twice daily by mouth

Observed, not endorsed

As a medicine	Never an approved medicine
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	In rodents and in cells in a dish only, and every result came with a delivery vehicle. By mouth in the drinking water, down a tube into the stomach with the peptide wrapped in tiny particles, in polymer capsules built to open in the colon, and as gels put into the rectum, because a plain solution would not be absorbed that way. On skin, plain diffusion put no measurable amount into the deeper layers, and it took tiny needles punching holes through the surface to get it through. No human study exists by any route.
Route used	Injected under the skin, swallowed, or rubbed on the skin. No injection of KPV has been published in any species.
How long it lasts	I could not find a measurement of this in a person, and no published human figures for how KPV is absorbed or how long it lasts, by any route. Vendor pages say the half life is short and cite nothing for it.
Vial sizes seen	5, 10, 20 mg

Where the circulating number comes from. There is nothing to compare against. Scaling that mouse figure the standard way lands near 90 mcg a day for an adult, which puts the oral convention five to ten times above the only number the literature can carry, and that number came from a mouse getting nanoparticles down a feeding tube. The injected convention sits above nothing at all, because I found no published injection of KPV in any species.

The mistake that costs people. The expensive mistake is buying the injected form on the strength of the parent molecule's research. The 2003 experiment put the fragment next to the parent, in the same cells, on the same day, and the fragment did nothing the parent did, and that paper still turns up in the opening paragraph of product pages cited as support. Of the three forms being sold, the injection has the best marketing and the worst evidence, which is none, in any species. What the published work shows is a local gut treatment for rodents that only works because a food transporter carries it into the cell.

Full cited entry: thelongevitydesk.org/compounds/kpv

Compare vendor prices for KPV: biohackblueprint.ai/compound/kpv: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Metabolic and GLP-1

The weight and blood sugar drugs, including the approved ones. The only category here where large randomized trials actually exist.

Semaglutide

Approved, and the evidence is not the problem.

GIVEN TO HUMANS · TRIAL OR LABEL

Large randomised placebo controlled trials

The strongest evidence base of anything on this site

WHAT CIRCULATES

Prescription doses, often from grey market vials

Observed, not endorsed

As a medicine	An approved medicine exists. As Ozempic, Wegovy and Rybelsus. No trial ever used research-grade material.
How they compare	What people take matches an amount a study gave
Route studied	Weekly injection of pharmaceutical product, in large trials. Also approved as a pill.
Route used	Weekly injection at home, often mixed by the person from a powder vial.
How long it lasts	About seven days in people, which is why it is a weekly shot. The natural gut hormone it is copied from lasts about two minutes.
Vial sizes seen	5, 10, 20, 30 mg

Where the circulating number comes from. The risk moved off the molecule and into the vial. Three tested vials were far less pure than claimed and simultaneously over label, so careful dosing meant overdosing.

The mistake that costs people. People assume the huge trial results and the number on the label both apply to the vial that arrived in the mail. No trial has ever used research grade or compounded material, and the one published test of grey market vials found the street belief backwards: the product was not weak and underdosed, it was dirty and stronger than the label said, which is how somebody dosing by that label overdoses.

Full cited entry: thelongevitydesk.org/compounds/semaglutide

Compare vendor prices for Semaglutide: biohackblueprint.ai/compound/semaglutide: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Tirzepatide

Approved, with a cloned trial record on the registry.

GIVEN TO HUMANS · TRIAL OR LABEL

5, 10 and 15 mg weekly

SURMOUNT-1, about a fifth of body weight at the top dose

WHAT CIRCULATES

Microdoses below 2.5 mg weekly

Observed, not endorsed

As a medicine	An approved medicine exists. As Mounjaro and Zepbound. The vials sold online are neither.
How they compare	People take less than what studies gave
Route studied	Under the skin, once a week, in large trials
Route used	Under the skin at home, once a week. Pharmacy mixed versions have also been sold as under the tongue liquids and dissolving tablets, neither an approved way to take it.
How long it lasts	The entry gives no number for how long it lasts in the body. It says only that a fatty tail on the molecule stretches its stay far enough for one injection a week under the skin, which is how every human trial dosed it.
Vial sizes seen	5, 10, 15, 20, 30, 40, 60, 100 mg

Where the circulating number comes from. Microdosing was tested once. At the smallest dose people lost under a kilogram in six months.

The mistake that costs people. The mistake that costs money and safety is quoting the trial numbers while buying something the trials never used. The 20.9% figure comes from branded tirzepatide at the top weekly dose over 72 weeks, whereas the only randomised weight result anywhere near the tiny doses sold online was under a kilogram in six months, and roughly a quarter of people on that dose still had stomach and gut side effects.

Full cited entry: thelongevitydesk.org/compounds/tirzepatide

Compare vendor prices for Tirzepatide: biohackblueprint.ai/compound/tirzepatide: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Retatrutide

Approved nowhere, and every vial is off supply chain.

GIVEN TO HUMANS · TRIAL OR LABEL

Up to 12 mg weekly

Lilly phase 2, about a quarter of body weight at the top dose

WHAT CIRCULATES

0.25 to 1.5 mg starting, 4 mg maintenance

Observed, not endorsed

As a medicine	In drug trials, approved nowhere. Lilly's program is in large trials; no approved version exists at any price.
How they compare	People take less than what studies gave
Route studied	Under the skin, once a week, in company trials
Route used	Under the skin, once a week, from unapproved vials
How long it lasts	About 6 days, from the published human trial work on the shot given under the skin. That is why the dosing is weekly.
Vial sizes seen	5, 7, 10, 12, 15, 20, 24, 30, 50, 60 mg

Where the circulating number comes from. Trial results describe a molecule, not a vial. No approved version exists at any price, so there is no reference article to hold yours against.

The mistake that costs people. People assume the dose numbers passed around online came out of the trials. They came out of vial sizes: the trials used 1, 4, 8 and 12 mg a week, while the vials sell in sizes from 5 to 60 mg, and the largest of them holds five times the highest dose ever given to anyone in a published trial.

Full cited entry: thelongevitydesk.org/compounds/retatrutide

Compare vendor prices for Retatrutide: biohackblueprint.ai/compound/retatrutide: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

NAD+

The molecule in the bag never gets inside a cell.

GIVEN TO HUMANS · TRIAL OR LABEL

10 mg a day into a vein, for seven days

Yu 2026, 180 adults with damaged hearts, the only study sized for an outcome

WHAT CIRCULATES

250 to 1000 mg a session into a vein, 100 to 500 mg under the skin

Observed, not endorsed

As a medicine	Never an approved medicine. No approved injectable NAD+ exists; one compounded version drew a Class I recall.
How they compare	People take more than was ever given in a study
Route studied	Into a vein, in all three human studies. Grant 2019 gave 750 mg over six hours to eight men aged 30 to 55, with three further men as controls, and it is still the only peer reviewed human study of what the substance does in the blood. Reyna 2026 read the records of a commercial infusion clinic where 500 mg of freeze dried NAD+ or nicotinamide riboside was diluted in 500 millilitres of ordinary salt water and infused on four consecutive days, six clients on NAD+ and eight on nicotinamide riboside, with no randomisation and no dummy group. Yu 2026 gave 10 mg a day for seven days to 180 adults on top of their usual heart medicines. For the injection under the skin, which is the most widely sold home practice, I found no published human study at all.
Route used	Dripped into a vein in a clinic, where vendors and clinics converge on 250 to 1000 mg per session over two to four hours, and injected under the skin at home at roughly 100 to 500 mg per injection. Both figures are convention, reported here as convention. The guide read most closely for this entry cites no study at all for its range into a vein, and justifies its under the skin range with a trial of nicotinamide mononucleotide swallowed at 300 to 600 mg per day, a different molecule by a different route.
How long it lasts	This entry gives no half life figure. The nearest thing in the record is the one peer reviewed study that followed the substance in people's blood: 750 mg dripped into a vein over six hours produced no change at all in blood NAD+ for the first two hours, which the authors read as rapid and complete removal from the plasma, and the level then climbed to about 400 percent above where it started by the end of the six hours. Two hours of infusion with nothing in the blood to show for it.
Vial sizes seen	500, 1000 mg

Where the circulating number comes from. The 500 to 1500 mg the wellness industry infuses is fifty to a hundred and fifty times the 10 mg a day of the one adequately sized randomised trial, and above the 100 mg that is the highest registered intravenous human dose those searches found. I found no published human dose-finding or dose-response study of injected NAD+ by any route, and no published human study at all of the under the skin form. That convention traces to a 2014 conference poster with no peer-reviewed publication I could find.

The mistake that costs people. Two mistakes, and the dangerous one is about speed rather than amount. What people compare is milligrams, when the figure that separates the two published infusions is milligrams per minute. Grant put 750 mg into eight men at about 2 mg per minute and recorded nothing at all. The clinic in Reyna 2026 put 500 mg into six clients at roughly 5 mg per minute and every one of them was ill. Bigger dose, slower, no symptoms. Smaller dose, faster, moderate to severe symptoms in everybody. That contrast is the entry writer's own arithmetic on their published figures and it is a hypothesis rather than a finding, and I found no study that has tested infusion rate as a variable for NAD+ given into a vein, so a

shorter appointment is a variable I found no measurement of. The second mistake is what the persuading evidence is actually about. A 2026 Nature Metabolism trial ran the three oral options against each other in 65 healthy participants over 14 days, at 0.5 g nicotinamide, 1 g nicotinamide riboside and 1 g nicotinamide mononucleotide once daily, and found nicotinamide riboside and nicotinamide mononucleotide comparably raise circulating NAD+ while nicotinamide does not. All oral, all precursors, none of it evidence about injected NAD+. Nor is it flattering on its own terms, since a 2023 Science Advances review of the entire human record for nicotinamide riboside taken by mouth concluded that supplementation has displayed few clinically relevant effects. The drip is sold on evidence generated by swallowing something else.

Full cited entry: thelongevitydesk.org/compounds/nad

Compare vendor prices for NAD+: biohackblueprint.ai/compound/nad: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

5-Amino-1MQ

Sold as a peptide, and every study I could find is a dish or a rodent.

GIVEN TO HUMANS · TRIAL OR LABEL

No human dose I could find, by any route

PubMed, ClinicalTrials.gov, the EU register and Europe PMC, no human study in any of them

WHAT CIRCULATES

50 to 150 mg a day by mouth, convention rather than evidence

Observed, not endorsed

As a medicine	Never an approved medicine
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	In rodents, mostly injection under the skin, dosed per kilogram of animal: 20 mg/kg three times a day for eleven days in one experiment, 40 mg/kg a day for seven weeks in another, 10 and 32 mg/kg a day for 30 days in a third. Rodent blood level arms also used into a vein at 5 mg/kg, by mouth at 30 mg/kg and under the skin at 25 mg/kg. The mechanism work was cultured mouse fat cells with the compound added to the medium.
Route used	Swallowed as a capsule, once. It is also compounded as an injectable.

How long it lasts	Rat and mouse figures, and none in a person. The one dedicated study of what the compound does after it goes in is in rats, reporting a terminal half-life of about 3.8 hours into a vein and about 6.9 hours by mouth, with 38.4 percent of a swallowed dose reaching the blood. A mouse experiment also ran blood level arms, into a vein at 5 mg/kg, by mouth at 30 mg/kg and under the skin at 25 mg/kg. I could not find any published human data of that kind. What a swallowed capsule does to a person's blood levels is not something I could find published.
Vial sizes seen	5, 10, 20, 50 mg

Where the circulating number comes from. There is nothing to compare against, because I could not find a published human study of this compound by any route. Every efficacy result came out of a needle in a rodent, dosed per kilogram of animal, one experiment at three injections a day, and the retail item is a capsule swallowed once. The circulating number is convention rather than evidence and I found no derivation for it. Under the same name, retail listings sell capsules at 500 micrograms, one hundredth to one three hundredth of the protocol dose.

The mistake that costs people. Two mistakes, and they cost different things. The first is the strength on the jar. The figure that circulates is 50 to 150 mg a day by mouth, usually 50 mg for one to two weeks then 100 mg, while retail listings sell capsules at 500 micrograms, half a milligram, under the same name. That is one hundredth to one three hundredth of the protocol number on identical labelling, so two people saying they run 5-Amino-1MQ can be describing amounts two hundredfold apart. The second is treating the mouse results as though they transfer. Every efficacy figure came from an injection in a rodent, mostly under the skin, at milligrams per kilogram, one experiment at three injections a day, and the product is a capsule swallowed once. The nearest thing to a bridge anybody has published is 38.4 percent oral bioavailability in a rat.

Full cited entry: thelongevitydesk.org/compounds/5-amino-1mq

Compare vendor prices for 5-Amino-1MQ: biohackblueprint.ai/compound/5-amino-1mq: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

AOD-9604

The evidence was gathered, and it came back negative.

GIVEN TO HUMANS · TRIAL OR LABEL

0.25, 0.5 and 1 mg a day, swallowed

METAOD006, the phase 2b in 502 adults over 24 weeks, which missed

WHAT CIRCULATES

300 mcg a day under the skin, inside a 250 to 500 mcg band

Observed, not endorsed

As a medicine	Never an approved medicine. Six human trials failed to beat placebo; the program closed in 2007.
How they compare	What people take matches an amount a study gave
Route studied	Swallowed, as capsules once a day, and into a vein, as single doses and as a weekly dose. In animals, by tube into the stomach of rats, and one study injected 0.25 mg into a rabbit's knee joint. The only administration under the skin anywhere in the published record is in mice, 250 mcg per kilogram a day by an implanted pump.
Route used	Injected under the skin, into belly fat. It is the only way it is sold, and I could not find one published human study of anybody being given it that way. FDA searched for the same thing in December 2024 and reported the same nothing.
How long it lasts	I could not find a half life, a clearance time or any figure for how long it lasts in the body, in people or in any animal. What the record does show is how often it was given: the two oral trials gave one capsule a day, and the intravenous work gave either a single dose or one dose a week.
Vial sizes seen	2, 5, 10 mg

Where the circulating number comes from. The circulating band lands on the two smallest arms of the phase 2b, 0.25 and 0.5 mg, and those were swallowed rather than injected. I could not establish a stated derivation for the injectable numbers, only a coincidence of magnitude, since the same 1 mg ceiling appears in the self-affirmed food status. Every human dose in the published record went into a vein, 25 to 400 mcg/kg as single doses, or was swallowed, 0.25 mg to 54 mg daily, and I could not find one published human study using the route it is sold by. The trial those numbers echo did not beat placebo, and the sponsor closed the obesity programme in February 2007.

The mistake that costs people. Two words carry the sales copy and neither means what it looks like. The first is GRAS, which stands for generally recognised as safe. That is a food ingredient status, not a drug approval, and this one was self-affirmed, meaning the company's own expert panel reached the conclusion, about up to 1 mg a day in food, and never asked the regulator to look. I searched FDA's GRAS Notice Inventory for AOD9604 and it returned zero records. The second is the hyphen. FDA writes the name AOD 9604, a space and no hyphen, which is the likeliest reason a search for the hyphenated name misses the warning letter it sent to a compounding pharmacy on 1 April 2020.

Full cited entry: thelongevitydesk.org/compounds/aod-9604

Compare vendor prices for AOD-9604: biohackblueprint.ai/compound/aod-9604: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Cagrilintide

Its own trials exist, and the numbers quoted are the pen's.

GIVEN TO HUMANS · TRIAL OR LABEL

0.3 to 4.5 mg a week, including 2.4 mg

Lau 2021 in 706 adults, plus single agent arms of 302 and 152 in two phase 3 trials

WHAT CIRCULATES

2.4 mg a week from a 0.25 mg start, or up to 4.5 mg

Observed, not endorsed

As a medicine	In drug trials, approved nowhere. In Novo Nordisk's trials, alone and inside CagriSema.
How they compare	What people take matches an amount a study gave
Route studied	Injected under the skin, once a week, in trials running 26 to 68 weeks. The first in human trial gave it daily instead, up to 800 micrograms a day over eight weeks in 96 people.
Route used	Injected under the skin, once a week, from vials labelled research chemical.
How long it lasts	Novo gives it as approximately 180 hours, in the company's own words, supporting once weekly dosing. That is about seven and a half days, which is why the schedule is one injection a week.
Vial sizes seen	5, 10 mg

Where the circulating number comes from. 2.4 mg is a dose the single agent really was given, and it is also semaglutide's share of the fixed pen, which is where the convention came from. The one dose finding trial in the single agent found 4.5 mg did better, minus 10.8 against minus 9.7 percent. The monotherapy trials that would settle it started in November 2025 and I could not find their dose in either registration.

The mistake that costs people. The costly mistake is paying for one drug on another drug's numbers. The percentage usually printed beside the cagrilintide name is 20.4 percent of body weight over 68 weeks, and that belongs to the pen holding both drugs. The single agent arm of the same trial, the same 68 weeks, the same kind of people, came out at 11.8 percent. About half, and semaglutide is doing most of the work. The dose has the same problem. 2.4 mg a week is semaglutide's share of the fixed pen, so the maintenance target people copy for cagrilintide alone was set by the other half of a product cagrilintide alone is not in, and the only dose finding trial the single agent has had found 4.5 mg did better than 2.4.

Full cited entry: thelongevitydesk.org/compounds/cagrilintide

Compare vendor prices for Cagrilintide: biohackblueprint.ai/compound/cagrilintide: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Mazdutide

Approved twice in China, quoted off a press release.

GIVEN TO HUMANS · TRIAL OR LABEL

4 mg and 6 mg weekly, for 48 weeks

GLORY-1, 610 Chinese adults, the trial the weight approval was built on

WHAT CIRCULATES

2.5 mg weekly for four weeks, then 5 mg weekly

Observed, not endorsed

As a medicine	An approved medicine exists. Twice, both in China, nowhere else.
How they compare	What people take matches an amount a study gave
Route studied	Injected under the skin, once a week, in trials running 48 to 60 weeks in Chinese adults, plus phase 1 and phase 2 work run by Lilly in the United States at higher doses
Route used	Injected under the skin at home, once a week, from grey market vials mixed with bacteriostatic water
How long it lasts	This entry gives no figure for how long it lasts in the body. What it says is that it is a once weekly injection, and that is how the Chinese label and every trial reported here dosed it.
Vial sizes seen	5, 10 mg

Where the circulating number comes from. The most copied chart starts at 2.5 mg and settles at 5 mg, and no published mazdutide trial used either number as a maintenance target in obesity. Both came off the vial rather than a paper, 10 mg reconstituted with 3.0 mL of bacteriostatic water. There is an approved human ladder sitting right there to compare against, 2 mg then 4 mg then up to 6 mg, which almost never happens in this reference, and the grey market went to vial arithmetic anyway. A second guide ends on 6 or 9 mg, which at least ends on a dose trials have used, though it skips the label's 2 mg start, and it cites for its titration speed a 2025 phase 2b trial in The Lancet Diabetes and Endocrinology that I could not find.

