



LONGEVITY SCIENCE · PLAIN-ENGLISH GUIDE · 2026 EDITION

Epitalon: the four-piece peptide aimed at your cellular clock.

Epitalon is a tiny peptide, four amino acids long, that Russian researchers have studied for decades as a way to nudge the enzyme that maintains the protective caps on your chromosomes. The idea is one of the most exciting in longevity science. The evidence in people is thin, the safety work has not been done, and the vendor I use does not stock it. This guide explains all three so you can decide with clear eyes.

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THINK OF IT LIKE THIS

Telomeres are the plastic tips on your shoelaces. Every time a cell divides, the tip wears down a little, and when it is gone the lace frays and the cell retires. Your body owns a repair kit for those tips, an enzyme called telomerase, but keeps it switched off in most adult cells, because a cell that can divide forever is the definition of a tumour. Epitalon is a small peptide that, in a lab dish, seems to nudge that repair kit back on.

This may be for you if...

- You are interested in longevity and want the honest version of its most-discussed compound
- You already have the basics locked in: sleep, strength, protein, bloodwork
- You are comfortable with an unproven compound taken under the tongue at a low dose
- You would rather track what actually predicts biological age than buy a telomere test

This probably is not for you if...

- You have had cancer, or have a strong family history of it; see page 5
- You expect to feel something; there is nothing to feel
- You are pregnant, breastfeeding, or trying to conceive
- You want human evidence behind it; page 6 has better-supported options in the same lane

EVIDENCE AT A GLANCE



LAB DISH

ANIMALS

SMALL HUMAN STUDIES

LARGE HUMAN TRIALS

APPROVED

Three small human studies, one randomised, none measuring lifespan or telomeres. Decades of animal work from a single research group. No safety study and no approval anywhere.

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Four amino acids aimed at the enzyme that rebuilds your chromosome caps.

Every chromosome in every cell ends in a stretch of repeated DNA called a telomere. It codes for nothing; its whole job is to be the part that wears away so the genes behind it do not. Each division shortens it. When it runs out, the cell stops dividing and lingers, inflamed, in a state scientists call senescence. It is one of the few places where ageing is literally a number you can measure.

Epitalon is a synthetic four-amino-acid peptide, designed in St Petersburg to mimic a natural pineal-gland extract called Epithalamin that the same team had studied for years. The claim is that it switches telomerase, the cap-rebuilding enzyme, back on in normal cells.

THE IDEA, STEP BY STEP

STEP 1 · ENTER

The peptide gets into the cell

It is small enough to pass into cells and, the theory goes, into the nucleus where the DNA lives.

STEP 2 · SWITCH

Telomerase is nudged on

Shown in a lab dish by the original team in 2003, and partly by an independent group in 2025.

STEP 3 · REBUILD

Caps lengthen, cells keep going

The hoped-for result. It has never been measured inside a living animal or person.

THE EXTRACT AND THE PEPTIDE ARE TWO DIFFERENT THINGS

Almost every impressive Epitalon story, including the famous one where elderly patients lived longer, was actually a study of Epithalamin, the gland extract. Epitalon was designed later to mimic it. The reputation moved across; the evidence largely did not. That is the single most useful thing to know before you buy a vial.

THREE THINGS WORTH KNOWING

- **It is taken in courses**, typically 10 to 20 days, once or twice a year, by injection or under the tongue.
- **The only human dose tested in a randomised study is 0.5 mg** under the tongue for 20 days. Vendors typically suggest 5 to 10 mg injected, ten to twenty times that.
- **Almost all the research comes from one group.** Of 220 published records, 137 share the same two authors. Independent replication began only in 2025.

TWO SUBSTANCES, ONE REPUTATION

	EPITHALAMIN (THE EXTRACT)	EPITALON (THE PEPTIDE)
What it is	A pineal-gland extract, a natural mixture	Four amino acids, made in a lab
Human studies	A small randomised mortality trial	Three small studies, none on lifespan
Animal lifespan	About 20 to 25 percent longer	Little or none in the best-powered study

PLAIN-ENGLISH NOTE

None of this means Epitalon does nothing. It means the honest state of knowledge is a beautiful idea, real lab-dish results, and a person-sized gap in the middle. Page 3 maps that gap; page 5 explains why the mechanism asks for caution.

A famous result that belongs to a different compound, and three small human studies.

In 2026 the FDA reviewed the published literature on Epitalon and found three studies in which it was given to people. None measured lifespan or telomere length. Here is what exists, next to the extract that earned the reputation.

3

human studies of Epitalon itself

One randomised: 40 night-shift workers, 0.5 mg under the tongue for 20 days. A melatonin by-product rose 1.7-fold. Sleep was not measured.

