



What Studies Gave vs What People Take

65 compounds · 26 with no dose to compare against · 17 with an
approved medicine behind them

THE LONGEVITY DESK · DESK GUIDE N° 5 · 2026 EDITION · VERSION
1.9

[THELONGEVITYDESK.ORG](https://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.

License: Creative Commons BY 4.0: use these tables freely, with attribution, same as the machine-readable dataset at thelongevitydesk.org/gap.csv.

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

How to read these tables

Every guide in this market prints a dosing chart: a confident table of amounts with references stapled on afterwards. These tables keep the format and invert the content. For each compound, three facts:

What a trial gave is what a published study actually administered to people, with its source. This is the datum, the only number in the row with evidence behind it.

What circulates is the dose reported in common practice. It is recorded because it is what happens, not because it is endorsed. For most compounds here, tracing this number leads not to a study but to a vial size: several “standard” doses are exactly one-tenth or one-twentieth of the bottle they ship in, the easiest marks to read on a syringe.

How they compare is the only claim these tables make. Put the two numbers side by side and ask a question anyone can answer: is the amount people actually take bigger than the amount a study gave, smaller, or the same?

- **People take more than any study gave** (9 of 65)
- **People take less than studies gave**, which is arithmetic, not a safety finding (13 of 65)
- **Matches an amount a study gave**, though sometimes by accident (17 of 65)
- **Nothing to compare against**: no published human dose exists to measure the practice against (26 of 65)

That last line is the finding these tables actually carry: for 26 of the 65 compounds sold on this market, the confident number on the vendor's chart can be compared against nothing, because nothing was ever published.

As a medicine answers the question a newcomer asks first: does an approved version of this molecule exist anywhere? "An approved medicine exists" deliberately does not mean the grey-market vial is that medicine, it never is. Details and every caveat live on each compound's page at thelongevitydesk.org.

The repeated warning, worth repeating: the middle column is what a trial administered to people under supervision. The circulating column is what gets reported in practice. These tables are a comparison of records, not a menu.

The tables

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.

COMPOUND	AS A MEDICINE	WHAT A TRIAL GAVE	WHAT CIRCULATES	HOW THEY COMPARE
BPC-157	Never an approved medicine	About 117 mcg per day. Allometric scaling from the 10 µg/kg rat arm, FDA body surface method	250 to 500 mcg per day	People take more than any study gave
TB-500	Never an approved medicine	No human dose has ever been published. FDA found no article administering it to a human	2 mg twice weekly, then weekly	Nothing to compare against
GHK-Cu	Never an approved medicine	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	1 to 2 mg a day under the skin, some say 3	Nothing to compare against
KPV	Never an approved medicine	No human dose has ever been published. The only figure in the literature is 16 mcg/kg/day in mice, by feeding tube	200 to 400 mcg a day injected, 250 mcg twice daily by mouth	Nothing to compare against

Price-compare these compounds across the vendors that carry them:

biohackblueprint.ai: price per mg, certificates linked where published. *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.

COMPOUND	AS A MEDICINE	WHAT A TRIAL GAVE	WHAT CIRCULATES	HOW THEY COMPARE
Semaglutide	An approved medicine exists	Large randomised placebo controlled trials. The strongest evidence base of anything on this site	Prescription doses, often from grey market vials	Matches an amount a study gave
Tirzepatide	An approved medicine exists	5, 10 and 15 mg weekly. SURMOUNT-1, about a fifth of body weight at the top dose	Microdoses below 2.5 mg weekly	People take less than studies gave
Retatrutide	In drug trials, approved nowhere	Up to 12 mg weekly. Lilly phase 2, about a quarter of body weight at the top dose	0.25 to 1.5 mg starting, 4 mg maintenance	People take less than studies gave
NAD+	Never an approved medicine	10 mg a day into a vein, for seven days. Yu 2026, 180 adults with damaged hearts, the only study sized for an outcome	250 to 1000 mg a session into a vein, 100 to 500 mg under the skin	People take more than any study gave
5-Amino-1MQ	Never an approved medicine	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	50 to 150 mg a day by mouth, convention rather than evidence	Nothing to compare against
AOD-9604	Never an approved medicine	0.25, 0.5 and 1 mg a day, swallowed. METAOD006, the phase 2b in 502 adults over 24 weeks, which missed	300 mcg a day under the skin, inside a 250 to 500 mcg band	Matches an amount a study gave
Cagrilintide	In drug trials, approved nowhere	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	2.4 mg a week from a 0.25 mg start, or up to 4.5 mg	Matches an amount a study gave
Mazdutide	An approved medicine exists	4 mg and 6 mg weekly, for 48 weeks. GLORY-1, 610 Chinese adults, the trial the weight approval was built on	2.5 mg weekly for four weeks, then 5 mg weekly	Matches an amount a study gave
Tesofensine	Never an approved medicine	0.25, 0.5 and 1.0 mg by mouth, once daily. Astrup 2008, TIPO-1, 203 obese adults over 24 weeks	0.25 mg to 0.5 mg by mouth, once daily	Matches an amount a study gave
L-Carnitine, injectable	An approved medicine exists	4 grams a day, into a vein. Zhang 2014, 30 patients with metabolic syndrome, inside a five day modified fast	250 to 1,000 mg into muscle, or a drip with no stated dose	People take less than studies gave