The mistake that costs people. The costly mistake is treating the number a seller prints as the trial's number. Four weight loss figures circulate and they measure three different things: 14.01% is the top arm of GLORY-1 at week 48 in the journal, against a 0.30% gain on placebo; 14.8% comes off the company's approval release counted a different way; 16.65% is the whole population of GLORY-2 over 60 weeks, against 1.50%; and about 20% is a subgroup of GLORY-2, the participants without type 2 diabetes. Only two of the four came out of a journal, and none of them is interchangeable. The second mistake is the dose chart. The most copied one pairs a 10 mg vial with 2.5 mg weekly for the first four weeks and then 5 mg weekly, and no published mazdutide trial used 2.5 mg or 5 mg as a maintenance target in obesity. That is vial arithmetic rather than trial arithmetic, and it is happening beside an approved human ladder that could have been compared against.

Full cited entry: thelongevitydesk.org/compounds/mazdutide

Compare vendor prices for Mazdutide: biohackblueprint.ai/compound/mazdutide: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Tesofensine

The dose is the real trial dose. The trial is flagged..

GIVEN TO HUMANS · TRIAL OR LABEL

0.25, 0.5 and 1.0 mg by mouth, once daily

Astrup 2008, TIPO-1, 203 obese adults over 24 weeks

WHAT CIRCULATES

0.25 mg to 0.5 mg by mouth, once daily

Observed, not endorsed

As a medicine	Never an approved medicine. One phase 3 ran; no paper and no approval followed.
How they compare	What people take matches an amount a study gave
Route studied	Swallowed once a day. Fourteen weeks in the Parkinson trial, 24 weeks in the obesity trials.
Route used	Swallowed once a day, from vendor capsules and tablets of 250 and 500 micrograms.
How long it lasts	234 hours, about ten days, modelled by Lehr and colleagues from 320 Alzheimer patients on repeated swallowed doses. That is unusually long for a daily pill, and the practical consequence is that taking it every day keeps building the level in the body for roughly six to eight weeks, so judging a dose at two weeks is reading it before the drug has finished arriving.

Where the circulating number comes from. The convention is the trial dose, which is rare here. What does not travel with it is the rest of the trial: every obesity trial paired the drug with an energy restricted diet, so I could not find a published result for the drug alone, and they all ran 24 weeks and stopped. The 1.0 mg arm behind the 10.6 percent was dropped at the FDA meeting before the large trial meant to settle the heart rate question, and that trial was never run. The paper the numbers come from carries a Lancet Expression of Concern from 2013 about unrecorded adverse events, and I found it still standing.

The mistake that costs people. Two mistakes, and they stack. The first is the approval. A sentence mirrored across vendor pages, uncited, says it has been approved in Mexico as Tesomet and Nupenta for obesity since 2023. What actually happened in February 2023 is that the Mexican regulator's new molecules committee issued a favourable opinion with qualifications, which the sponsor's own description calls a non binding technical opinion that does not represent a market authorization nor a rejection. Mexican outlets ran it under headlines using the verb aprueba, which is where the confusion starts. In November 2024 the sponsor announced that the filing had not been approved, and in February 2025 announced a

resubmission. As of 5 August 2026 I could not find a marketing authorisation in any country. The second is treating the clean cardiovascular numbers as belonging to tesofensine. The modern trial with no significant difference in heart rate or blood pressure, 21 adults with hypothalamic obesity over 24 weeks, tested tesofensine given together with a beta blocker whose job is to cancel exactly that effect. That flat result belongs to the combination, not to the pill on its own.

Full cited entry: thelongevitydesk.org/compounds/tesofensine

L-Carnitine, injectable

The route with the muscle evidence is the swallowed one.

GIVEN TO HUMANS · TRIAL OR LABEL

4 grams a day, into a vein

Zhang 2014, 30 patients with metabolic syndrome, inside a five day modified fast

WHAT CIRCULATES

250 to 1,000 mg into muscle, or a drip with no stated dose

Observed, not endorsed

As a medicine	An approved medicine exists. For carnitine deficiency and dialysis patients. not for fat.
How they compare	People take less than what studies gave
Route studied	Into a vein. Five hour infusions in healthy men, a 12 hour infusion in septic shock, a slow push into the return line after each dialysis session, and 4 grams a day during a supervised fast. The weight loss pooling was swallowed, and so was the one protocol I found that raised muscle carnitine outside a laboratory insulin clamp. Five hours into a vein did raise it, but only while insulin was held high by a second drip.
Route used	A drip into a vein at a clinic, weekly or fortnightly, and a compounded shot into muscle.
How long it lasts	The entry gives no figure for how long levocarnitine lasts in the body, and I could not find one in the sources behind it.

Where the circulating number comes from. The numbers that circulate sit below every injected dose in the published trial record, and they are also a different route: the vendor figures go into muscle, and every injected dose in that trial record went into a vein. At the top of the range they run into the label's own dialysis dose, which is 700 to 1,400 mg per session in a 70 kilogram adult. Neither clinic page in the entry publishes a milligram figure at all, and one low-quality vendor-facing aggregator states that no peer reviewed randomised trials evaluate that range, attributing it to protocols passed around on forums. What the numbers do line up with is the syringe. The compounded product is 500 mg per millilitre, so 250, 500 and 1,000 mg are half a millilitre, one and two, which the entry reads as packaging and labels inference rather than derivation.

The mistake that costs people. The pitch is that injecting skips the gut, and that part is true, since only about 15 percent of a swallowed dose reaches the blood. The gut is not where the shortfall is. Muscle already holds far more carnitine than blood, so getting more in means pushing it uphill through a pump, and five hours of infusion at roughly ten times the blood carnitine the label calls normal moved muscle carnitine by nothing unless insulin was also pinned high by a second drip, which is a laboratory procedure and not something a clinic does. The only protocol I found that raised it outside that setup was swallowed: 24 weeks of 4 grams a day taken with 160 grams of sugar a day.

Full cited entry: thelongevitydesk.org/compounds/l-carnitine-injectable

Compare vendor prices for L-Carnitine, injectable: biohackblueprint.ai/compound/l-carnitine: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Growth hormone

Secretagogues and releasing hormones that raise the body's own growth hormone rather than replacing it.

Ipamorelin

Two human trials, and nobody has seen the second.

GIVEN TO HUMANS · TRIAL OR LABEL

About 4.2 mg per day, into a vein

The published Helsinn trial, which missed its endpoint

WHAT CIRCULATES

200 to 900 mcg per day, under the skin

Observed, not endorsed

As a medicine	Never an approved medicine. Its drug program died two trials in; the second was never published.
How they compare	People take less than what studies gave
Route studied	Into a vein, in hospital
Route used	Under the skin, at home
How long it lasts	About two hours. That figure comes from a single study in healthy men where it went into a vein. I could not find a measurement of how long it lasts in a person injecting it under the skin.
Vial sizes seen	2, 5, 10 mg

Where the circulating number comes from. Five to twenty one times smaller, and by a route I found no human study of. The smaller number is smaller in a unit no one has converted.

The mistake that costs people. People believe the headline selling point, that it raises growth hormone without raising stress hormones, is a human finding. It was measured in pigs, once, by the company that owned the molecule, and that same test also failed to detect a rise for an older compound that is known to raise those hormones in people, so the test itself proved nothing. In humans the number of measurements is zero.

Full cited entry: thelongevitydesk.org/compounds/ipamorelin

Compare vendor prices for Ipamorelin: biohackblueprint.ai/compound/ipamorelin: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

CJC-1295

Two versions sold under one name.

GIVEN TO HUMANS · TRIAL OR LABEL

30 to 60 mcg/kg, about 2.25 to 4.5 mg

Teichman 2006, trials of 28 and 49 days

WHAT CIRCULATES

1 to 2 mg per week, DAC version

Observed, not endorsed

As a medicine	Never an approved medicine. The DAC version's program ended early; the no-DAC version sold today was never studied at all.
How they compare	People take less than what studies gave
Route studied	Injected under the skin, in a clinical trial
Route used	Injected under the skin, at home
How long it lasts	About 5.8 to 8.1 days in people for the clipped version, injected under the skin. For the version without the clip, I found no published figure in a person.
Vial sizes seen	5 mg

Where the circulating number comes from. A quarter to a half of one studied injection. Lower, not higher, and still a dose no trial administered.

The mistake that costs people. That there is only one CJC-1295. The impressive numbers on vendor pages, a 2 to 10 fold rise in growth hormone lasting six days or more, come from trials of the version with the clip, while the version most people are actually buying and injecting daily is the one with the clip removed, and not one peer reviewed human study of it exists.

Full cited entry: thelongevitydesk.org/compounds/cjc-1295

Compare vendor prices for CJC-1295: biohackblueprint.ai/compound/cjc-1295: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

MK-677

In a Phase 3 for children and on the grey market at once.

GIVEN TO HUMANS · TRIAL OR LABEL

25 mg, the top of three arms

A 1996 dose ranging study in 32 people aged 64 to 81

WHAT CIRCULATES

10 to 25 mg once daily

Observed, not endorsed

As a medicine	In drug trials, approved nowhere. An active Phase 3. for children with growth hormone deficiency, dosed per kilogram.
How they compare	What people take matches an amount a study gave
Route studied	By mouth, as a daily pill
Route used	By mouth, usually one capsule at night
How long it lasts	I could not find a measurement of this in a person. The roughly 24 hours quoted on vendor pages has no primary human source, and the pages contradict each other.

Where the circulating number comes from. The convention matches a studied dose, but one chosen for being the largest tried in 32 elderly people. Children in the active Phase 3 are dosed per kilogram. Nobody re-derived it for adults.

The mistake that costs people. The mistake that costs people is trusting a normal fasting blood test. In the trial of 24 obese men, fasting sugar and insulin looked unchanged after eight weeks, while a test that challenges the body with a measured sugar drink showed impaired handling at both two weeks and eight weeks. A clean fasting panel here is reassurance from the one test already shown to under report the effect.

Full cited entry: thelongevitydesk.org/compounds/mk-677

Compare vendor prices for MK-677: biohackblueprint.ai/compound/mk-677: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Tesamorelin

Approved for one thing, at a dose that is no longer sold.

GIVEN TO HUMANS · TRIAL OR LABEL

2 mg a day, continuously, for 26 weeks to a year

Falutz 2007 in 412 adults with HIV, plus three later trials at the same dose

WHAT CIRCULATES

2 mg a day, from grey market vials, run in cycles

Observed, not endorsed

As a medicine	An approved medicine exists. For HIV-associated visceral fat. The 2 mg product the convention copies is gone.
How they compare	What people take matches an amount a study gave
Route studied	Injected under the skin, once a day without a break, in trials running 26 weeks to a year
Route used	Injected under the skin at home, from grey market bottles, often in cycles of some weeks on and some weeks off
How long it lasts	This entry gives no figure for how long it lasts in the body. What it says is that the molecule is a copy of the body's own signal, altered to last longer in the blood after an injection, and that every trial gave it once a day.
Vial sizes seen	5, 10, 20 mg

Where the circulating number comes from. The number matches the dose in every published trial, and the product it was approved for is gone. What is sold as medicine now is 1.4 mg a day, and 1.28 mg in the version that replaced it, in formulations both labels call not substitutable. Every trial dosed continuously, and no published evaluation of the weeks on, weeks off cycling turned up.

The mistake that costs people. Two mistakes, and they stack. The first is what the drug actually empties. There are two fat compartments in an abdomen and this one works on the store behind the muscle wall, around the organs, while in 806 pooled patients the layer directly under the skin, the stuff you can pinch, was essentially unchanged, a difference too small to separate from chance. Anyone buying it for how they look is paying to empty a compartment no mirror can show them. The second is the number. The 2 mg a day quoted as the approved dose belongs to a product that is gone, so measuring out of a grey market bottle to hit the approved 2 mg is aiming at something that no longer exists. Price is why people do it anyway: a Canadian review recorded a submitted price of $3,085 for a box of 60 bottles, a 30 day supply, against grey market listings around $150 for a 10 mg bottle.

Full cited entry: thelongevitydesk.org/compounds/tesamorelin

Compare vendor prices for Tesamorelin: biohackblueprint.ai/compound/tesamorelin: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Sermorelin

Two approvals, neither for an adult, both gone in 2009.

GIVEN TO HUMANS · TRIAL OR LABEL

2 mg nightly, or 2,000 mcg

Vittone 1997, the only adult treatment study the author could find, 11 men, six weeks, no control group

WHAT CIRCULATES

200 to 300 mcg under the skin nightly, titrated toward 500 mcg

Observed, not endorsed

As a medicine	Was approved; product gone. Both approvals, pediatric and diagnostic, were withdrawn in 2009. What circulates is compounded.
How they compare	People take less than what studies gave
Route studied	Into a vein at 1 microgram per kilogram of body weight, which was the hospital test the first approval covered. Under the skin nightly at 30 micrograms per kilogram in the children's treatment programme, and 2 milligrams under the skin nightly in the one adult treatment study I could find. Of the two trials that put it head to head against growth hormone in children, one gave it as a continuous infusion and the other gave it under the skin split into three doses a day. They disagreed. Growth hormone won the infusion comparison, 14.6 cm a year against 9.2, and in the one injected under the skin the high dose peptide arm came out comparable to growth hormone.
Route used	Injected under the skin at home, at night before bed, often five nights on and two nights off. There is no approved adult labelling for any route.
How long it lasts	Two figures are in the record and they do not agree. The approved label said 11 to 12 minutes, whether it went into a vein or under the skin. A 2026 review in the journal Frontiers in Endocrinology tabulates about 4.3 minutes, give or take 1.4, and I could not locate the primary source behind the shorter figure.
Vial sizes seen	0.5, 1, 5, 10 mg

Where the circulating number comes from. The convention sits at about one seventh to one tenth of both figures it could be held against: the pediatric label dose of 30 mcg/kg scales to roughly 2,100 mcg in a 70 kg adult, and the one adult study used a flat 2 mg. Grey market doses normally drift upward. This one drifted down, and there is no approved adult labelling and no adult dose finding study behind it.

The mistake that costs people. The mistake that costs money is thinking you have bought sermorelin when you have bought CJC-1295 without DAC. The paper that named CJC-1295 describes a tetrasubstituted form of the same 29 building blocks, meaning four of them were swapped out, at positions 2, 8, 15 and 27, with an added lysine based attachment on the end that fastens the molecule to a protein in the blood. Cut that attachment off and the four swaps are still sitting there, and the result has a name of its own, modified growth hormone releasing factor 1 to 29. So what the market sells as CJC-1295 without DAC is sermorelin with four building blocks changed rather than sermorelin itself. Anything bought under that name is

worth taking the certificate of analysis to, to see whether it names an actual peptide or gives you the product name back.

Full cited entry: thelongevitydesk.org/compounds/sermorelin

Compare vendor prices for Sermorelin: biohackblueprint.ai/compound/sermorelin: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

GHRP-2

An approved drug in Japan, for one test injection.

GIVEN TO HUMANS · TRIAL OR LABEL

100 mcg, one injection into a vein

The Japanese label, marketed since February 2005: one slow injection into a vein, given fasting, for the diagnosis of growth hormone secretion deficiency. The nearest repeated dosing is Nijland, 100 mcg under the skin once daily for five days in nine healthy young men.

WHAT CIRCULATES

100 to 300 mcg per injection under the skin, one to three times daily, most commonly 200 mcg

Observed, not endorsed

As a medicine	An approved medicine exists. In Japan, as a single diagnostic injection to test a pituitary. not as a treatment.
How they compare	People take more than was ever given in a study
Route studied	Into a vein for the approved use, one slow injection given on an empty stomach, and into a vein again in Arvat 1997 at 1 and 2 micrograms per kilogram of body weight. Under the skin in the study that matches what people actually do, 100 micrograms once daily for five days in nine healthy young men. The two places insulin like growth factor 1 moved were both continuous rather than injected: a pump under the skin at 1 microgram per kilogram per hour for 30 days, and a drip into a vein at that same hourly rate for 21 hours in intensive care after a single injection into a vein. The appetite work used drips under the skin as well. In children, injections under the skin for eight months at 0.3 to 3.0 micrograms per kilogram per day, and dosing up the nose for 18 to 24 months. The 30 day pump paper also reports single doses of 0.1, 1 and 10 micrograms per kilogram, and its abstract describes the acute comparisons as going into a vein, specifying under the skin only for the 10 microgram per kilogram dose.
Route used	Injected under the skin at home, one to three times a day, taken on an empty stomach and run in cycles. That is a different route and a different frequency from the only approval I could find anywhere, which is one injection into a vein, given once, under supervision.
How long it lasts	This entry gives no half life, in any species and by any route. The nearest thing in it to a timing figure is measured in days rather than hours, and it is about the response rather than the substance: across five days of one injection a day in nine healthy young men, the peak growth hormone fell from a mean of 83 micrograms per litre on day 1 to 59 on day 3 and 51 on day 5. That is a response fading, not a measurement of how long a dose stays in the body.

Vial sizes seen	5, 10 mg

Where the circulating number comes from. The approval covers a single administration as a test, one slow injection into a vein given fasting, and it says nothing about the second dose. What circulates is up to three injections a day under the skin, run in cycles. The bottom of that range is the same 100 mcg as the Japanese diagnostic dose and the Nijland protocol, and I could not establish any derivation for it, beyond noting that nobody appears to have reasoned from either. Across those five days of daily injections the peak growth hormone fell from a mean of 83 mcg/L to 51, and mean serum IGF-1 did not move at all. It moved under a 30 day pump and under a drip into a vein, not under an injection.

The mistake that costs people. Three mistakes, and the first one is the whole compound. It is reading the Japanese approval as cover for the habit. Everywhere else in this reference I am reporting the absence of safety data, and here a regulator has a printed table with percentages on it, describing what one injection into a vein does when it is given fasting, under supervision, to find out whether a pituitary works. That is the entire approved use in the one country an approval could be found in, and it says nothing about the second dose. The second is the rise in insulin like growth factor 1 that gets quoted to buyers. It is real, and it came from a pump running for 30 days and a drip running in intensive care. Under the thing people actually do, an injection under the skin, that marker did not move over five days in healthy men, over eight months in growth hormone deficient children, or over 18 to 24 months up the nose. Nobody runs a pump. The third takes about five minutes to catch: the cycling advice in circulation is credited to a 1998 paper that is not the paper linked beside it, and the paper named is a swine study of ipamorelin, in which both GHRP-6 and GHRP-2 raised adrenocorticotropic hormone and cortisol while ipamorelin did not.

Full cited entry: thelongevitydesk.org/compounds/ghrp-2

Compare vendor prices for GHRP-2: biohackblueprint.ai/compound/ghrp-2: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

GHRP-6

The hunger it is bought for, I could not find measured.

GIVEN TO HUMANS · TRIAL OR LABEL

1 mcg/kg into a vein, about 80 to 100 mcg

Bowers 1990, 18 normal men, and the same dose and route reused exactly in five later studies

WHAT CIRCULATES

100 to 300 mcg under the skin, two to three times daily

Observed, not endorsed

As a medicine	Never an approved medicine

How they compare	What people take matches an amount a study gave
Route studied	Into a vein, in the human studies that state a route: the 18 man dose ladder in 1990, the 34 hour drip in nine young men, the half life work in nine men, and a Cuban randomised trial in 36 patients with a stroke caused by a blocked artery, which gave 3.5 or 5 milligrams into a vein twice a day for 7 days and always paired it with a second compound, epidermal growth factor, so nothing in it can be assigned to GHRP-6. Swallowing has also been through people: ten normal men took it by mouth at 30, 100 and 300 micrograms per kilogram and peak growth hormone came out at 5.2, 9.2 and 18 micrograms in a litre up that ladder, against 26 from 1 microgram per kilogram into a vein, so swallowing it works at roughly three hundred times the dose into a vein. The largest single group of people given it, 69 of them in the adrenal testing work, is a study whose route is not stated in the abstract.
Route used	Injected under the skin at home, two to three times a day on an empty stomach, in runs of 8 to 16 weeks. That is neither of the two routes that have been through people. The only exposure under the skin on record is a look back at 14 men with low testosterone, with no control group, who were taking GHRP-6 alongside GHRP-2 and sermorelin, 100 micrograms of each, three times a day for an average of 134 days, with a blood growth marker rising from 159.5 to 239.0 nanograms in a millilitre. Three compounds went in at once, so nothing in it belongs to GHRP-6 on its own.
How long it lasts	About 2.5 hours, give or take 1.1, and that figure comes from one route only: nine healthy men given single doses into a vein at 100, 200 and 400 micrograms for every kilogram of body weight. I found no study in a person of the route almost everybody actually uses, the needle under the skin, measuring where a dose goes and how fast it disappears.
Vial sizes seen	5, 10 mg

Where the circulating number comes from. The number matches, and unusually for this reference it is traceable. Bowers 1990 set 1 mcg/kg into a vein as its top rung, Borges 1997, Pandya 1998, Muller 2001, Micic 2002 and Alaioubi 2010 all reused that dose and that route exactly, and for an 80 to 100 kg man that is 80 to 100 mcg, which lands on the flat 100 mcg the community uses. Above that bottom rung the convention keeps going, to 300 mcg an injection and 200 to 900 mcg a day. The transfer is the part I found no validation of: the published dose is a single bolus into a vein for acute provocation, the convention is repeated injection under the skin for weeks, and I found no human study measuring blood levels after an injection under the skin, no dose response by that route, and no study of repeated daily dosing under the skin of GHRP-6 alone. The one exposure under the skin on record put GHRP-6, GHRP-2 and sermorelin in at once.

The mistake that costs people. Two mistakes, and both are borrowing. The first is GHRP-2, which is a different molecule. The multi month growth study people cite for GHRP-6, six children before puberty who were short of growth hormone, given stepwise doses under the skin of 0.3, 1.0 and 3.0 micrograms per kilogram a day over eight months, where growth speed rose while two blood growth markers did not, used GHRP-2. Its evidence is not this one's evidence. The vendor claim running the other way, that GHRP-6 is the dirtier of the two, rests

on a comparison I could not locate: I found no human head to head against GHRP-2 on prolactin, cortisol, adrenocorticotropic hormone, the pituitary signal that drives the stress hormone cortisol, growth hormone or appetite. The second mistake is reading the hunger as proof the thing is working. Because GHRP-6 led researchers to ghrelin, it gets sold as though it were ghrelin, and in six normal subjects given both at 1 microgram per kilogram into a vein, the real hormone peaked at 39.9 micrograms in a litre of growth hormone against 18.4.

Full cited entry: thelongevitydesk.org/compounds/ghrp-6

Compare vendor prices for GHRP-6: biohackblueprint.ai/compound/ghrp-6: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Hexarelin

The response fades, and nothing downstream moved.

GIVEN TO HUMANS · TRIAL OR LABEL

1.5 mcg/kg twice daily, about 210 mcg a day at 70 kg

Rahim, O'Neill and Shalet, 12 healthy elderly people, 16 weeks under the skin

WHAT CIRCULATES

About 100 mcg an injection under the skin, two to three times daily for 200 to 300 mcg a day, several call 200 mcg twice daily standard and some go higher

Observed, not endorsed

As a medicine	Never an approved medicine
How they compare	What people take matches an amount a study gave
Route studied	Under the skin in the only long study, 1.5 micrograms per kilogram of body weight twice daily for 16 weeks in 12 healthy elderly people. Into a vein for the single dose work, which is where all five human heart studies sit, almost always at 2.0 micrograms per kilogram, and where the hormone measurements at 0 to 1.0 micrograms per kilogram were made. Up the nose at 1.25 milligrams three times daily for 8 days in seven elderly subjects, and by mouth at 20 milligrams three times daily for 15 days in seven elderly women, neither of which blunted the response, moved prolactin or cortisol, or caused a side effect. Up the nose again for months in two uncontrolled studies in short children. In rats, under the skin at 80 micrograms per kilogram twice daily for 21 days.
Route used	Injected under the skin at home, two to three times daily, in cycles of about 6 to 8 weeks with a 4 to 8 week break. The author could find no repeat dose human heart study and no human heart data at all by that route.

How long it lasts	This entry gives no figure for how long it lasts in the body, and no measurement of that kind appears in the record it draws on, by any route. The only timings it carries describe how long an effect lasted rather than how long the substance did: in 24 men given a single dose into a vein during bypass surgery, pumping rose from ten minutes and the rise in blood output lasted up to 90 minutes.
Vial sizes seen	5, 10 mg

Where the circulating number comes from. The convention lands on a dose that was actually given, by the same route. 1.5 mcg/kg twice daily works out at about 105 mcg per injection and 210 mcg per day for a 70 kg adult, or 120 mcg and 240 mcg per day at 80 kg. What that study found at 16 weeks was a fall of roughly 45 percent in the growth hormone response, while across the same 20 weeks insulin like growth factor 1, the blood marker growth hormone normally drives up, did not change significantly, and neither did the protein that carries it, P = 0.24 and P = 0.74, and total body fat, lean body mass and bone mineral density had not changed at week 16 either. I could not establish any published derivation for the 100 mcg figure, and the cycles of about 6 to 8 weeks with a 4 to 8 week break are framed explicitly as managing the fading response.

The mistake that costs people. Two mistakes, and the first is what the break in the cycle is for. Breaks are sold as a way to manage the fading response, which concedes the central finding rather than answering it, and the thing those breaks protect is a growth hormone spike that, in the one study measuring it at that amount and by that route, never produced a rise in insulin like growth factor 1 to begin with. Sixteen weeks in, the response was down roughly 45 percent and body fat, lean mass and bone density had not moved. The second is the heart evidence, which is genuinely good and is about something narrower than the page it appears on. All five human heart studies gave a single dose into a vein, almost always 2.0 micrograms per kilogram, and the author could find no repeat dose human heart study and no human heart data at all by the route people actually inject. The long version of that story is rats, at 80 micrograms per kilogram twice daily for 21 days, roughly 53 times the 1.5 micrograms per kilogram twice daily of the only long human study, before any adjustment for the size difference between a rat and a person. The tidy anti-atherosclerosis results belong to EP-80317, a different compound that does not release growth hormone at all. And the receptor paper people cite for the heart claims is the one in which the compound narrowed coronary vessels. Underneath both mistakes sits a third: GHRP-6 is one methyl group away at a single position, and its evidence gets read across as this compound's.

Full cited entry: thelongevitydesk.org/compounds/hexarelin

Compare vendor prices for Hexarelin: biohackblueprint.ai/compound/hexarelin: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

IGF-1 LR3

Sold as long acting, cleared faster in the rat.

GIVEN TO HUMANS · TRIAL OR LABEL

No dose in a person that I could find

I found no study giving it to a human being, and no registered trial. Across the records reviewed, every dose is an animal dose.

WHAT CIRCULATES

Roughly 20 to 100 mcg a day under the skin, in cycles of about 4 to 6 weeks

Observed, not endorsed

As a medicine	Never an approved medicine. Built as a lab reagent for growing protein in bacteria; no human study by any route.
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	In animals only. Rats had it under the skin for seven days, both as a continuous infusion and as a once daily injection. Food restricted rats, guinea pigs and finisher pigs had it by continuous infusion. Fetal sheep had it into a vein for a week, at 6.6 micrograms for every kilogram of body weight per hour, about 158 per day, and growth restricted fetuses at about 28 per day. The blood sugar work in pigs used single injections. One study infused it into an artery feeding a patch of skin in six conscious sheep. The article's author found no published study giving it to a human being by any route, and no registered trial.
Route used	Injected under the skin at home, sometimes split into two injections a day, run in cycles of about 4 to 6 weeks. Community writing also describes injecting it into a particular muscle to grow that muscle, and the article's author found no study testing that in any species.
How long it lasts	The 20 to 30 hours printed on sales pages is the figure to be suspicious of. The article's author could not trace it to a published measurement in any species. Native recombinant human insulin like growth factor 1 has a half life of about 20 hours in healthy volunteers when it goes under the skin, and the number looks inherited from that parent rather than measured on this molecule. What has been measured runs the other way. The primary literature states that LR3 has very low affinity for the binding proteins in the rat and is therefore cleared from the circulation more quickly than insulin like growth factor 1 itself, and after a single dose into a vein of virgin rats, clearance from the plasma ran 9.84 millilitres per minute for every kilogram of body weight for LR3 against 0.90 for the native hormone, about eleven times faster.
Vial sizes seen	1 mg

Where the circulating number comes from. There is nothing to compare against, because I found no published study in which it was given to a human being and no registered trial. Per kilogram the convention is small rather than large: about 0.25 to 1.25 micrograms/kg/day for an 80 kg adult, and every published dose sits above it, from about 28 micrograms/kg/day in growth restricted fetal sheep, which is 22 to 112 times higher, up to about 2,133 to 2,667 in steroid treated rats. The pig bolus doses that produced measurable hypoglycaemia were 20 to 50 micrograms/kg in one injection, 16 to 200 times the convention.

I found no derivation for the 20 to 100 mcg anywhere: no allometric scaling from a named animal study, no dose ranging work, no pharmacokinetic anchor. Sitting under the animal doses is not a safety finding, because I could not find a measurement in a person at any dose.

The mistake that costs people. The expensive mistake is borrowing Increlex's file. Mecasermin, sold as Increlex, is an approved medicine with real trials, a real label, real low blood sugar numbers and a real cancer warning, and that document gets waved over a molecule that began as a construct for growing protein in a bacterium. It is a different substance and none of it transfers. The second mistake is the half life. LR3 was built specifically so that it would not join the package that keeps insulin like growth factor 1 in the blood, and it is then sold as long acting. That is taking the lid off the pot to make the water boil faster and quoting the time it took with the lid on. The third is the amount. The roughly 20 to 100 micrograms a day that circulates has no derivation the article's author could find anywhere: no allometric scaling from a named animal study, no dose ranging work, no pharmacokinetic anchor. Per kilogram it is small rather than large, about 0.25 to 1.25 micrograms for every kilogram of body weight per day in an 80 kilogram adult, and every published dose sits above it, but sitting under a pig dose is not a safety finding, because I could not find a measurement in a person at any dose.

Full cited entry: thelongevitydesk.org/compounds/igf-1-lr3

Compare vendor prices for IGF-1 LR3: biohackblueprint.ai/compound/igf-1-lr3: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

HGH Fragment 176-191

The trials belong to a molecule one oxygen atom away.

GIVEN TO HUMANS · TRIAL OR LABEL

No human dose of the fragment was found

Six searches across four databases on 2026-08-05 found no human study of it

WHAT CIRCULATES

250 to 500 mcg a day under the skin in 8 to 12 week cycles, or 200 to 500 mcg fasted for about four weeks

Observed, not endorsed

As a medicine	Never an approved medicine. Every human trial in this family belongs to AOD-9604, a modified copy.
How they compare	Nothing to compare against: no human dose has ever been published

Route studied	Rats and a dish. The summary of the 1978 rat paper never states how it was given. Ma and colleagues followed up in rats in 1982, with no summary published and a full text the author did not obtain. Habibullah and colleagues in 2022 ran the peptide against MCF-7 breast cancer cells and through computer docking simulations, no animal and no person. Every human dose on record in this family belongs to the modified copy, AOD-9604, at 25 to 400 micrograms per kilogram into a vein and 0.25 milligrams to 54 milligrams swallowed.
Route used	Injected under the skin, and one vendor page specifies fasted. The Food and Drug Administration reported in two separate sections that it did not identify human exposure to the modified copy under the skin or through the skin, and no study giving the unmodified fragment to a person by any route turned up in these searches.
How long it lasts	The 15 to 20 minute figure everyone quotes has no published human source. The Food and Drug Administration reported that it did not identify any clinical study of how the modified copy is taken up, spread or cleared by the body, by any route, and six searches across four databases turned up no human study of the unmodified fragment at all.
Vial sizes seen	5 mg

Where the circulating number comes from. There is nothing to compare against. Six searches across four databases found no human study of the unmodified fragment, and the author could not establish where the 200 to 500 mcg convention came from and would not invent a lineage for it. Every human dose on record in this family belongs to AOD-9604, a modified copy sixteen daltons and two CAS numbers away: 25 to 400 mcg/kg into a vein and 0.25 mg to 54 mg by mouth, an oral range spanning a factor of 216 from bottom to top, and nothing in that spread produces 250 to 500 mcg a day under the skin of a person. FDA reported it did not identify human exposure even to AOD-9604 by the subcutaneous or transdermal route. The 250 to 500 mcg tabulated in a 2026 journal review is self-reported forum protocols, and a forum number reprinted in a journal table is still a forum number.

The mistake that costs people. The expensive mistake is buying this fragment on the strength of a trial record that belongs to a modified copy of it. Six human trials were run in Australia between roughly 2001 and 2007 by a company called Metabolic Pharmaceuticals, and they survive as one summary paper written by that sponsor's own employees and consultants in a journal the PubMed database does not index, which the Food and Drug Administration summarised in December 2024. On that agency's reading, the first four showed no statistically significant weight loss. The fifth put 300 patients with obesity on the swallowed form at 1, 5, 10, 20 or 30 milligrams a day or a dummy treatment for 12 weeks, exists only as a conference abstract whose methods the agency could not find published, and its largest effect was at its smallest dose, minus 0.22 kilograms a week on 1 milligram against minus 0.07 on the dummy. The one built to settle it, OPTIONS, randomised 502 people out of 536 enrolled, adults with a body mass index of 30 to 45, on 0.25, 0.5 or 1 milligram once a day by mouth for 24 weeks against a dummy, powered at 80 percent to detect a 1.8 kilogram difference at 12 weeks. It did not separate, and on 21 February 2007 the company terminated development for obesity. Watch the doses across those last two trials, 1 to 30 milligrams a day and then 0.25 to 1

milligram: the one trial powered to find anything ran at the bottom of every swallowed dose the compound had ever been given. And the author found no study putting the fragment and the modified copy side by side, in any system, in any species.

Full cited entry: thelongevitydesk.org/compounds/hgh-fragment-176-191

Compare vendor prices for HGH Fragment 176-191:
biohackblueprint.ai/compound/hgh-fragment-176-191: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Follistatin-344

The name belongs to a gene, and so does the evidence.

GIVEN TO HUMANS · TRIAL OR LABEL

No study I found gave the protein to a person on its own, by any route

93 PubMed clinical trial records and 79 registry studies searched, and every human study I found that gave follistatin gave a gene

WHAT CIRCULATES

100 to 200 mcg a day under the skin, in cycles of 10 to 30 days, community convention not a tested dose

Observed, not endorsed

As a medicine	Never an approved medicine
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	As a gene. Into muscle, carried by a virus, in the published muscular dystrophy and myositis trials, and as a plasmid, a loop of bare DNA, in a commercial study of 43 healthy subjects in Honduras that has posted no results. ACE-083, a different engineered molecule, went into one named muscle at 50 to 200 mg.
Route used	Injected under the skin, from vials sold under the gene's name.
How long it lasts	This entry gives no figure. I found no pharmacokinetic study, meaning a measurement of how much reaches the blood and how fast, of follistatin protein under the skin in any species. The nearest evidence is sheep, where four compounds were injected under the skin, three animals each, and the conclusion was that molecules above about 16,000 daltons are absorbed mainly by lymph, which is slow and partial. Follistatin is about twice that mass.

Where the circulating number comes from. There is nothing to compare against, because I found no published study giving follistatin protein to a person on its own by any route. Every human result I found under this name came from delivering the gene, carried in by a virus or given as a plasmid, which is a loop of bare DNA, and a gene keeps expressing inside a muscle fibre for months in a way an injection does not. The doses in the gene therapy record are counts of gene carrying virus particles per kilogram of body weight, and those do not

convert into micrograms of protein. The two masses in the record run the other way: ACE-083, an engineered follistatin fusion, used 50 to 200 mg into one muscle, 250 to 2,000 times the daily microgram convention, and the dosage page carrying the convention concedes that no published human dose-response studies exist.

The mistake that costs people. Reading gene therapy results as results for an injected protein, which is the substitution the sales copy depends on. Four things travel under this one name: a virus carrying the gene into muscle, a loop of bare DNA, an engineered follistatin Fc fusion built to stay where it is put, and a bacterial protein in a vial. Only the last one is what anybody buys, and it is the only one of the four with no human evidence I could find. The doses do not carry across either. Every dose in the gene therapy record is a count of gene carrying virus particles per kilogram of body weight, which does not convert into micrograms of protein. The two masses in the record point the opposite way: 50 to 200 milligrams of ACE-083 into a single muscle, which is 250 to 2,000 times the daily microgram convention, and a pharmaceutical model projecting 3 to 5 milligrams per kilogram a week for a half life engineered fusion, which is 240 to 400 milligrams a week for an 80 kilogram adult against a convention of roughly 0.7 to 1.4 milligrams a week.

Full cited entry: thelongevitydesk.org/compounds/follistatin-344

PEG-MGF

The 25 percent that sells it came from injecting a gene.