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links.

Growth hormone

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

COMPOUND	AS A MEDICINE	WHAT A TRIAL GAVE	WHAT CIRCULATES	HOW THEY COMPARE
Ipamorelin	Never an approved medicine	About 4.2 mg per day, into a vein. The published Helsinn trial, which missed its endpoint	200 to 900 mcg per day, under the skin	People take less than studies gave
CJC-1295	Never an approved medicine	30 to 60 mcg/kg, about 2.25 to 4.5 mg. Teichman 2006, trials of 28 and 49 days	1 to 2 mg per week, DAC version	People take less than studies gave
MK-677	In drug trials, approved nowhere	25 mg, the top of three arms. A 1996 dose ranging study in 32 people aged 64 to 81	10 to 25 mg once daily	Matches an amount a study gave
Tesamorelin	An approved medicine exists	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	2 mg a day, from grey market vials, run in cycles	Matches an amount a study gave
Sermorelin	Was approved; product gone	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	200 to 300 mcg under the skin nightly, titrated toward 500 mcg	People take less than studies gave
GHRP-2	An approved medicine exists	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.	100 to 300 mcg per injection under the skin, one to three times daily, most commonly 200 mcg	People take more than any study gave
GHRP-6	Never an approved medicine	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	100 to 300 mcg under the skin, two to three times daily	Matches an amount a study gave

COMPOUND	AS A MEDICINE	WHAT A TRIAL GAVE	WHAT CIRCULATES	HOW THEY COMPARE
Hexarelin	Never an approved medicine	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	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	Matches an amount a study gave
IGF-1 LR3	Never an approved medicine	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.	Roughly 20 to 100 mcg a day under the skin, in cycles of about 4 to 6 weeks	Nothing to compare against
HGH Fragment 176-191	Never an approved medicine	No human dose of the fragment was found. Six searches across four databases on 2026-08-05 found no human study of it	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	Nothing to compare against
Follistatin-344	Never an approved medicine	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	100 to 200 mcg a day under the skin, in cycles of 10 to 30 days, community convention not a tested dose	Nothing to compare against
PEG-MGF	Never an approved medicine	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	200 to 400 mcg two to three times a week, and daily in the same row	Nothing to compare against

Price-compare these compounds across the vendors that carry them:

biohackblueprint.ai: price per mg, certificates linked where published. *Our price directory; affiliate links.*

Cognitive and neuro

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

COMPOUND	AS A MEDICINE	WHAT A TRIAL GAVE	WHAT CIRCULATES	HOW THEY COMPARE
Semax	An approved medicine exists	800 to 8,000 mcg, up the nose. The Russian 0.1 percent label	500 to 3,000 mcg, usually injected	People take less than studies gave

COMPOUND	AS A MEDICINE	WHAT A TRIAL GAVE	WHAT CIRCULATES	HOW THEY COMPARE
Selank	An approved medicine exists	No trial has ever reported a dose. Three Russian trials, 192 patients, no dose in any of them	900 mcg a day from the drops, 1,350 quoted by vendors	Nothing to compare against
Cerebrolysin	An approved medicine exists	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	5 to 10 mL a day, under the skin or into a muscle	People take less than studies gave
P-21	Never an approved medicine	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	500 mcg to 1 mg once daily, under the skin	Nothing to compare against
DSIP	Never an approved medicine	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	100 to 300 mcg under the skin, once in the evening	People take less than studies gave
Dihexa	Never an approved medicine	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	About 5 to 50 mg a day by mouth across vendor and community pages, no two agreeing	Nothing to compare against
PE-22-28	Never an approved medicine	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	100 to 2,000 mcg per dose, mostly up the nose	Nothing to compare against