GIVEN TO HUMANS · TRIAL OR LABEL

No dose in a person, or in a live animal of any species, that I could find

FDA states it has identified no human exposure data on PEG-MGF products by any route

WHAT CIRCULATES

200 to 400 mcg two to three times a week, and daily in the same row

Observed, not endorsed

As a medicine	Never an approved medicine
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	None that I could find. I found no published study giving PEG-MGF to a person, and none giving it to a live animal of any species. The live animal record belongs to the unpegylated peptide: injected locally into a surgical bone defect in rabbits, into the heart muscle in mice inside implanted polymer rods the peptide seeped out of, and into bruised muscle in mice.
Route used	Injected under the skin or into a muscle after training. That is what circulates, reported as convention and not as a tested schedule.

How long it lasts	This is the whole selling proposition and the part I could not source. What circulates is about 5 to 7 minutes for the native peptide against 48 to 72 hours once the polymer is attached, and the two figures do not come off the same page. One vendor page prints the 48 to 72 hours. A second prints several hours to days against 5 to 7 minutes, and says on that same page that no human data on how the compound moves through the body exists and that the right dose for any use is unknown. I could not trace either number to a measurement in any species, and the one peer reviewed source I found that treats PEG-MGF as a compound records the half-life as not reported.
Vial sizes seen	2, 5 mg

Where the circulating number comes from. There is nothing to compare against. I found no published study giving PEG-MGF to a person and none giving it to a live animal of any species, and the regulator says the same about the human half. The nearest published figure per kilogram I found belongs to the unpegylated 24 amino acid peptide, injected into a surgical bone defect in 27 rabbits at 28.5 and 57 micrograms per kilogram, where only the higher dose separated from no treatment. Against that dose the circulating amount is 11 to 23 times smaller per kilogram, and it went into bone rather than muscle or fat.

The mistake that costs people. The costly mistake is treating a gene experiment as a peptide result. The 25 percent figure comes from Goldspink's own account in Physiology News in 2003 of injecting the gene into muscle in a loop of DNA, so the muscle manufactured the product itself, and his sentence names no species. Injecting a gene and injecting a peptide are different operations, the way installing a boiler and carrying in a bucket of hot water are, and one of them keeps producing. The only source cited for that figure is United States patent 6,221,842 B1, and I searched that patent's full description: no 25 percent, no fibre measurement, no loop of DNA and no mice. The second mixup is a different molecule with a similar name: RO5046013 is a pegylated insulin like growth factor 1 that went into a first in man study in 62 healthy volunteers, and none of its numbers belong to this compound.

Full cited entry: thelongevitydesk.org/compounds/peg-mgf

Compare vendor prices for PEG-MGF: biohackblueprint.ai/compound/peg-mgf: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Cognitive and neuro

Nootropic peptides, most with a research base published outside the English language literature.

Semax

A Russian prescription drug, judged without its own literature.

GIVEN TO HUMANS · TRIAL OR LABEL

800 to 8,000 mcg, up the nose

The Russian 0.1 percent label

WHAT CIRCULATES

500 to 3,000 mcg, usually injected

Observed, not endorsed

As a medicine	An approved medicine exists. A prescription drug in Russia; FDA's reviewers recommended against compounding it in the US.
How they compare	People take less than what studies gave
Route studied	Up the nose, as drops
Route used	Injected under the skin, at home
How long it lasts	I could not find a measurement of this in a person, by any route, nose or needle.
Vial sizes seen	5, 10, 20, 30 mg

Where the circulating number comes from. Below the label range and by a different route. Almost everything sold here is injected; every published study went intranasally.

The mistake that costs people. The expensive mistake is treating N Acetyl Semax and N Acetyl Semax Amidate as upgraded, stronger versions of the original. Nothing at all has been published on them, and the one study that looked at adding that acetyl group found it wiped out a protective effect the plain version had on cells, which is the opposite of what the marketing claims.

Full cited entry: thelongevitydesk.org/compounds/semax

Compare vendor prices for Semax: biohackblueprint.ai/compound/semax: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Selank

Three Russian trials, and not one reports a dose.

GIVEN TO HUMANS · TRIAL OR LABEL

No trial has ever reported a dose

Three Russian trials, 192 patients, no dose in any of them

WHAT CIRCULATES

900 mcg a day from the drops, 1,350 quoted by vendors

Observed, not endorsed

As a medicine	An approved medicine exists. A Russian nasal drop. None of its three trials reports a dose.
How they compare	Nothing to compare against: no human dose has ever been published

Route studied	Up the nose, as drops. Every documented human use is by that route.
Route used	Injected. The injectable solution that is actually sold has never been compared with the nose drops in a clinical study.
How long it lasts	No half life has been published in a person. The only figure of that kind anywhere in the record is on the Russian label, which describes the substance clearing the blood within about five minutes.
Vial sizes seen	5, 10, 20, 30 mg

Where the circulating number comes from. There is nothing to compare against. None of the three trials reports a dose or a treatment length, so both circulating numbers came from somewhere other than a study: 900 mcg per day is a derivation from assuming 20 drops to a millilitre of the Russian nasal drops, and the 1,350 mcg per day that vendors attribute to the 2008 trial is absent from every primary source.

The mistake that costs people. The costly mistake is the Semax pairing, because it is not a stack anybody has studied. Search for both names and you get 11 articles, and in none of them did researchers give both peptides to the same subjects. The one study that contains both names does the opposite of what a stack implies: Panikratova 2020 scanned 52 healthy people in three separate arms, one given Semax, one given Selank and one given nothing. The two are chemically related, sharing the last three of their seven building blocks, and that shared tail is a plausible route to a shared mechanism, which is a reason two compounds that act alike may not add up to more when taken together rather than an argument for combining them. I could find nobody who has checked.

Full cited entry: thelongevitydesk.org/compounds/selank

Compare vendor prices for Selank: biohackblueprint.ai/compound/selank: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Cerebrolysin

A licensed pig brain extract its own label cannot measure.

GIVEN TO HUMANS · TRIAL OR LABEL

10 to 50 mL a day into a vein, in patients

The Austrian label's table by condition, and the stroke and dementia trials behind it

WHAT CIRCULATES

5 to 10 mL a day, under the skin or into a muscle

Observed, not endorsed

As a medicine	An approved medicine exists. Licensed in Austria since 1996; never in the US or UK.

How they compare	People take less than what studies gave
Route studied	Into a vein, in patients, in hospital, at 10 to 50 mL a day, most of it as a slow drip. The label permits up to 5 mL into a muscle and up to 10 mL as a straight injection into a vein, and from 10 mL it recommends a drip given over about 15 to 60 minutes.
Route used	Injected under the skin or into a muscle, at home, from an ampoule.
How long it lasts	No published half life for it turned up in the searches behind this entry. The Austrian label says a direct measurement of what the body does with the drug cannot be carried out at all, because the fragments in it are similar or identical to short pieces the body already makes, and the indirect figures were set from what the drug appears to do rather than from measuring it. That is the regulator's own document saying the drug cannot be measured directly in the body.

Where the circulating number comes from. The circulating amount runs at or below the bottom of every row of that table, its upper end of 10 mL landing exactly on the bottom of the dementia row. The reason it stops there looks mechanical rather than clinical, and that is a reading rather than something the label states: 5 mL is the most the label allows into a muscle, 10 mL the most allowed as a straight injection into a vein, and from 10 mL the label recommends a drip. There is a second gap in the route. Injection under the skin appears nowhere on the label, which lists muscle, vein and drip only, and a PubMed search for cerebrolysin and subcutaneous returned seven records, every one a rodent study or one that does not name a human population.

The mistake that costs people. Two mistakes, and they stack. The first is reading the Austrian licence as covering the reason people buy it. The licence is real, and it is the most useful thing a seller could be handed, but it is for supportive treatment of cerebrovascular disorders in patients, given in a clinic and mostly by drip. Nothing in it speaks to a healthy adult injecting an ampoule under the skin for memory, and behind that use sit two studies, from 1998 and 2000. The second is arithmetic printed by the vendor guide itself. It glosses 5 to 10 mL a day as roughly 500 mg to 1,000 mg of the protein hydrolysate, when at the label's 215.2 mg per millilitre those volumes are 1,076 mg and 2,152 mg. The stated milligram figures are out by about a factor of two, in the direction that makes the dose sound smaller.

Full cited entry: thelongevitydesk.org/compounds/cerebrolysin

P-21

Not a Cerebrolysin derivative, and the record is rodent.

GIVEN TO HUMANS · TRIAL OR LABEL

No dose in a person that I could find

Every dose in the record came from a mouse or a rat, by chow, a stomach tube, an implanted pellet or a shot into the abdomen

WHAT CIRCULATES

500 mcg to 1 mg once daily, under the skin

Observed, not endorsed

As a medicine	Never an approved medicine
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	In mice, released continuously from a pellet implanted under the skin, mixed into the chow, and in one study injected into the abdominal cavity. In rats, by a tube into the stomach. All rodent.
Route used	Injected under the skin, daily. I found no study, in any species, that gave it that way.
How long it lasts	The entry prints no half life. The figure in the record behind it is the Alzheimer's Drug Discovery Foundation's, a plasma half life of over 3 hours in mice, and no figure in a person turned up in my searches. I found no bioavailability figure published for any route in any species either, so I could not work out how much of an injection would reach the blood.
Vial sizes seen	5, 10 mg

Where the circulating number comes from. There is nothing to compare against, because P-21 has not been given to a person in any published record I could find. The doses that exist are rodent doses by routes the market does not use: 25 nanomoles a day leaking from a pellet under the skin, 60 nanomoles per gram of feed in chow, 500 nanomoles per kilogram down a stomach tube, and 750 nanomoles a day into the abdominal cavity, that last one in the study where most motor measures did not move. One seller shows its working, and its own scaling of the animal figures lands about six times and about fifty times above the 500 micrograms the same market runs. I found no bioavailability figure published for any route in any species, so no arithmetic gets you from the pellet to the syringe.

The mistake that costs people. That P-21 is a piece of Cerebrolysin. It is not. Cerebrolysin is a mixture made by digesting animal brain protein with enzymes, and P-21 is a defined molecule of four amino acids with a carbon cage on the end. The real connection is that the inventing laboratory reported finding ciliary neurotrophic factor activity inside Cerebrolysin in 2007 and went off to work on that factor, which is a lineage of attention rather than a chemical derivation, and the licensed medicine's clinical record does not transfer to this molecule. The second mistake stacks on top: several of the most quotable results belong to Peptide 6, the eleven amino acid parent, and a traumatic brain injury result credited to P-21 is that molecule's.

Full cited entry: thelongevitydesk.org/compounds/p-21

Compare vendor prices for P-21: biohackblueprint.ai/compound/p-21: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

DSIP

Named for sleep, then matched by saline in rabbits.

GIVEN TO HUMANS · TRIAL OR LABEL

About 1,485 mcg into a vein, for a 70 kg adult

25 nmol/kg, or 21.2 mcg/kg, the dose most of the human sleep trials used

WHAT CIRCULATES

100 to 300 mcg under the skin, once in the evening

Observed, not endorsed

As a medicine	Never an approved medicine
How they compare	People take less than what studies gave
Route studied	Into a vein, in every human administration whose route I could establish, apart from one study given up the nose that carries no abstract. In animals, infused into the fluid filled chambers inside the brain, and under the skin in two cat experiments and in rabbits at 1 mg/kg.
Route used	Injected under the skin, once in the evening, 1 to 3 hours before intended sleep.
How long it lasts	FDA states a short plasma half life of 8 minutes, citing a 2001 review rather than a primary measurement, and I could not trace that figure back to a primary human study. Kato and colleagues, measuring how fast it disappeared after an injection into a vein, got 4.0 minutes in 4 anaesthetised dogs, 2.9 in a monkey and 2.0 in 3 rats. All of those numbers are for a vein. Fast clearance from a vein does not by itself sink a nightly injection under the skin, since absorption out of the tissue can be the slow step, and neither FDA nor I found a study measuring that in any species. Untested, not refuted.
Vial sizes seen	5, 10 mg

Where the circulating number comes from. The circulating figure is roughly 5 to 15 times smaller per kilogram than the trial dose, and it goes in by a route neither FDA's reviewers nor I found a human trial for. Every human administration whose route I could establish went into a vein, apart from one study up the nose that carries no abstract. I could find no published derivation for the 100 to 300 mcg number, and the dosing page I opened describes those figures as coming from research write ups rather than clinical trials. Against the two cat experiments, both near 100 mcg/kg under the skin, it is 24 to 71 times smaller.

The mistake that costs people. Reading the abstract and stopping there. Everyone quoting DSIP safety, including this site until FDA's 2026 document was read, has been quoting the

abstract of that 1984 withdrawal series, which records only headaches in a few patients, while the full paper records three serious adverse effects. The abstract is the part that is free. The second mistake is the name. DSIP was named on a rabbit brainwave result from 1977, and when a Moscow group put DSIP and thirteen modified versions back into rabbits by that same route into the brain, DSIP itself did nothing to sleep that a saline injection into the same animals did not do, while two of the modified versions raised slow wave sleep by 10 to 15 percent and a third suppressed it.

Full cited entry: thelongevitydesk.org/compounds/dsip

Compare vendor prices for DSIP: biohackblueprint.ai/compound/dsip: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Dihexa

The human evidence is negative and filed under another name.

GIVEN TO HUMANS · TRIAL OR LABEL

No dose in a person that I could find

Every human figure belongs to fosgonimeton, dihexa with a phosphate group added so it can be injected

WHAT CIRCULATES

About 5 to 50 mg a day by mouth across vendor and community pages, no two agreeing

Observed, not endorsed

As a medicine	Never an approved medicine. Its drug-form analog missed its endpoint in the one large trial.
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	In rats, into a brain fluid space, into a vein, into the belly cavity and by mouth. In people, only as the injected phosphate version, under the skin once a day.
Route used	By mouth. Dihexa does not dissolve in water, and the material sold to individuals is commonly supplied in DMSO, an industrial solvent that carries things through skin, which is how the rat work dosed it too.
How long it lasts	In rats, 12.68 days after 10 mg/kg into a vein, and 8.83 days after 20 mg/kg into the belly cavity, that second figure resting on four animals. In the 65 Phase 1 participants who received the injected phosphate version, the active molecule lasted about an hour and a half after injection under the skin. Days against hours, and I found nothing published explaining the gap.

Where the circulating number comes from. There is nothing to compare against, because no human oral dose of dihexa has been established in anything I could find. Every human figure belongs to fosgonimeton, the same molecule with a phosphate group on it so it can be injected, given at 40 mg or 70 mg a day under the skin rather than swallowed. None of the vendor or community pages I opened carrying an oral figure showed its working.

Converting the rat oral dose of 2 mg/kg by body surface area lands near 22.6 mg for a seventy kilogram adult, but that is arithmetic worked here rather than a derivation I found anybody publishing, and the published method divides the result by a further ten before anyone is dosed, which puts it at 2.26 mg.

The mistake that costs people. Every vendor page I have seen says dihexa has never been tested in humans. That is true of the exact molecule and not of the molecule with a phosphate on it, which went into a trial of 554 people with Alzheimer's disease, was given to 331 of them, and did not separate from the dummy injection. The number doing the selling is in worse shape than that. Ten million times more powerful than BDNF traces to a Washington State University press release dated 11 October 2012, and I searched the full texts of both founding papers for BDNF and for brain-derived neurotrophic factor and found neither in either. Three of the four papers the compound rests on were retracted in April 2025, and the fourth, which carries every rat dose, spine count and half life anybody quotes, has been under an expression of concern since September 2021, meaning the journal has flagged it without withdrawing it.

Full cited entry: thelongevitydesk.org/compounds/dihexa

Compare vendor prices for Dihexa: biohackblueprint.ai/compound/dihexa: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

PE-22-28

Little of the selling belongs to the molecule in the vial.

GIVEN TO HUMANS · TRIAL OR LABEL

No human dose I could find, by any route

Every published dose is in a mouse: 3.0 to 4.0 mcg/kg into the abdominal cavity, and 1 mg/kg by tube into the stomach in one panel

WHAT CIRCULATES

100 to 2,000 mcg per dose, mostly up the nose

Observed, not endorsed

As a medicine	Never an approved medicine
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	Injected into the abdominal cavity of mice, at 3.0 to 4.0 micrograms per kilogram, and in one panel by a tube passed into the stomach at 1 milligram per kilogram. No route in a person that I could find.
Route used	Up the nose, and under the skin. My PubMed search pairing either peptide name with the nose, the mouth or the skin returned no records.

How long it lasts	I could find no published half life for this molecule, in any species, by any route. I found no study measuring how much of it gets into the blood, how far it spreads or how fast it clears. The 23 hours that appears everywhere belongs elsewhere: that experiment injected two modified versions into the abdominal cavity of mice at 3.2 to 40 micrograms per kilogram, ten mice per time point, and PE-22-28 itself was not in it. It is also not a blood level at all but a half effect time, meaning the time at which half the behavioural effect was left, and the paper's own results and discussion disagree about which of the two modified molecules the 23 hours belongs to. Every once daily on a protocol page is therefore a schedule with no measured duration behind it.
Vial sizes seen	5, 8, 10, 20 mg

Where the circulating number comes from. There is nothing to compare against, because I could find no published or registered study giving PE-22-28, spadin or any analogue of either to a person. Every published dose is in a mouse, and the two routes the market runs on, up the nose and under the skin, returned nothing when I paired either name with them on PubMed. Scaling the mouse dose by the standard body surface area conversion gives about 17 to 23 micrograms for a 70 kilogram adult, which puts the low end of the convention roughly four to six times above that and the high end ninety to a hundred and twenty times. That arithmetic is a check on the method, not a dose.

The mistake that costs people. Taking the numbers on the sales page to describe what is in the vial. The 23 hour duration was measured on a modified version at ten times the dose, and the paper cannot decide which of its two modified molecules it belongs to. The potency claim, roughly 300 times spadin, is a ratio whose denominator its own source contradicts: the 2017 paper cites spadin at 40 to 60 nanomolar and credits a 2010 paper that measured 70.7, in a different cell line, while printing its own figure four times as 0.12 twice and 0.10 twice and swapping it with its alanine cousin. Both figures come from channels put into cells in a dish rather than from an animal. And the premise underneath both is a mouse born without the gene, not a mouse given the drug.

Full cited entry: thelongevitydesk.org/compounds/pe-22-28

Compare vendor prices for PE-22-28: biohackblueprint.ai/compound/pe-22-28: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Mitochondria and cellular energy

Compounds aimed at the cell's energy machinery. Strong mechanisms, thin human data.

MOTS-c

The mouse data is good, the human trial is forged.

GIVEN TO HUMANS · TRIAL OR LABEL

No human dose has ever been published

Every published dose is a mouse dose, 0.5 to 15 mg per kg per day

WHAT CIRCULATES

5 to 10 mg per dose, two or three times a week up to daily

Observed, not endorsed

As a medicine	Never an approved medicine. Only CB4211, a modified analog, ever reached a human trial.
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	Into the abdominal cavity, in mice. Lee 2015 and Reynolds 2021 both injected it there.
Route used	Under the skin. No study in mice that showed an effect used that route.
How long it lasts	I found no published study of how long an injected dose lasts, in any species. Sellers give three different answers, and the four hour figure that circulates is usually credited to what are called the University of Southern California gerontology trials, which do not appear to exist.
Vial sizes seen	5, 10, 40 mg

Where the circulating number comes from. There is nothing to compare against. Every dose in the record was given to a mouse, into the abdominal cavity, and the one completed human trial used CB4211, a modified version rather than MOTS-c itself. Vendors say they reached the number by scaling the mouse doses by body surface area, and running that conversion on the 15 mg per kg dose does not land at 5 to 10 mg.

The mistake that costs people. The costly mistake is reading a measurement as a trial. In the 2021 paper, ten sedentary young men, average age about 24, rode a stationary bicycle to exhaustion, and the amount of MOTS-c their own bodies were already making rose 11.9 fold in muscle and 1.5 fold in blood, returning to normal within four hours. The men received no peptide at all. Measuring how much of a substance is already inside somebody is a completely different kind of evidence from giving it to them and watching what happens, and that study is routinely sold as a human trial of the injection. The same error runs the other way with CB4211, the modified version tested in the one completed trial, whose final group of 20 obese people with fatty liver got 25 mg once daily for four weeks, which is 2.5 to 5 times the amount people inject of a molecule that is not the same thing.

Full cited entry: thelongevitydesk.org/compounds/mots-c

Compare vendor prices for MOTS-c: biohackblueprint.ai/compound/mots-c: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

SS-31

Approved on eight patients, and sold as a different salt.

GIVEN TO HUMANS · TRIAL OR LABEL

40 mg a day under the skin

Five published trials and the approved label, every one in people with a diagnosed disease

WHAT CIRCULATES

0.1 to 40 mg a day under the skin

Observed, not endorsed

As a medicine	An approved medicine exists. As elamipretide, for Barth syndrome, on eight patients. and bulk powder is usually a different salt.
How they compare	People take less than what studies gave
Route studied	Injected under the skin once a day at 40 mg in the later trials, and infused into a vein by body weight in the earlier ones. The mouse ageing result used an injection into the abdominal cavity, a route people do not use.
Route used	Injected under the skin from grey market vials, daily to three times a week, sometimes in cycles that one vendor page itself admits are not scientifically established.
How long it lasts	This entry publishes no figure for how long it lasts in the body. What it reports instead is how fast the effect came and went: after a single two hour infusion into a vein, a laboratory measure of energy production rose immediately afterwards and the difference was gone by day 7.
Vial sizes seen	10, 30, 35, 50 mg

Where the circulating number comes from. The headline number is real for once. Forty milligrams a day under the skin is the dose in five published trials and on the approved label, and every one of those was in people with a diagnosed disease. Where the convention departs, it departs downward. I could find no human trial reporting a clinical result at 2, 5 or 10 mg a day, and the label mentions that lower range only as a span over which blood levels were measured, so somebody has given 2 mg a day and published nothing but the blood levels. I looked for a study in any species testing the three times weekly schedule several pages give, and could not find one.

The mistake that costs people. Treating the approval as though it covers what is in the vial. What was approved is one salt, elamipretide hydrochloride, and a salt is the same active molecule paired with a partner that makes it a stable powder, which a regulator treats as its own product. Most bulk powder sold to compounding pharmacies is the acetate, and eighty days after the approval the American drug regulator wrote to a Florida distributor naming elamipretide (SS-31) acetate as ineligible for compounding. In that listing the active ingredient named in the filing was something called peptide B27PD. I could find no published comparison of the two salts in people, and nothing describing what peptide B27PD is.

Full cited entry: thelongevitydesk.org/compounds/ss-31

Compare vendor prices for SS-31: biohackblueprint.ai/compound/ss-31: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Humanin

The lifespan paper found no lifespan gain in its mice.

GIVEN TO HUMANS · TRIAL OR LABEL

No human dose I could find, by any route

Every published dose is an animal dose. Yen 2020 gave 100 mice the analogue S14G at 4 mg per kg into the abdominal cavity

WHAT CIRCULATES

0.1 mg to 10 mg per dose under the skin, two or three times a week up to daily

Observed, not endorsed

As a medicine	Never an approved medicine
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	Into the abdominal cavity in mice and into a vein in pigs, both with the S14G analogue. In one rat study native humanin was infused into the brain fluid spaces, where insulin action improved, and into a vein, where the same native peptide did not significantly alter insulin action. No human route that I could find.
Route used	Injected under the skin. All three sites quoting numbers describe that route.
How long it lasts	I could find no study of what an injected dose does over time, in any species, by any route. So no measured half life stands behind any of the injection schedules in circulation.
Vial sizes seen	5, 10 mg

Where the circulating number comes from. There is nothing to compare against. I could find no published study, and no registered one, giving humanin or any version of it to a person by any route, so every schedule in circulation sits beside an animal number rather than a human one. Most of those animal numbers belong to S14G, the one letter mutant, while the vial holds the other molecule. Two of the three sites quoting doses say themselves that their figures are extrapolation from rodent work, and the spread between the three is a hundredfold for the same two molecules.

The mistake that costs people. Paying for one molecule on the strength of another's results. The vial holds native humanin and most of the animal record belongs to S14G, the one letter mutant, reported as roughly a thousand times more potent. Follow that thousandfold figure and it thins out. The 2006 structure paper asserts it without measuring it, and the review most often cited for it hangs that sentence on entry 23 of its own bibliography, which is a 2001 paper about tau, the protein that clumps into the tangles seen in Alzheimer's brains, with no

humanin in it anywhere. The laboratory that discovered the peptide put the gap at two to three orders of magnitude, 100 to 1000 fold, so the number everybody repeats is the top of a range. The second half of the same mistake is the dose. The three sites quoting figures run from 0.1 mg to 10 mg per dose, a hundredfold spread for the same two molecules, and two of the three say outright that their numbers are extrapolation rather than a finding.

Full cited entry: thelongevitydesk.org/compounds/humanin

Compare vendor prices for Humanin: biohackblueprint.ai/compound/humanin: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

SLU-PP-332

Injected into mouse abdomens, sold as a capsule.

GIVEN TO HUMANS · TRIAL OR LABEL

No human dose I could find, by any route

Four mouse studies, 25 to 50 mg per kg into the abdominal cavity

WHAT CIRCULATES

250 mcg to 1.5 mg a day under the skin, or 1 to 5 mg, or 400 to 800 mg by mouth

Observed, not endorsed

As a medicine	Never an approved medicine
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	Injected into the abdominal cavity, the space the organs sit in, in mice. Four published studies, 25 to 50 mg per kilogram, once or twice daily, for six days to eight weeks. I found none by mouth and none under the skin.
Route used	Mostly swallowed, as a capsule. Sellers also list 5 mg of freeze dried powder in a vial for injection, and protocol pages describe injecting under the skin, which is a route I did not see in any published study.
How long it lasts	This entry publishes no half life. The only pharmacokinetic work in the primary paper, meaning where the compound goes once it is in the body, is a single tissue distribution experiment in a handful of mice, and it reports no half life, no peak concentration and no bioavailability figure, with nothing given by mouth. No figure of that kind appears anywhere in this entry, for a person or for a mouse.

Where the circulating number comes from. There is nothing to compare against. Every published dose I found was given to a mouse, by injection into the abdominal cavity, and the scientists who made the compound wrote that it lacks oral bioavailability, meaning it does not get from the gut into the blood. Most of what is sold is a capsule. The 400 to 800 mg oral band that circulates is about where a body surface area conversion of the mouse dose lands, roughly

570 mg a day for a 70 kilogram adult, which is arithmetic applied to a route its own inventors say does not work.

The mistake that costs people. Two mistakes, and they stack. The first is reading oral activity onto this molecule. The scientists who made it wrote that SLU-PP-332 lacks oral bioavailability, meaning it does not get from the gut into the blood, and the orally available compound they describe is SLU-PP-915, a chemically distinct molecule with a different name. Most of what is sold is a capsule, so the product and the sentence that undermines it are both in print, and the sentence was written by the people who invented the thing. The second mistake is treating the number on the bottle as information. One seller lists capsules at 250 micrograms and another at 50 milligrams under the same compound name, two hundred fold apart on the label, and a buyer cannot fix that by being careful because there is no correct number to be careful about. The 400 to 800 mg a day that circulates for the swallowed route is roughly where a body surface area conversion of the mouse dose lands, about 570 mg a day for a 70 kilogram adult, which is arithmetic rather than evidence, and arithmetic applied to a route its own inventors say does not work.

Full cited entry: thelongevitydesk.org/compounds/slu-pp-332

Compare vendor prices for SLU-PP-332: biohackblueprint.ai/compound/slu-pp-332: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

BAM-15

Does what DNP did, and the margin is missing.

GIVEN TO HUMANS · TRIAL OR LABEL

No published human dose I could find, at any route

All 72 PubMed records retrieved and every title read; the doses in them are mice, flies and worms

WHAT CIRCULATES

10 micrograms to 60 mg a day, depending on the page

Observed, not endorsed

As a medicine	Never an approved medicine
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	Mixed into the food, and single doses by tube into the stomach, in mice. In fruit flies it was in the food and in nematode worms in the medium. I could find no published study of any route in a person.
Route used	By mouth. The unit the market has settled on is a 50 mg capsule, and the microgram guides name either under the skin or by mouth.

How long it lasts	1 hour 42 minutes in mice, by mouth. Three animals given a single 10 milligram per kilogram dose down a tube into the stomach cleared half of it in that time, and the authors call the short half life a limitation of the compound. I could find no measurement of how long it lasts in a person, by any route.

Where the circulating number comes from. There is nothing to compare against. The 200 mg per kilogram mouse figure quoted as proof of a wide margin is where dosing stopped because the compound would not dissolve any further, not a toxic dose anybody reached. Scaling the 85 mg per kilogram mouse dose by body surface area lands near 480 mg a day for a 70 kg adult, which is arithmetic rather than a studied dose and does not make 480 mg safe or sensible, and it sits above every circulating number, the 50 mg capsule at about a tenth of it. None of the circulating numbers shows a derivation, and the smallest and largest are six thousand times apart.

The mistake that costs people. The unit. What circulates runs from 10 micrograms a day on a forum guide to 60 milligrams a day on a dosage page, a six thousandfold spread for one molecule, and the capsule on sale is 50 mg. Somebody who reads a microgram protocol and then swallows a capsule is out by somewhere between about fifty and five thousand times, depending which end of that guide they read, and no page on either end shows where its number came from. The second mistake is reading the 200 mg per kilogram mouse figure as a safety margin. It is a solubility limit wearing a safety label, quoted as though somebody had gone looking for a toxic dose and failed to find one. And the arithmetic that scales the mouse dose to roughly 480 mg a day is mine rather than anybody else's, it is a rule of thumb for where a trial would start, and it does not make 480 mg safe or sensible.

Full cited entry: thelongevitydesk.org/compounds/bam-15

AICAR

The evidence is not missing. It came back no, twice.

GIVEN TO HUMANS · TRIAL OR LABEL

42 mg per kg into a vein, about 2,940 mg at 70 kg, once

RED-CABG, 3,080 adults having heart surgery, stopped for futility

WHAT CIRCULATES

1 to 25 mg a day under the skin, on pages that disagree

Observed, not endorsed

As a medicine	Never an approved medicine. About 7,100 people randomised as acadesine; never approved.
How they compare	People take less than what studies gave

Route studied	Into a vein, in hospital. Every human dose I found went into a vein or an artery: 42 milligrams per kilogram over about seven hours in heart surgery, and up to 315 milligrams per kilogram by four hour infusion in the leukaemia trial, where 210 was the most anyone tolerated. The 2008 mouse study injected into the abdominal cavity.
Route used	Injected under the skin, on the pages that sell it. I could find no human study, and no registry record, using that route.
How long it lasts	About 1.4 hours in people, measured in 1991 after it went into a vein. A radiolabelled study in 1993 found intact drug measurable for only about two hours after the infusion, while the carbon label itself hung around far longer, with a terminal half life of about a week in breakdown products and inside red blood cells. I could find no half life figure of any kind for an injection under the skin.
Vial sizes seen	50 mg

Where the circulating number comes from. The convention sits far below everything that was tested. A whole 50 milligram vial is about one fifty-ninth of the single infusion RED-CABG gave, and that trial found the bad outcome on 5.1 percent of the drug group against 5.0 percent on the dummy infusion. Scaling the mouse dose by body surface area, which is arithmetic done here rather than a published derivation, gives about 2,840 milligrams a day at 70 kilograms, roughly 110 times the larger dosing page's 25 milligrams and between about 950 and about 2,800 times the smaller page's 1 to 3. Every human dose I found went into a vein or an artery, and I could find no study of any design at the milligram doses that circulate, given under the skin.

The mistake that costs people. The costly mistake is reading the trial programme as evidence for the thing being sold. Studied in thousands of patients is true, and it describes a drip into a vein during heart surgery, on a rationale about blood vessels that predates the exercise story entirely, and the trial built to settle whether it worked was stopped early for futility with the bad outcome landing on 5.0 percent of the dummy group and 5.1 percent of the drug group. The second mistake is inside the mouse study everyone cites. The famous 44 percent is distance and the time figure was about 23 percent, and the mice were injected into the abdominal cavity, though the paper's own abstract calls the compound orally active. How much survives being swallowed had already been measured in people in 1991, at below 5 percent.

Full cited entry: thelongevitydesk.org/compounds/aicar

Compare vendor prices for AICAR: biohackblueprint.ai/compound/aicar: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Longevity and bioregulators

Compounds sold on lifespan and ageing claims, where the claims usually outrun the measurements by a wide margin.

Epithalon

The human evidence belongs to a cow gland extract.

GIVEN TO HUMANS · TRIAL OR LABEL

0.5 mg a day, sprayed under the tongue

Ivko 2021, 20 women on a 20 day spray, the only randomised study of the four unit chain

WHAT CIRCULATES

10 mg a dose under the skin, 50 or 100 mg a course, one to two times a year

Observed, not endorsed

As a medicine	Never an approved medicine. The human record belongs to Epithalamin, a cow-gland extract FDA calls a different substance.
How they compare	People take more than was ever given in a study
Route studied	In people, three published studies: two sprays under the tongue in night shift workers, and one injection into the tissue around the eyeball. The only one of the three with a dose I could point to is 0.5 mg a day for 20 days under the tongue. In mice, injected under the skin, 1.0 microgram per mouse on five consecutive days each month.
Route used	Injected under the skin, at home. The entry's author found no published study giving it to a human by that route, and it is the route the whole community convention runs on.
How long it lasts	I could not find one, in any species. The entry's author found no pharmacokinetic study of this compound at all, which is the kind of study that measures where a dose goes and how fast it disappears, so how long a dose lasts, whether the intact four unit chain survives being sprayed under the tongue or injected under the skin, and what fraction of it reaches any tissue are all unmeasured.
Vial sizes seen	10, 20, 50 mg

Where the circulating number comes from. Twenty times the only dose the four unit chain has been given a person, and by a route no published study was found using. Trace the 10 mg and it lands on the 2003 extract paper, whose St Petersburg cohort gave 10 mg into muscle daily for 10 days, 100 mg a course, digit for digit the circulating schedule. The agent in that trial was Epithalamin, a bovine pineal extract that FDA states is a different substance, and no vendor or clinic page was found deriving the 10 mg from any study of the chain itself.

The mistake that costs people. The costly mistake is the one letter. The 266 person survival paper, the 4.1 fold mortality figure and the later Kiev follow up are all real research on real patients, and every bit of it was done with Epithalamin, the cow pineal extract. Read the 266

carefully, though, because it is three cohorts added together rather than one trial of 266 people: 94 women at a St Petersburg veterans home split four ways, a separate 20 given both extracts every year for six years, and 152 people in Kiev split three ways on a different schedule. Everything in that paper went into muscle; the later Kiev follow up does not state a route. The famous 4.1 fold is the group of 20 against the St Petersburg control arm of 22, which in counts is 4 deaths against 18, and the arm on the extract alone, 24 patients, had a six year death rate of 45.8 percent, 11 deaths. Real randomisation, real numbers, small arms, different substance. The 10 mg figure comes from the same paper: its St Petersburg cohort gave 10 mg into muscle daily for 10 days, 100 mg a course, which is the circulating Russian schedule digit for digit, and its Kiev cohort gave 10 mg into muscle in five doses, 50 mg a course, which is the other circulating one. The entry's author found no vendor or clinic page that derives that 10 mg from any study of the four unit chain.

Full cited entry: thelongevitydesk.org/compounds/epithalon

Compare vendor prices for Epithalon: biohackblueprint.ai/compound/epithalon: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Pinealon

Its main review's two human claims lead to a review and a patent.

GIVEN TO HUMANS · TRIAL OR LABEL

200 mcg a day, swallowed, for two weeks

Nazimko 2012, one 100 mcg capsule twice a day in locomotive crew, no participant count given

WHAT CIRCULATES

5 to 10 mg a day injected, or 10 to 20 mg swallowed

Observed, not endorsed

As a medicine	Never an approved medicine
How they compare	People take more than was ever given in a study
Route studied	Swallowed as capsules, one 100 microgram capsule twice a day for two weeks, in the only published paper I found that names a route. The 25 patient study printed inside the patent injected it into the muscle once a day for ten days. The animal work injected it into the belly cavity, which is a laboratory route and not one a person uses.
Route used	Injected under the skin, or swallowed. That is what the protocol pages list, not observed use. No human paper I found describes an injection, and the one that names a route used capsules.
How long it lasts	No figure has been published that I could find. I found no measurement of how much of it is absorbed, how long it lasts in the body, or what fraction of a dose ever reaches the blood, in any species. Khavinson's own 2022 review on how these very short peptides are carried into cells proposes transport routes and reports no such measurement.

Vial sizes seen	10, 20 mg

Where the circulating number comes from. The swallowed convention is a hundred times the one human amount I found in a published paper, on the same route: 200 micrograms a day against a vendor top end of 20 milligrams. The injected convention matches one published human figure only, and it is the 5 milligram arm reserved for the most severely injured in a ten day study I found inside a patent, whose mildest arm got 1 microgram. I found no page tracing its milligram figure to any study, and one says outright that the number was shaped by the product format and community habit rather than by a dose response trial.