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Mitochondria and cellular energy

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

COMPOUND	AS A MEDICINE	WHAT A TRIAL GAVE	WHAT CIRCULATES	HOW THEY COMPARE
MOTS-c	Never an approved medicine	No human dose has ever been published. Every published dose is a mouse dose, 0.5 to 15 mg per kg per day	5 to 10 mg per dose, two or three times a week up to daily	Nothing to compare against

COMPOUND	AS A MEDICINE	WHAT A TRIAL GAVE	WHAT CIRCULATES	HOW THEY COMPARE
SS-31	An approved medicine exists	40 mg a day under the skin. Five published trials and the approved label, every one in people with a diagnosed disease	0.1 to 40 mg a day under the skin	People take less than studies gave
Humanin	Never an approved medicine	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	0.1 mg to 10 mg per dose under the skin, two or three times a week up to daily	Nothing to compare against
SLU-PP-332	Never an approved medicine	No human dose I could find, by any route. Four mouse studies, 25 to 50 mg per kg into the abdominal cavity	250 mcg to 1.5 mg a day under the skin, or 1 to 5 mg, or 400 to 800 mg by mouth	Nothing to compare against
BAM-15	Never an approved medicine	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	10 micrograms to 60 mg a day, depending on the page	Nothing to compare against
AICAR	Never an approved medicine	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	1 to 25 mg a day under the skin, on pages that disagree	People take less than studies gave

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Longevity and bioregulators

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

COMPOUND	AS A MEDICINE	WHAT A TRIAL GAVE	WHAT CIRCULATES	HOW THEY COMPARE
Epithalon	Never an approved medicine	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	10 mg a dose under the skin, 50 or 100 mg a course, one to two times a year	People take more than any study gave
Pinealon	Never an approved medicine	200 mcg a day, swallowed, for two weeks. Nazimko 2012, one 100 mcg capsule twice a day in locomotive crew, no participant count given	5 to 10 mg a day injected, or 10 to 20 mg swallowed	People take more than any study gave

COMPOUND	AS A MEDICINE	WHAT A TRIAL GAVE	WHAT CIRCULATES	HOW THEY COMPARE
FOXO4-DRI	Never an approved medicine	No dose in a person that I could find. Every animal dose I could read is 5 mg per kilogram, in mice	25 mg into a vein three times, or 250 to 500 mcg daily	Nothing to compare against
Glutathione, injectable	Never an approved medicine	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	600 to 1,400 mg per session, two to three times a week	Matches an amount a study gave

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Immune and thymic

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

COMPOUND	AS A MEDICINE	WHAT A TRIAL GAVE	WHAT CIRCULATES	HOW THEY COMPARE
Thymosin Alpha-1	An approved medicine exists	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	1.6 mg under the skin, twice weekly	Matches an amount a study gave
Thymalin	An approved medicine exists	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	10 mg a day for 5 to 10 days, injected under the skin	Matches an amount a study gave
LL-37	Never an approved medicine	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	100 to 250 micrograms a day under the skin, some pages to 500	Nothing to compare against
VIP	An approved medicine exists	50 micrograms four times a day, inhaled through a nebuliser. Eight pulmonary hypertension patients in 2003, and 20 sarcoidosis patients in 2010	50 micrograms per spray, four times a day, into the nose	Matches an amount a study gave
ARA-290	Never an approved medicine	4 mg a day under the skin for 28 days. A 64 patient sarcoidosis trial, and a 10 volunteer exposure study behind the number	4 mg a day under the skin, in blocks of four weeks and longer	Matches an amount a study gave