The mistake that costs people. Two things get mixed up, and they stack. The first is the gland. The name reads as a pineal compound and it is filed next to Epithalon on that basis, while its inventors say it was taken from an extract of cattle brain cortex, and in the one rat pineal gland culture I found that tested both, the peptide reported to move the pineal markers was Epithalon and not this one. The second is what stands behind the human numbers. The main English language review of it makes two claims about people, and following its own citations leads to another review and to a patent, so a reader who expects a trial report does not find one.

Full cited entry: thelongevitydesk.org/compounds/pinealon

Compare vendor prices for Pinealon: biohackblueprint.ai/compound/pinealon: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

FOXO4-DRI

The mouse in the photograph has a DNA repair disease.

GIVEN TO HUMANS · TRIAL OR LABEL

No dose in a person that I could find

Every animal dose I could read is 5 mg per kilogram, in mice

WHAT CIRCULATES

25 mg into a vein three times, or 250 to 500 mcg daily

Observed, not endorsed

As a medicine	Never an approved medicine
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	In mice, into a vein or into the belly cavity, at 5 mg for every kilogram of body weight, usually three doses every other day, in groups of three to eight animals where a count is reported. The one rat study I found gave it into the belly cavity and does not state its dose in its abstract. No study in a person that I could find, by any route.

Route used	Injected, and the two conventions do not agree on how. The 25 mg figure is into a vein three times on alternate days, the 250 to 500 mcg ladder is daily under the skin for 16 weeks, and I found no published study giving this peptide under the skin to any animal.
How long it lasts	I found no study of what happens to it in a body, in any species, so there is no half life figure and no basis for a dosing interval. The nearest thing I found is in the founding paper, an antibody detecting the peptide inside cultured cells 2 to 4 hours after it was added and still detecting it at 72 hours, which is a cell in a dish rather than a concentration in a living animal.
Vial sizes seen	10 mg

Where the circulating number comes from. There is nothing to compare against, because I found no study in which a person received it. The 25 mg figure does have a derivation, which is rare: a 2018 blog post took the mouse dose and scaled it to a 60 kg adult. The daily microgram ladder is not a scaling of anything I could find, being roughly a fiftieth of the intravenous figure given about thirty seven times as many times, by a route I found no published animal study using. Under both sits one number, 5 mg per kilogram in mice, and in nine years I found no living animal given more or less.

The mistake that costs people. The photograph. The fur and activity results everyone has seen came from XpdTTD/TTD mice, a strain carrying a mutation in Xpd, a gene used both to repair DNA and to read it, which models trichothiodystrophy, a human genetic disease in which sparse brittle fur is present from early life. That mouse is ill rather than old. In the naturally aged mice in the same paper the wording goes soft, that the peptide could improve fur density and responsiveness against robust a few figures earlier, the running wheel was abandoned because the animals varied too much, no survival or lifespan endpoint appears anywhere in that paper, and the longest follow-up was 30 days. A second mistake costs a reader their own check. A PubMed search for the name on the vial returns 19 records and the 2017 paper that everything rests on is not among them, because it never uses the string FOXO4-DRI in its title or abstract, so someone checking the literature in the obvious way can read the entire indexed corpus for the name and still miss the study underneath it.

Full cited entry: thelongevitydesk.org/compounds/foxo4-dri

Compare vendor prices for FOXO4-DRI: biohackblueprint.ai/compound/foxo4-dri: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Glutathione, injectable

FDA's search found one trial. So did mine. It missed..

GIVEN TO HUMANS · TRIAL OR LABEL

600 mg twice a day, and 1,400 mg three times a week, into a vein

Two Parkinson's disease studies: nine patients uncontrolled, and 21 randomised at P = 0.32

WHAT CIRCULATES

600 to 1,400 mg per session, two to three times a week

Observed, not endorsed

As a medicine	Never an approved medicine. No approved glutathione drug exists in the US; the vials are compounded or grey.
How they compare	What people take matches an amount a study gave
Route studied	Into a vein, in every study behind the injection: the one skin lightening trial that the regulator's literature search and mine both found, where a preparation carrying a trial dose of glutathione 1200 mg alongside vitamin C and hydrolysed collagen was given twice weekly for six weeks, and the two Parkinson's disease studies the clinic number came from. Every controlled skin lightening result in the file came from a capsule taken by mouth or a lotion on the skin instead, and the lotion used the oxidised form rather than this molecule.
Route used	Into a vein at a clinic, from a compounded preparation mixed to order by a pharmacy, and by the compounder's own label also into a muscle. The Philippine regulator says the infusion is sometimes paired with vitamin C in the same session.
How long it lasts	About 15 minutes in the blood after an infusion, which is the time for half of it to clear. That figure comes from 10 healthy volunteers given one infusion into a vein at 2 grams for every square metre of body surface: blood glutathione rose about 64 fold, to 444 micromoles per litre, then cleared as cysteine, its breakdown product, rose in blood and urine. Aebi and colleagues ran it, and this entry read it through the regulator's summary rather than the original paper.
Vial sizes seen	200, 500, 600, 1500 mg

Where the circulating number comes from. Both ends of the circulating range are real doses from real studies, and both studies are Parkinson's disease in patients rather than skin or energy in healthy people. The number travelled without its schedule: Sechi gave 600 mg twice a day for thirty days, about 8,400 mg a week against the 1,200 to 1,800 a clinic schedule comes to in a week, and three times a week is Hauser's schedule from the trial that missed at P = 0.32. I found no study behind the twice weekly end. For skin lightening the figure came from the sellers instead, and the single trial FDA and I both found either search found used the top of the marketing range.

The mistake that costs people. The whole case for putting it in a vein is that swallowing it does not work, and that rests on one dose given to seven people who were then watched for four and a half hours. Look for longer and the answer changes: a randomised placebo controlled trial of capsules at a trial dose of 1,000 mg a day for six months, and not as a recommendation, with 54 adults analysed, finished 30 to 35 percent up in red cells, plasma and lymphocytes, while a four week trial at the same daily amount in 40 adults found nothing

move. The trade quotes the four and a half hour study, and I found no clinic page mentioning the six month one. The regulator, having read all of it, still concluded that the amount of swallowed glutathione that reaches the bloodstream is minimal, so the two readings sit side by side rather than one having settled the other.

Full cited entry: thelongevitydesk.org/compounds/glutathione-injectable

Compare vendor prices for Glutathione, injectable:
biohackblueprint.ai/compound/glutathione: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Immune and thymic

Compounds aimed at immune signalling. Several have genuine clinical histories outside the English language literature.

Thymosin Alpha-1

The approval and the evidence are for different things.

GIVEN TO HUMANS · TRIAL OR LABEL

1.6 mg under the skin, twice weekly, and every 12 hours in sepsis

The Italian label's own dosing table, 900 micrograms per square metre of body surface

WHAT CIRCULATES

1.6 mg under the skin, twice weekly

Observed, not endorsed

As a medicine	An approved medicine exists. In Italy, for flu-vaccine support in immunocompromised patients. The US compounding vote went 4 to 17 against.
How they compare	What people take matches an amount a study gave
Route studied	Under the skin in every human trial I found, and into a muscle or under the skin on the Italian label. The sepsis trial gave 1.6 mg every 12 hours for seven days, the hepatitis trials 1.6 mg twice weekly, and the registered vaccine schedule is one vial twice weekly for four weeks from the first vaccination, repeated from week eight to week twelve for the second.
Route used	Under the skin, at home, twice weekly. That matches the trials and the label. What does not match is who is doing it and why.
How long it lasts	Below three hours, with a peak at one to two hours, measured in nine healthy volunteers given 900 micrograms per square metre of body surface under the skin in 1999. The Italian label puts the peak at six hours instead, and I could not reconcile the two figures against each other.
Vial sizes seen	1.6, 2, 5, 10 mg

Where the circulating number comes from. The number is right and the reason for it is not what sellers say. 1.6 mg is not a chosen dose: the Italian label sets 900 micrograms per square metre of body surface area and prints a height and weight table, and every row of that table is that figure times the patient's surface area, to the nearest 10 micrograms. An average adult lands at 1.6 mg, which is a vial size. The drift is indication and population. The label covers adjuvanting influenza vaccination in immunocompromised patients, the trials people cite are hepatitis and sepsis, and every completed trial I found that measured whether people got better enrolled patients rather than healthy adults.

The mistake that costs people. The costly mistake is reading one document as though it licensed the other. A real registration exists and a real trial literature exists, and vendor pages weld them together. The registration is Italian and covers flu vaccination in immunocompromised patients. The trials are sepsis and hepatitis, and the two largest placebo controlled ones came back null: 28 day deaths of 23.4 percent against 24.1 in 1,106 septic adults, and hepatitis C cure rates of 12.7 against 10.5 percent in 552 patients. Read the corrected version of that sepsis paper, too, because the journal corrected it in place in May 2025 and the PubMed abstract still prints the old hazard ratio. Every piece of this is real. The picture assembled out of them is not.

Full cited entry: thelongevitydesk.org/compounds/thymosin-alpha-1

Compare vendor prices for Thymosin Alpha-1:
biohackblueprint.ai/compound/thymosin-alpha-1: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Thymalin

The registered active substance is the words thymus extract.

GIVEN TO HUMANS · TRIAL OR LABEL

10 mg a day for 5 to 10 days, injected into a muscle

The Russian label, and every published human use I could open across 25 years

WHAT CIRCULATES

10 mg a day for 5 to 10 days, injected under the skin

Observed, not endorsed

As a medicine	An approved medicine exists. Registered in Russia. where the registered active substance is calf thymus extract.
How they compare	What people take matches an amount a study gave
Route studied	Into a muscle, in every human study I could open: 10 mg daily for 10 days in the geroprotection cohort and in the Chita COVID-19 trial, and 10 mg daily for 5 days in the St Petersburg COVID-19 study. I searched PubMed for thymalin and subcutaneous and got 8 records; one 1998 paper gives thymalin under the skin to CBA mice and broiler chickens and reports it stimulated the immune response only at the injection site.

Route used	Under the skin, at home. The label lists injection into a muscle and no other route, and I found no published human study giving thymalin under the skin.
How long it lasts	I could not find one, in any species. My searches returned no pharmacokinetic study of thymalin by any route, which is the kind of study that measures where a dose goes and how fast it disappears, and for an extract with no defined molecule there is no single analyte to measure anyway.
Vial sizes seen	10, 20 mg

Where the circulating number comes from. Nothing drifted on quantity and everything drifted on route. Ten milligrams sits inside the label's own 5 to 20 mg range, is one whole vial, and is the dose in all five published human uses I could open, with the course arithmetic landing inside the label's 30 to 100 mg range too. The label lists injection into a muscle and no other route, every human dose I found in a paper went that way, and I found no published human study giving thymalin under the skin. One vendor protocol page prints 30 units and calls it about 30 micrograms; thirty units is 0.3 mL, and a 10 mg vial made up in the 1 to 2 mL the label specifies holds 3 mg or 1.5 mg in that volume.

The mistake that costs people. Two numbers get repeated and both need reading carefully. The first is 266, which is not a trial. Khavinson and Morozov 2003 pooled three cohorts at two institutions: 94 women at a St Petersburg war veterans home randomised four ways, a separate 20 given two agents every year for six years, and 152 people in Kiev randomised three ways on a different schedule. Twenty four people received Thymalin on its own, and in that arm 10 of 24 died over six years against 18 of 22 on placebo. The second is that Thymalin halved hospital mortality, which comes from one trial in Chita and from a secondary endpoint in it. That trial met one of its three primary endpoints and missed the other two, and the treated group took slightly longer to improve.

Full cited entry: thelongevitydesk.org/compounds/thymalin

Compare vendor prices for Thymalin: biohackblueprint.ai/compound/thymalin: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

LL-37

A real human peptide, studied on wounds and sold for injection.

GIVEN TO HUMANS · TRIAL OR LABEL

0.5 to 3.2 mg per mL on a wound, and 250 to 500 micrograms into each tumour

Three randomised wound trials and one melanoma injection trial

WHAT CIRCULATES

100 to 250 micrograms a day under the skin, some pages to 500

Observed, not endorsed

As a medicine	Never an approved medicine. Four human trials, on wounds and into tumours. none by the route it is sold for.
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	On a wound, in all three randomised trials: a solution at 0.5, 1.6 or 3.2 mg per mL twice a week in venous leg ulcers, and a cream at 0.5 mg per gram in diabetic foot ulcers. One trial injected it into melanoma deposits in the skin at 250 or 500 micrograms per tumour, into two to four tumours a session. I searched PubMed, the United States registry and the European register and found nothing giving it under the skin, into a muscle or into a vein.
Route used	Under the skin, at home, once daily in blocks of two to four weeks. That is the route with no published human study behind it.
How long it lasts	I could not find one. My searches returned no measurement of blood levels after a dose of LL-37 in a person by any route, so how long a dose lasts and what fraction of it reaches any tissue are both unmeasured. That absence is the reason the arithmetic below is a ceiling rather than an estimate.
Vial sizes seen	5 mg

Where the circulating number comes from. There is a human dosing record and none of it is the route being sold. Every randomised trial put LL-37 on a wound bed; the injection trial I found put it into melanoma deposits in the skin, not under it. Two of the pages carrying the circulating figures say where they came from, and neither says a study: one calls them anecdotal and unsupported by scientific data, the other credits supplier and community sources. What they look like instead is vial arithmetic, and that reading is mine: two millilitres into a five milligram vial gives 2.5 mg per mL, which makes 100 micrograms a round 0.04 mL and 250 a round 0.10 mL.

The mistake that costs people. Two things get read backwards. The first is the dose response: more is not more here, and past a point more is worse. In the first-in-man trial the highest concentration, 3.2 mg per mL, was indistinguishable from the dummy while the lowest of the three separated, and the same inversion turned up independently in a range finding study of an analogue in a completely different tissue. There is an explanation available and it is not established, so treat it as consistency rather than evidence. The second is scale. Take 500 micrograms, a molecular weight of 4,493 and a nominal three litres of plasma, ignore absorption and clearance entirely so the answer is a generous ceiling, and you get about 37 nanomolar. The concentration that stops E. coli growing is roughly 135 times higher, uninflamed tissue already carries six to thirty times more than the injection would add, and the Lyme range sits 1,800 to 2,700 times above it.

Full cited entry: thelongevitydesk.org/compounds/ll-37

Compare vendor prices for LL-37: biohackblueprint.ai/compound/ll-37: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

VIP

The identity is clean. The nasal dose came off a nebuliser.

GIVEN TO HUMANS · TRIAL OR LABEL

50 micrograms four times a day, inhaled through a nebuliser

Eight pulmonary hypertension patients in 2003, and 20 sarcoidosis patients in 2010

WHAT CIRCULATES

50 micrograms per spray, four times a day, into the nose

Observed, not endorsed

As a medicine	An approved medicine exists. One authorisation found, and it is a combination product, not the lone molecule in the vial.
How they compare	What people take matches an amount a study gave
Route studied	Inhaled through a nebuliser in the lung studies, into a vein in the COVID-19 trials and the migraine work, and into erectile tissue on the one licence. Not one row of the dose table in this entry is a nasal spray or an injection under the skin.
Route used	Sprayed into the nose from a compounded preparation, and secondarily injected under the skin. I searched PubMed and ClinicalTrials.gov and found no human study of this peptide given under the skin.
How long it lasts	About one minute in blood, measured in four healthy volunteers given it into a vein in 1978. That figure is the reason the nasal question is genuinely open in both directions: with a half life that short and a mucous membrane in the way, whether 50 micrograms in a nostril produces any systemic exposure at all is unmeasured, and I found no human study of how much of a nasal dose reaches the blood.
Vial sizes seen	5, 6, 10 mg

Where the circulating number comes from. The number matches digit for digit and was never re-derived for the new route. 200 micrograms a day in four doses was an inhaled dose in eight patients in 2003, reappeared as an inhaled dose in sarcoidosis in 2010, and was carried to the nose in 2013 with the paper's stated reason being the 2010 study. I found no study establishing what 50 micrograms into a nostril delivers against the same amount misted into a pair of lungs, and no human study of how much of a nasal dose reaches the blood. It then drifted up three ways, to 400 micrograms a day on a pharmacy's own directions and 600 in the protocol document.

The mistake that costs people. The dose is the cleanest derivation chain in this batch and it ends at a nebuliser. An inhaled dose in eight patients in 2003 reappeared as an inhaled dose in sarcoidosis in 2010 and was carried across to the nose in 2013 unchanged, with the paper's stated reason being the 2010 study. Nobody worked it out again for the new route. Read the 2013 paper's own results and even the schedule is the protocol rather than what most patients did: 8 of the 20 used it three or four times a day consistently, 4 used it once or twice, 3 only before strenuous activity, and 5 stopped. Meanwhile the randomised version of the lung

programme it all descends from ran across eight European countries and its investigators, replying in print in 2012, referred to the negative results of the acute test and of the three months of administration. The protocol document still lists pulmonary hypertension as an indication for the spray.

Full cited entry: thelongevitydesk.org/compounds/vip

Compare vendor prices for VIP: biohackblueprint.ai/compound/vip: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

ARA-290

Real randomised trials, measured on a photograph of an eye.

GIVEN TO HUMANS · TRIAL OR LABEL

4 mg a day under the skin for 28 days

A 64 patient sarcoidosis trial, and a 10 volunteer exposure study behind the number

WHAT CIRCULATES

4 mg a day under the skin, in blocks of four weeks and longer

Observed, not endorsed

As a medicine	Never an approved medicine. Real randomised trials ran; no approval followed.
How they compare	What people take matches an amount a study gave
Route studied	Into a vein in the 2012 pilot, at 2 mg three times a week for four weeks, and under the skin at 4 mg a day for 28 days in the trials that followed. More than one vendor guide states that under the skin is the only route in the trial literature, and the intravenous pilot is why that is wrong.
Route used	Under the skin at 4 mg a day, which is the trial dose quoted accurately. What has drifted is who takes it, for how long, and on what schedule.
How long it lasts	Not the useful number here. What was measured, and what the dose was actually built on, is total exposure: a crossover study in 10 healthy volunteers matched 4 mg under the skin at 59 nanogram-minutes per millilitre against 65 for the 2 mg into a vein that produced the first result. That is why the subcutaneous dose is what it is.
Vial sizes seen	10, 15, 16, 50 mg

Where the circulating number comes from. The dose is correct and vendors quote it accurately, which is rare enough here to say plainly. A crossover in 10 healthy volunteers matched 4 mg under the skin to the 2 mg into a vein that produced the first result, 59 nanogram-minutes per millilitre against 65, so the subcutaneous number reproduces the exposure of the injection that worked. The drift is population, duration and route. Every efficacy trial enrolled patients with a diagnosed condition, four of the six studies ran 28 days,

and the longest exposure I found anywhere was 12 weeks in nine people. More than one guide states that under the skin is the only route in the trial literature, and the intravenous pilot is why that is wrong.