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Melanocortin and hormonal

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

COMPOUND	AS A MEDICINE	WHAT A TRIAL GAVE	WHAT CIRCULATES	HOW THEY COMPARE
Melanotan II	Never an approved medicine	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.	250 to 500 mcg daily to load, some to 1,000 mcg, then 500 mcg twice weekly or 250 mcg once or twice weekly	People take less than studies gave
PT-141	An approved medicine exists	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.	1.0 to 2.0 mg under the skin in men, reported as convention	Matches an amount a study gave
Melanotan I	An approved medicine exists	16 mg in a rod placed under the skin every two months. The approved implant, in patients with a rare light sensitivity disease	1 mg a day for 10 days, then 2 mg a week, injected	Matches an amount a study gave
Oxytocin	An approved medicine exists	A drip into a vein, or ten units into a muscle after delivery. The Pitocin label, which permits exactly those two routes	24 units by nose, and 100 to 500 micrograms under the skin	People take more than any study gave
Kisspeptin-10	Never an approved medicine	0.31 micrograms per kilogram into a vein, about 22 mcg for an adult. FDA's record of the commonest studied intravenous bolus dose	50 to 500 micrograms under the skin, 100 to 200 commonest	People take more than any study gave
Gonadorelin	An approved medicine exists	100 micrograms as a single diagnostic injection, or 5 to 20 per pulse. The British diagnostic licence, and the Canadian pump licence	100 micrograms under the skin, two or three times a week	Matches an amount a study gave

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SARMs

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

COMPOUND	AS A MEDICINE	WHAT A TRIAL GAVE	WHAT CIRCULATES	HOW THEY COMPARE
RAD-140	In drug trials, approved nowhere	50 to 150 mg a day, with 100 mg set as the maximum tolerated. A completed phase 1 in women with metastatic breast cancer	20 to 30 mg a day for men, on an eight week cycle	People take less than studies gave
RAD-150	Never an approved medicine	Nothing, in any species. Searched under RAD-150, RAD150 and TLB-150 on 10 August 2026	Sold as a RAD-140 ester. I found no dosing figure traceable to anything	Nothing to compare against
LGD-4033	Never an approved medicine	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	10 mg a day for men over 8 to 10 weeks, up to 15 for experienced users	People take more than any study gave
LGD-3033	Never an approved medicine	Nothing, in any species. Searched under LGD-3033 and LGD3033 on 10 August 2026	I found no dosing figure traceable to anything	Nothing to compare against
MK-2866	Never an approved medicine	3 mg a day for 147 days in the phase 3 trials. Two completed phase 3 trials in people starting chemotherapy	10 to 25 mg a day, reported as the commonest range on guide pages	People take more than any study gave
YK-11	Never an approved medicine	Nothing in a person. Cell work in 2011, and one mouse study in bacterial sepsis	I found no dosing figure I could trace to a source	Nothing to compare against
S4	Never an approved medicine	Nothing in a person. A 2024 review reports its preclinical work was suspended before phase 1	I found no dosing figure I could trace to a source	Nothing to compare against
S23	Never an approved medicine	Nothing in a person. Rat work, injected under the skin, not swallowed	I found no dosing figure I could trace to a source	Nothing to compare against
AC-262	Never an approved medicine	Nothing in a person. One primary pharmacology paper, in castrated male rats over two weeks	I found no dosing figure I could trace to a source	Nothing to compare against
SR-9009	Never an approved medicine	100 mg per kilogram, injected into the belly cavity, in mice. The two mouse studies the selling rests on, both by injection	10 to 40 mg a day, with an instruction to redose every two to four hours	Nothing to compare against

COMPOUND	AS A MEDICINE	WHAT A TRIAL GAVE	WHAT CIRCULATES	HOW THEY COMPARE
GW-0742	Never an approved medicine	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	I found no dosing figure I could trace to a source	Nothing to compare against

Price-compare these compounds across the vendors that carry them:

biohackblueprint.ai: price per mg, certificates linked where published. *Our price directory; affiliate links.*

What to do with a row

Each compound name in these tables has a page at

thelongevitydesk.org/compounds/[name]: the same three facts explained in plain language, plus what the thing actually is, how to check you got the right molecule, what is known about harm, and a link to the full cited entry. The two-minute version always comes first.

To compare any two side by side: **thelongevitydesk.org/compare**.

These tables as machine-readable data, CSV and JSON, every row carrying its source URL: **thelongevitydesk.org/gap**.

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 the pattern is not subtle. Where the evidence is strongest, the GLP-1 class, tested in tens of thousands of people, the circulating numbers still drift off the vial sizes rather than the trials. Where the evidence is thinnest, the numbers get *more* confident, not less. The market fills silence with precision.

Nobody else publishes the middle column, because printing what a trial actually gave makes the confident chart next to it indefensible.

This content is for educational and informational purposes only and is not medical advice. Peptides discussed are research compounds and may not be approved for human use. Nothing here

should be used to diagnose, treat, cure, or prevent any disease. Always consult a qualified healthcare professional before starting any peptide, supplement, or protocol. Individual responses vary. Do not self-administer compounds without proper medical supervision.

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