The mistake that costs people. The endpoint is what to read before anything else. The measure that carried this programme forward, trial after trial, was a photograph of nerve fibres in the cornea, which the largest trial's own abstract calls a surrogate. In the 2013 trial only that corneal measure moved, and both its figures are comparisons of a group against its own starting point rather than against the placebo arm the trial had gone to the trouble of recruiting, while the skin biopsy that neurologists actually use to diagnose the disease did not move. In the 2017 trial, placebo corrected change at day 28 was 109 square micrometres on 1 mg, 697 on 4 mg and 431 on 8 mg, so doubling the middle dose made the result smaller and the lowest dose did nothing, and I found no published explanation. Pain improved in every arm including the dummy. Two papers in the record are retracted for image problems, both animal work and neither touching a human trial, but one of them is the preclinical account of why a peptide that does not make blood should improve insulin sensitivity, which is what the human blood sugar number gets sold on.

Full cited entry: thelongevitydesk.org/compounds/ara-290

Compare vendor prices for ARA-290: biohackblueprint.ai/compound/ara-290: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Melanocortin and hormonal

Compounds acting on melanocortin and reproductive signalling. The category with the most documented acute side effects.

Melanotan II

Three men for the tan, and a real safety file.

GIVEN TO HUMANS · TRIAL OR LABEL

0.025 mg/kg, about 1.75 mg for a 70 kg adult

Recommended by the 1996 phase I and used in all three later trials. Four trials, 43 men, 1996 to 2000.

WHAT CIRCULATES

250 to 500 mcg daily to load, some to 1,000 mcg, then 500 mcg twice weekly or 250 mcg once or twice weekly

Observed, not endorsed

As a medicine	Never an approved medicine. Abandoned in development. A related molecule, PT-141, was approved instead.
How they compare	People take less than what studies gave

Route studied	Under the skin, in all four human trials. The only study of how long a dose lasts was in rats, into a vein.
Route used	Injected under the skin at home, usually paired with ultraviolet light exposure. A nasal spray is also sold commercially, and no human study of melanotan II by that route was found.
How long it lasts	How long it lasts in a person is something I could not find. The only study of that kind that could be located was in rats, 0.3 milligrams for every kilogram of body weight given into a vein, and the half life figures printed on seller pages have no human source that could be located.
Vial sizes seen	10, 20 mg

Where the circulating number comes from. The convention sits below the tested amount rather than above it. The three later trials used 0.025 mg/kg, about 1.75 mg for a 70 kg adult, and the 1996 phase I ran 0.01 to 0.03 mg/kg, roughly 0.7 to 2.1 mg at that weight, so what circulates is between a seventh and a third of what anybody was given. I could not trace it to a derivation: one says the figures are extrapolated from the published research range and then names no publication, and another concedes the loading and maintenance models are community-derived.

The mistake that costs people. The mistake is assuming the circulating numbers came out of the research, and here they miss in the unusual direction. The three later trials used 0.025 mg/kg, about 1.75 milligrams for a 70 kilogram adult, and the 1996 first in human study ran 0.01 to 0.03 mg/kg, roughly 0.7 to 2.1 milligrams at that weight, so what circulates is between a seventh and a third of what anybody was given. It sits below the tested amount rather than above it, which is the reverse of nearly everything else in this reference. I could not trace the number to a derivation: one says the figures are extrapolated from the published research range and then names no publication for them, and another concedes in its fine print that no dose approved by the United States Food and Drug Administration exists and that the loading and maintenance models are community derived. The second mistake is what the trials were for. Four trials, 43 men, and what they measured was erections. The tanning claim, which is the reason almost everybody buys it, rests on three men who received five injections each, two of whom went darker.

Full cited entry: thelongevitydesk.org/compounds/melanotan-ii

Compare vendor prices for Melanotan II: biohackblueprint.ai/compound/melanotan-2: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

PT-141

Approved, and the label rules out the men buying it.

GIVEN TO HUMANS · TRIAL OR LABEL

1.75 mg under the skin, in premenopausal women

Two phase 3 trials, NCT02333071 and NCT02338960, in 1,267 premenopausal women. The only published male efficacy doses under the skin were 4 mg and 6 mg, in men sildenafil had not helped.

WHAT CIRCULATES

1.0 to 2.0 mg under the skin in men, reported as convention

Observed, not endorsed

As a medicine	An approved medicine exists. As Vyleesi, for premenopausal women. The label names men as not indicated.
How they compare	What people take matches an amount a study gave
Route studied	Under the skin, by autoinjector into the abdomen or the thigh, in premenopausal women. In men, the only published efficacy data under the skin is a 2004 study, and the rest of the male work was given up the nose.
Route used	Injected under the skin, 30 to 60 minutes before sexual activity according to vendor, clinic and protocol pages, which also describe a smaller first dose before the full one. The approved product is given by autoinjector, while what men are described as holding is a vial.
How long it lasts	This entry gives no figure for how long it lasts in the body. The only timing anywhere in the record is on the approved label, which describes a dose taken at least 45 minutes before anticipated sexual activity, at most one dose in 24 hours, with more than eight in a month not recommended, and which instructs prescribers to discontinue after 8 weeks if the patient does not report an improvement.
Vial sizes seen	5, 10 mg

Where the circulating number comes from. The number matches, and unusually for this reference it is traceable. The 1.75 mg was lifted off the Vyleesi label, where it is the approved dose for premenopausal women and the top of a phase 2b trial that compared 0.75, 1.25 and 1.75 mg in 327 of them. That same label's Limitations of Use name men as a group the drug is not indicated for. No male dose-finding study supports the number, I could not find a published trial of any design giving a man the 1.75 mg subcutaneous dose, and against the only published male subcutaneous efficacy doses, 4 mg and 6 mg, the convention runs at roughly a third to a half.

The mistake that costs people. The costly mistake is reading the approval as covering the person who bought it. The 1.75 mg figure is not a male number at all. It is the dose approved for premenopausal women, itself the top of three amounts, 0.75, 1.25 and 1.75 mg, compared in 327 premenopausal women in an earlier trial, and it was lifted off a label whose Limitations of Use name men as a group the drug is not indicated for. No male dose-finding study supports it, and I could not find a published trial of any design that has given a man that dose. The second mistake follows the first, which is assuming the thing being bought is large. In the trials, desire rose 0.35 points on a questionnaire and the distress item fell 0.33 points against the dummy injections, the number of satisfying sexual events did not differ significantly between the

groups, and in the 52 week extension, where the drug was free and nobody was on a dummy, 684 women enrolled and 272 finished. The third is melanotan II, a separate molecule whose harm reports do not carry across, and which the published sources cannot agree is either this compound's parent or merely its lookalike.

Full cited entry: thelongevitydesk.org/compounds/pt-141

Compare vendor prices for PT-141: biohackblueprint.ai/compound/pt-141: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Melanotan I

The molecule is the approved drug. The product is not.

GIVEN TO HUMANS · TRIAL OR LABEL

16 mg in a rod placed under the skin every two months

The approved implant, in patients with a rare light sensitivity disease

WHAT CIRCULATES

1 mg a day for 10 days, then 2 mg a week, injected

Observed, not endorsed

As a medicine	An approved medicine exists. As a physician-placed implant for a rare light-sensitivity disease. not a vial.
How they compare	What people take matches an amount a study gave
Route studied	As an implant under the skin in every efficacy trial: 16 mg, three implants over 180 days in the pivotal study. The injected human record is separate and older, daily dosing at 0.08 to 0.21 mg per kilogram in 1997 and 2000, ten days in 2004 and three ten day cycles in 2006, which works out at roughly 5.6 to 14.7 mg an injection for a 70 kg adult.
Route used	Injected under the skin at home, daily for a loading period and then weekly. Every published injection schedule I found dosed on weekdays rather than weekly, and I found no published study of a weekly injection of this peptide in people.
How long it lasts	About 30 minutes for the peptide itself on the European label, and 0.8 to 1.7 hours in the elimination phase measured after injection under the skin in three volunteers. The approved implant reads at about 15 hours in 12 healthy adults, which is the polymer doing the work rather than the peptide.
Vial sizes seen	10 mg

Where the circulating number comes from. The monthly rate matches and nothing else does. A vendor page shows its working: the trials used a 16 mg implant every 60 days, which it converts to 8 mg a month, and 2 mg a week is the same monthly figure. On a four week month those agree; across a calendar year it is 104 mg against about 97 mg. What does not carry across is the delivery. The rod releases most of its content in the first two days, is absorbed over

50 to 60 days, and is placed by a trained physician three or four times a year in Europe. A weekly injection of a peptide with a half life measured in hours produces the opposite shape. The loading figure has no study behind it either: it sits at a fifth to a tenth of the daily amounts the injected trials used, and the page that prints it says experts encourage erring on the side of safety.

The mistake that costs people. The costly mistake is reading an approval for one product as an approval for another. A vendor page can point at the chemical database, point at the label, and be telling the truth about the molecule, and everything after that sentence is transferred from a rod to a vial. The approval is also thinner than the pages suggest, and both regulators say so in their own documents. One pivotal trial carried the European authorisation after two others were dropped following an inspection; the headline figure of 24 extra pain free hours across six months, and its range from 0.3 to 50.3, come from a method the assessment report says was specified after the data were in, printed under a heading for post hoc analyses; significance on the protocol primary endpoint came only on a one sided test; and seven members of the committee signed a divergent position against granting it without specific obligations.

Full cited entry: thelongevitydesk.org/compounds/melanotan-1

Compare vendor prices for Melanotan I: biohackblueprint.ai/compound/melanotan-1: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Oxytocin

Approved as an injection, sold as a spray for the mind.

GIVEN TO HUMANS · TRIAL OR LABEL

A drip into a vein, or ten units into a muscle after delivery

The Pitocin label, which permits exactly those two routes

WHAT CIRCULATES

24 units by nose, and 100 to 500 micrograms under the skin

Observed, not endorsed

As a medicine	An approved medicine exists. As an injection for labour. The mood sprays sold online are approved nowhere this site could find.
How they compare	People take more than was ever given in a study
Route studied	Into a vein or into a muscle on the approved label. In the behavioural literature it is a nasal spray at 24 units, six squirts metered at 4 units each, and the two large autism trials targeted 48 units a day. The best direct measurement of whether the nose reaches the brain gave 24 units to 11 men and saline to 4, one spinal fluid sample each.
Route used	Sprayed into the nose, and secondarily injected under the skin. I could not find a human trial of oxytocin under the skin at the amounts that circulate for that route.

How long it lasts	About 1 to 6 minutes in the blood, from the approved label. The uterus responds almost at once to an intravenous dose and settles within an hour, or within 3 to 5 minutes into a muscle, persisting 2 to 3 hours.
Vial sizes seen	2, 5, 10 mg

Where the circulating number comes from. The gap here is route rather than indication, and the under the skin figures are the ones to look at twice. Converting at the international standard's 1.68 micrograms per unit, which is my arithmetic, 100 to 500 micrograms a day is roughly 60 to 300 units. A single dose vial of the approved American injection holds 10 units. I could not find a human trial of oxytocin under the skin at those amounts. The nasal convention is a different matter: 24 units is not a calculation but a physical object, six squirts of a commercial spray metered at 4 units each, and I could not find the study that chose it.

The mistake that costs people. The premise under the whole spray market is that sniffing it reaches the brain, and that is argued over inside the papers that measured it rather than settled. The founding human paper for the nose to brain route did not test oxytocin at all; it gave a melanocortin fragment, vasopressin and insulin. Oxytocin itself was measured eleven years later in neurology inpatients already having a spinal tap, one sample each, and nothing measurable had happened at 45 or 60 minutes, with only the three men sampled at 75 minutes above the placebo group. Since then macaque work found no advantage of the nose over a vein, a human imaging study explained the brain blood flow change entirely by the rise in the bloodstream, and blocking the nasal blood route removed most of an electrical brain effect. Pushing the other way, fluid sampled straight out of rodent brain regions rose after a nasal dose, and reviews split on the same literature. The honest position is that it is unresolved, and blood oxytocin, which is what nearly every study and every sales page measures, did not track the spinal fluid in the one human study that measured both.

Full cited entry: thelongevitydesk.org/compounds/oxytocin

Compare vendor prices for Oxytocin: biohackblueprint.ai/compound/oxytocin: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Kisspeptin-10

A real human record, by a route almost nobody sells.

GIVEN TO HUMANS · TRIAL OR LABEL

0.31 micrograms per kilogram into a vein, about 22 mcg for an adult

FDA's record of the commonest studied intravenous bolus dose

WHAT CIRCULATES

50 to 500 micrograms under the skin, 100 to 200 commonest

Observed, not endorsed

As a medicine	Never an approved medicine. The US compounding vote was unanimous against: 0 for, 11 against.
How they compare	People take more than was ever given in a study
Route studied	Into a vein in 23 of the 24 rows of the regulator's own table, usually as a single bolus or a timed infusion, in a clinic. The one exception is a 2011 study giving a single injection under the skin to healthy women in the first half of the cycle, four to five per dose group against saline, at 2 to 32 nanomoles per kilogram, in which no reproductive hormone moved. The regulator found no human study of any kind by the intramuscular route.
Route used	Injected under the skin, daily on one dosing page and two to three times a week on another. That is the route the nominated product was for, and the route with almost no human record behind it.
How long it lasts	3.8 minutes in healthy men, measured by frequent blood sampling during and after an intravenous infusion, and 4.1 minutes in women. That is roughly seven times shorter than kisspeptin-54, and it is the decisive number against a once daily protocol.
Vial sizes seen	5, 10 mg

Where the circulating number comes from. Five to twenty times the commonest studied amount, and by a route that is not the studied one. FDA tabulated 24 human studies and roughly 300 subjects, footnoting that the total may be too high because subjects could overlap, and 23 of those 24 rows are intravenous only. The whole under the skin record FDA identified is one 2011 study in healthy women, at up to 32 nanomoles per kilogram, roughly 29 times what circulates, in which no reproductive hormone moved. Neither dosing page I read traces its figures to a study, and one says so in its own words.

The mistake that costs people. Two things get read backwards. The first is that a large human record means a large record for what is being sold; here almost all of it is a drip in a clinic, on one day, and the product is an injection you give yourself. The second is the pulse. A compound cleared from the blood in under four minutes, whose receptor is designed to answer a rhythm and which goes quiet under a constant signal, is being sold on a once daily schedule. The nearest thing to a real test of that schedule is a pharmaceutical company's own programme: an analogue given under the skin on once daily, twice weekly and once weekly schedules in exactly this population, terminated for missing its primary endpoint, with placebo beating two of the three drug arms.

Full cited entry: thelongevitydesk.org/compounds/kisspeptin-10

Compare vendor prices for Kisspeptin-10: biohackblueprint.ai/compound/kisspeptin-10: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Gonadorelin

The dose matches the label. The rhythm is the whole drug.

GIVEN TO HUMANS · TRIAL OR LABEL

100 micrograms as a single diagnostic injection, or 5 to 20 per pulse

The British diagnostic licence, and the Canadian pump licence

WHAT CIRCULATES

100 micrograms under the skin, two or three times a week

Observed, not endorsed

As a medicine	An approved medicine exists. The label is real; its rhythm. a pump pulsing 112 times a week. is not what 2 or 3 injections copy.
How they compare	What people take matches an amount a study gave
Route studied	Under the skin or into a vein for the single British diagnostic injection, and by a wearable pump under the skin for every therapeutic use I found: 5 to 20 micrograms per pulse every 90 minutes on the Canadian licence, 10 micrograms every 90 minutes in the fertility study vendor pages cite, and 5 micrograms every two hours in the 1989 mechanism experiment.
Route used	Injected under the skin two or three times a week. The route matches the British label, which is unusual for this reference. The schedule matches nothing: a pump at 90 minute intervals delivers 112 doses a week.
How long it lasts	About 4 minutes on the British label. The Canadian monograph gives a different figure and I could not reconcile the two, so treat the short end as the one the pulsed licences are built around.

Where the circulating number comes from. The quantity is right and the route is right, which is rare here, and the schedule is the whole problem. 100 micrograms is the live British diagnostic dose, given once, and it was the strength of the smallest discontinued American vial. Every therapeutic human use I found runs a wearable pump around the clock: the Canadian licence and the fertility studies fire every 90 minutes, which is 112 doses a week, and the 1989 mechanism experiment ran every two hours. The circulating protocol delivers two or three. That arithmetic is mine, from the documents named. The drug also clears in about 4 minutes on the British label, so Monday's injection is long gone before Thursday's.

The mistake that costs people. The premise is that testosterone silences the hypothalamus, so you put the hypothalamic signal back. That premise was put to a human test in 1989 and did not survive it. Six men whose brains make no such signal were fitted with a pump delivering it every two hours until their levels were normal, then given testosterone with the pump still running. Both pituitary hormones fell anyway, luteinising hormone to about half and follicle stimulating hormone to about 30 percent, and the pituitary's answer to each pulse fell with them. The authors concluded that testosterone suppresses them by a route that does not run through the hypothalamus at all, acting directly on the pituitary. The British licence says the same thing in its interactions section, telling prescribers to run the test in the absence of drugs

that directly affect pituitary gonadotropin secretion, naming preparations containing androgens. Six men is six men, and that is a hypothesis rather than a verdict. It is also the closest published human test of the proposition that I could find, and it appears on no sales page I read.

Full cited entry: thelongevitydesk.org/compounds/gonadorelin

SARMs

Not peptides, and covered last. Two of the eleven are not androgen drugs at all, and FDA warning letters name six of them.

RAD-140

Real trials, all of them in cancer patients.

GIVEN TO HUMANS · TRIAL OR LABEL

50 to 150 mg a day, with 100 mg set as the maximum tolerated

A completed phase 1 in women with metastatic breast cancer

WHAT CIRCULATES

20 to 30 mg a day for men, on an eight week cycle

Observed, not endorsed

As a medicine	In drug trials, approved nowhere. Cancer-drug trials: one phase 1 completed, one trial recruiting.
How they compare	People take less than what studies gave
Route studied	By mouth, daily, at 50, 100 or 150 mg, in women with metastatic breast cancer. A second study is recruiting under the code EP0062, and that registry record never names RAD-140, so the identity link runs through a chemical database synonym list.
Route used	By mouth, at 20 to 30 mg a day on an eight week cycle, reported as convention and not as a recommendation.
How long it lasts	I could not find a published human half life. The completed phase 1 established a maximum tolerated dose rather than a pharmacokinetic profile in the material the class page research reached.

Where the circulating number comes from. This one runs the opposite way to the rest of the shelf: what circulates sits below what was studied rather than above it. The completed trial gave 50 mg a day to six patients, 100 mg to thirteen and 150 mg to three, and set the maximum tolerated dose at 100 mg. The page publishing the 20 to 30 mg figure cites no human study for it. Sitting under a studied dose is not a safety finding, because that trial was in women with metastatic breast cancer taking it under supervision, and it raised one liver enzyme in 59.1 percent of them.

The mistake that costs people. The trap here is the direction of the dose gap. Almost everything else in this reference is sold above what was studied; this is sold below it. That is not reassurance. The studied doses were given to people with metastatic cancer under supervision, with blood tests, and the trial still raised liver enzymes in most of them.

Full cited entry: thelongevitydesk.org/compounds/rad-140

Compare vendor prices for RAD-140: biohackblueprint.ai/compound/rad-140: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

RAD-150

A drawn molecule with nothing downstream of the drawing.

GIVEN TO HUMANS · TRIAL OR LABEL

Nothing, in any species

Searched under RAD-150, RAD150 and TLB-150 on 10 August 2026

WHAT CIRCULATES

Sold as a RAD-140 ester. I found no dosing figure traceable to anything

Observed, not endorsed

As a medicine	Never an approved medicine
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	None. No study in any species turned up under RAD-150, RAD150 or TLB-150 in searches run on 10 August 2026.
Route used	By mouth, in the same way RAD-140 is taken. I found no published dosing figure to report.
How long it lasts	I could not find one, in any species. That is the measurement the entire ester premise rests on.

Where the circulating number comes from. There is nothing to compare against. The molecule is drawn and registered, CAS 1208070-53-4, and the arithmetic of the ester claim closes exactly at 393.8 plus 104.1 equals 497.9. Everything after the drawing is missing: no paper under its name or CAS number, no registered trial, and no published analysis of what is sold under it. That is an empty file rather than a clean one, and the difference matters. Nothing published says it is harmful, because nothing published says anything about it.

The mistake that costs people. An ester claim sounds like chemistry and is being used as a marketing claim. A real ester of a real compound would come with an attachment position, a hydrolysis rate and a measured conversion, and none of those appears in anything the searches reached.

Full cited entry: thelongevitydesk.org/compounds/rad-150

Compare vendor prices for RAD-150: biohackblueprint.ai/compound/rad-150: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

LGD-4033

The cleanest trial record here, and the widest dose gap.

GIVEN TO HUMANS · TRIAL OR LABEL

1.0 mg a day for 21 days, and 2.0 mg a day for 12 weeks

A phase 1 in 76 healthy men and a phase 2 in 108 hip fracture patients

WHAT CIRCULATES

10 mg a day for men over 8 to 10 weeks, up to 15 for experienced users

Observed, not endorsed

As a medicine	Never an approved medicine. Two trials ran under the code VK5211; no approval and no active program found.
How they compare	People take more than was ever given in a study
Route studied	By mouth, once a day. The phase 1 randomised 76 healthy men aged 21 to 50 to a dummy or to 0.1, 0.3 or 1.0 mg for 21 days. The phase 2 randomised 108 people aged 65 and over to a dummy or to 0.5, 1.0 or 2.0 mg for 12 weeks.
Route used	By mouth, at 10 mg a day for men over an 8 to 10 week cycle and up to 15 mg for experienced users, reported as convention and not as a recommendation.
How long it lasts	I could not find a published human half life in the material behind the class page. The dosing in both trials was once daily.

Where the circulating number comes from. Five to fifteen times the top dose of either trial. The 21 day phase 1 randomised 76 healthy men to a dummy or to 0.1, 0.3 or 1.0 mg, and the 12 week phase 2 in people recovering from a hip fracture topped out at 2.0 mg. The guide page carrying the 10 to 15 mg figures also tells readers that clinical trials support up to 222 mg a day for 14 days; its citation list has two entries, and the only trial among them is the 21 day study whose highest dose was 1.0 mg. The one published case report that gives a daily amount describes severe liver injury at 10 mg.

The mistake that costs people. The trial doses and the market doses are not the same order of magnitude, and one guide page bridges the gap with a sentence that does not survive checking: it tells readers clinical trials support up to 222 mg a day for 14 days. Its citation list has two entries, and the only trial among them is the 21 day study whose highest dose was 1.0 mg.

Full cited entry: thelongevitydesk.org/compounds/lgd-4033

Compare vendor prices for LGD-4033: biohackblueprint.ai/compound/lgd-4033: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

LGD-3033

One digit from a real compound, and an empty record of its own.

GIVEN TO HUMANS · TRIAL OR LABEL

Nothing, in any species

Searched under LGD-3033 and LGD3033 on 10 August 2026

WHAT CIRCULATES

I found no dosing figure traceable to anything

Observed, not endorsed

As a medicine	Never an approved medicine
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	None found in any species under this spelling. LGD-3303, the neighbouring name, has been studied in rats.
Route used	By mouth, in the way the other compounds on this shelf are taken. I found no published dosing figure to report.
How long it lasts	I could not find one. There is no compound-specific pharmacology under this name to measure.

Where the circulating number comes from. There is nothing to compare against, and the name is the whole problem. A PubMed search returns zero records under either spelling, and the only database entry the name produces is PubChem's record for LGD-3303, one digit away, where LGD-3033 sits among depositor supplied synonyms. LGD-3303 is a different chemotype, it is the earlier compound in the literature rather than a successor, and the papers on it are in rats. A European laboratory network lists both spellings in one scope line; the American watch list and a 2019 Senate bill carry only LGD-3303.

The mistake that costs people. One digit separates this name from a real compound with published rat pharmacology, and documents disagree about whether they are the same thing. A European laboratory network lists both spellings in one scope line, while the American watch list and a 2019 Senate bill carry only LGD-3303. Where official documents cannot agree that two names are two things, a shopper has no way to.

Full cited entry: thelongevitydesk.org/compounds/lgd-3033

Compare vendor prices for LGD-3033: biohackblueprint.ai/compound/lgd-3033: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

MK-2866

The only one here with a phase 3 record, and it measured two things.

GIVEN TO HUMANS · TRIAL OR LABEL

3 mg a day for 147 days in the phase 3 trials

Two completed phase 3 trials in people starting chemotherapy

WHAT CIRCULATES

10 to 25 mg a day, reported as the commonest range on guide pages

Observed, not endorsed

As a medicine	Never an approved medicine. Reached phase 3 for cancer muscle-wasting; the program ended without approval.
How they compare	People take more than was ever given in a study
Route studied	By mouth, once daily. The two phase 3 trials gave 3 mg a day for 147 days. An earlier phase 2 randomised 120 healthy elderly men and postmenopausal women across five arms at 0.1, 0.3, 1 and 3 mg and placebo for 12 weeks. Later trials in breast cancer used 9 mg and 18 mg.
Route used	By mouth, at 10 to 25 mg a day, reported as the commonest range on guide pages and not as a recommendation.
How long it lasts	I could not find a published human half life in the material behind the class page. Dosing in every trial was once daily.

Where the circulating number comes from. Three to eight times the phase 3 dose, and the trials are worth reading before the dose. Both carried two co-primary endpoints, a body scan measure and a stair climb measure, both scored as responder counts on advice the design paper attributes to the American regulator. At day 84 the scan showed more responders on the drug in both trials. The stair climb showed a smaller gap in the same direction in the first and went the wrong way in the second. Those registry records post percentages and confidence intervals and no statistical test of any kind, so nothing sourced to them says an endpoint passed.

The mistake that costs people. The scan moved further than the person did, and that is the finding worth carrying away. Both phase 3 trials scored two co-primary endpoints as responder counts. At day 84 the body scan measure showed more responders on the drug in both. The stair climb measure showed a smaller gap in the same direction in the first trial and went the wrong way in the second. Those registry records post no statistical test at all, so nothing sourced to them says an endpoint passed either way. The one trial where a functional measure did improve against placebo was the 120 person phase 2, at 3 mg.

Full cited entry: thelongevitydesk.org/compounds/mk-2866

Compare vendor prices for MK-2866: biohackblueprint.ai/compound/mk-2866: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

YK-11

Filed with the SARMs, and called a steroid by its own first paper.

GIVEN TO HUMANS · TRIAL OR LABEL

Nothing in a person

Cell work in 2011, and one mouse study in bacterial sepsis

WHAT CIRCULATES

I found no dosing figure I could trace to a source

Observed, not endorsed

As a medicine	Never an approved medicine
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	Nothing in a person. Cell work in 2011 and 2013, and one study in mice with bacterial sepsis.
Route used	By mouth. I found no dosing figure I could trace to a source.
How long it lasts	I could not find one in a person. A study exists whose full text the class page research could not reach, so the species and subject count behind it are unestablished here.

Where the circulating number comes from. There is nothing to compare against, because nothing has been given to a person in any published study the searches found. The myostatin claim that the selling rests on comes from a 2013 experiment in which YK-11 induced follistatin, the protein that binds myostatin, in mouse muscle cells in a dish. One animal study exists, in bacterial sepsis. The identity is genuinely contested rather than settled: anti-doping files it among the SARMs, while its founding paper opens with the words a novel steroid compound and its chemical name carries the steroid nucleus.

The mistake that costs people. A myostatin inhibitor is a much bigger claim than a SARM, and it is being made on cells in a dish. Follistatin rising in cultured mouse muscle cells is a long way from a person growing muscle, and the gap between those two things is where the entire selling proposition sits.

Full cited entry: thelongevitydesk.org/compounds/yk-11

Compare vendor prices for YK-11: biohackblueprint.ai/compound/yk-11: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

S4

Sold on a vision effect I could not trace to a primary source.

GIVEN TO HUMANS · TRIAL OR LABEL

Nothing in a person

A 2024 review reports its preclinical work was suspended before phase 1

WHAT CIRCULATES

I found no dosing figure I could trace to a source

Observed, not endorsed

As a medicine	Never an approved medicine
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	Nothing in a person. Preclinical work only, suspended before phase 1 according to a 2024 review.
Route used	By mouth. I found no dosing figure I could trace to a source.
How long it lasts	I could not find one in a person.

Where the circulating number comes from. There is nothing to compare against. The claim that defines this compound in the market, that it disturbs vision, is one I could not trace to a primary report. Three searches returned nothing, and the single published human case pairing andarine with a visual symptom is a man taking three compounds who arrived with blurred vision, a blood glucose of 558 and an HbA1c of 13.9 percent, whose eye examination excluded retinopathy. That is newly diagnosed diabetes rather than an andarine effect. A blindness report does sit in an adverse event database, filed under the generic keyword rather than under andarine.

The mistake that costs people. The vision claim is the most repeated thing about any compound on this shelf and I could not find its primary source. The single published human case pairing andarine with a visual symptom is a man taking three compounds who arrived with blurred vision, a blood glucose of 558 and an HbA1c of 13.9 percent, and whose eye examination excluded retinopathy. That reads as newly diagnosed diabetes. A blindness report does sit in an adverse event database, filed under the generic keyword for the class rather than under andarine, in a table showing only ten of the fifteen reports that keyword returned.

Full cited entry: thelongevitydesk.org/compounds/s4

Compare vendor prices for S4: biohackblueprint.ai/compound/s4: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

S23

A male contraceptive finding in rats, given by injection.

GIVEN TO HUMANS · TRIAL OR LABEL

Nothing in a person

Rat work, injected under the skin, not swallowed

WHAT CIRCULATES

I found no dosing figure I could trace to a source

Observed, not endorsed

As a medicine	Never an approved medicine
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	Rats, injected under the skin. That is the route behind every efficacy figure this compound has.
Route used	By mouth, which is how it is sold. The searches behind the class page found no study giving it that way.
How long it lasts	I could not find one in a person.

Where the circulating number comes from. There is nothing to compare against, and the headline finding does not transfer the way the selling implies. The contraceptive result people cite gave S-23 to rats by injection under the skin together with estradiol benzoate, with four of six rendered azoospermic, no pregnancies, and full reversal at 100 days. Every efficacy figure this compound has comes from that kind of experiment. The searches behind this page found no study giving it by mouth, which is how it is sold.

The mistake that costs people. The contraceptive study is quoted as though it were about S-23 by itself and about people. It gave S-23 to rats together with estradiol benzoate, by injection under the skin. Four of six were rendered azoospermic, no pregnancies resulted, and fertility returned completely by 100 days. Every part of that sentence, the species, the co-administered hormone and the route, has to travel with the finding.

Full cited entry: thelongevitydesk.org/compounds/s23

Compare vendor prices for S23: biohackblueprint.ai/compound/s23: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

AC-262

One pharmacology paper in rats, and almost nothing since.

GIVEN TO HUMANS · TRIAL OR LABEL

Nothing in a person

One primary pharmacology paper, in castrated male rats over two weeks

WHAT CIRCULATES

I found no dosing figure I could trace to a source

Observed, not endorsed

As a medicine	Never an approved medicine
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	Castrated male rats, over two weeks, in one pharmacology paper. The only work in a living animal since 2008 that the searches found is in two Thoroughbred horses.

Route used	By mouth. I found no dosing figure I could trace to a source.
How long it lasts	I could not find one in a person.

Where the circulating number comes from. There is nothing to compare against, and the size of the absence is the finding. PubMed returns four records in total, three of them methods for detecting the compound in urine, and ClinicalTrials.gov returns none. The only work in a living animal since 2008 that the searches found is in two Thoroughbred horses. The 2026 anti-doping Prohibited List does not name it, though WADA's 2023 testing figures record one finding for it among the anabolic agents.

The mistake that costs people. Four PubMed records, three of which exist so that laboratories can catch the compound in urine, is a strange evidence base for a product. The detection methods are not evidence that it works; they are evidence that people are taking it.

Full cited entry: thelongevitydesk.org/compounds/ac-262

Compare vendor prices for AC-262: biohackblueprint.ai/compound/ac-262: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

SR-9009

Not a SARM, and 2.2 percent of a swallowed dose gets in.

GIVEN TO HUMANS · TRIAL OR LABEL

100 mg per kilogram, injected into the belly cavity, in mice

The two mouse studies the selling rests on, both by injection

WHAT CIRCULATES

10 to 40 mg a day, with an instruction to redose every two to four hours

Observed, not endorsed

As a medicine	Never an approved medicine
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	Mice, injected into the abdominal cavity, in both studies the selling rests on. The oral availability figure of 2.2 percent also comes from mice, at 1 mg per kilogram.
Route used	By mouth, at 10 to 40 mg a day, reported as convention and not as a recommendation, with an instruction to redose every two to four hours.
How long it lasts	About 33 minutes, measured on the intravenous side of the 2013 mouse study. That is the number the retail instruction to redose every two to four hours is quietly acknowledging.

Where the circulating number comes from. The gap is not quantity, it is whether a swallowed dose arrives at all. In the 2013 paper that measured it, oral availability came out at

2.2 percent in mice at 1 mg per kilogram, against 23.4 percent for one of the improved compounds in the same table, and the terminal half life on the intravenous side was about 33 minutes. Those authors wrote that these compounds would suit dosing by injection. Both famous mouse results obeyed that, giving 100 mg per kilogram into the abdominal cavity for 30 days. The vendor instruction to redose every two to four hours is the one place a sales page and a pharmacology paper agree.

The mistake that costs people. A friendlier bioavailability figure of about 24 percent circulates and is attributed to the same study. It belongs to a different molecule: the bioavailability row of that table reads 2.2, 23.4, 2.4, 3.5 and 3.0 percent across five compounds, and the 23.4 is a different compound the authors singled out as an improvement. Every figure in that table was measured in mice, so none of them is a human number.

Full cited entry: thelongevitydesk.org/compounds/sr-9009

Compare vendor prices for SR-9009: biohackblueprint.ai/compound/sr-9009: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

GW-0742

Cardarine's sibling, with its reputation and not its data.

GIVEN TO HUMANS · TRIAL OR LABEL

A single 15 mg dose by mouth, in a doping control excretion study

Not an efficacy trial; it measured how long the compound stays detectable

WHAT CIRCULATES

I found no dosing figure I could trace to a source

Observed, not endorsed

As a medicine	Never an approved medicine
How they compare	Nothing to compare against: no human dose has ever been published
Route studied	No efficacy trial in a person. It has been given to people once in a published study, a single 15 mg dose by mouth in a doping control excretion experiment that measured how long it stays detectable, which is not a trial of whether it does anything.
Route used	By mouth. I found no dosing figure I could trace to a source.
How long it lasts	I could not find one in a person.

Where the circulating number comes from. There is nothing to compare against, and the thing to watch is what gets carried across rather than what gets scaled up. This is cardarine with one hydrogen swapped for a fluorine, acting on the same receptor, and the two year cancer studies people cite belong to cardarine: oral gavage in rats and mice over 104 weeks, with

neoplastic findings in multiple tissues at all doses. No equivalent study of GW-0742 turned up in the searches, and one conference abstract has it reducing skin tumours in mice. The 2026 anti-doping list names cardarine and never names this one.

The mistake that costs people. The cancer findings people carry across belong to cardarine, not to this compound. Those were two year studies: oral gavage in rats and in mice over 104 weeks, with neoplastic findings in multiple tissues at all doses in the rat study, and stomach tumours at all doses in the mouse one. No equivalent study of GW-0742 turned up in the searches, and a conference abstract in the same volume has GW-0742 reducing skin tumours in mice. Sharing a receptor is not sharing a toxicology file, in either direction.

Full cited entry: thelongevitydesk.org/compounds/gw-0742

Compare vendor prices for GW-0742: biohackblueprint.ai/compound/gw-0742: price per mg across the vendors that carry it, certificates linked. *Our price directory; affiliate links.*

Where to compare vendors

Biohack Blueprint (biohackblueprint.ai) lists what eleven vendors charge per milligram for the same compound, side by side, with each product's certificate linked where the vendor publishes one. It is our price directory, and its outbound links are affiliate links.

The Desk's take

Sixty-five compounds and one pattern: the thinner the evidence, the more confident the chart. The GLP-1 class, tested in tens of thousands of people, circulates with caveats attached. BPC-157, with no completed human trial, circulates with a "standard dose" quoted to the microgram. The market fills silence with precision.

Every number in this guide can be checked: the trial figures against their sources, the circulating figures against any vendor page, and the provenance against the full cited entries at thelongevitydesk.org. If we got one wrong, it goes on the corrections page with our name on the mistake.

Where to go from here

- **The one-table version:** Desk Guide Nº 5, and thelongevitydesk.org/gap
- **The mixing arithmetic:** Desk Guide Nº 3, and thelongevitydesk.org/tools/reconstitution
- **How to check what is actually in a vial:** Desk Guides Nº 1 and 2

- **One email a week at most**, nothing for sale: thelongevitydesk.org/subscribe

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