25%

longer average life in rodents

Of the extract, not the peptide, and often quoted as 41 percent. The best-powered study of the peptide itself found no change.

0

measurements inside a living body

No study in any animal or person has measured what Epitalon does to telomeres or telomerase in the body.

1

independent replication

Brunel University, 2025, corrected twice. The clearest result was in breast-cancer cells, and it was a safety finding rather than a benefit.

What we know

- The extract, Epithalamin, has a small but genuinely randomised trial in elderly patients that found lower mortality
- In a lab dish, Epitalon does seem to affect telomere maintenance, in the original work and partly in the 2025 replication
- It raised a melatonin by-product in the one randomised human study, which fits the pineal story
- It is cheap to make, stable, and caused no obvious acute harm in the small studies

What we are still learning

- Whether it does anything to telomeres in a living person; nobody has looked
- Whether it is safe over years; there is no toxicology study and no cancer study, and the FDA's review said it "has the potential to be carcinogenic"
- What dose matters; the human-tested dose is a tenth to a twentieth of what is sold
- Whether the extract's lifespan effect transfers to the peptide at all

WHERE THE FAMOUS NUMBERS COME FROM

THE CLAIM	THE SUBSTANCE	WHAT WAS ACTUALLY FOUND
"Up to 41% longer life"	Epithalamin extract, rodents	The three papers cited report 25, 25 and 20 percent
"Halved mortality in the elderly"	Epithalamin extract, small trial	Real and randomised, but the headline figure comes from a non-randomised add-on group
"Lengthens telomeres"	Epitalon, lab dish	Shown in cells; never measured in an animal or person
"Improves sleep"	Epitalon, 40 people	A melatonin by-product rose; sleep itself was not measured

MY HONEST TAKE

I would not tell a family member to buy this. Not because it is dangerous in any proven way, but because the study that would tell us it is safe has not been done, the mechanism it is sold on is the one cancers use, and the same money buys more certainty elsewhere. If you run it anyway, run the human-tested dose, keep a baseline, and read page 5 twice.

The dose with human data, and the doses on the vial.

This page is honest about a gap: the only human-tested protocol is a low dose under the tongue, and what vendors suggest is ten to twenty times that by injection. Both are shown so you can see the difference. Vial counts assume 10 mg vials, the common size.

COURSE	DOSE	WHAT YOU NEED	WHAT TO EXPECT
Studied 20 days	0.5 mg under the tongue, once daily	1 × 10 mg vial	The only regimen with a randomised human study. A melatonin by-product rose; expect, at most, a subtle change in sleep quality. Nothing else has been measured.
Common, short 10 days	5 mg injected under the skin, once daily	5 × 10 mg vials (50 mg)	What most vendors and forums suggest. No human study has used this dose or this route. Any benefit you notice is unmeasured, and so is any harm.
Common, long 20 days, 1–2× a year	5 mg injected under the skin, once daily	10 × 10 mg vials (100 mg)	The standard “course” in the bioregulator community, usually repeated every six months. There is no data on the pattern at all.

Which one? If you take one thing from this page, take this: the Studied course is the one I would choose, because it is the one where a human has gone before you. A single 10 mg vial covers it with room to spare.

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HOW TO TAKE IT, IN FOUR STEPS		DOSE TO UNITS	
01	Mix. Add 1 mL of bacteriostatic water per 10 mg in the vial. Run it down the glass, do not shake, let it clear.	DOSE	DRAW
02	Under the tongue (the studied route): draw 5 units, remove the needle, and hold the liquid under your tongue for a minute before swallowing.	0.5 mg	5 units
03	Injection (the common route): under the skin of the belly or thigh, rotating spots, in the morning.	1 mg	10 units
04	Store. The mixed vial in the fridge, in the dark, used within 28 days. Same time each day; morning, because it touches the melatonin system.	5 mg	50 units
		10 mg	100 units

At 10 mg per mL, on a standard insulin syringe.

COMMON QUESTIONS

Should I take it with Pinealon or Thymalin?

Stacking three thin evidence files does not make a thick one, and it makes it impossible to tell what did what. One thing at a time.

What about a telomere test?

They cost \$100 to \$300 and the year-to-year noise is bigger than any change you could hope to see. Page 7 has better markers, and most are free.

Morning or night?

Morning. It nudges melatonin, and the night-shift study dosed by day.

Regimens reflect the one randomised human study and common practice in the bioregulator community. They are not a prescription. Talk to your doctor before starting, especially about your cancer history.

Read this page before you buy it anywhere.

Epitalon has not caused obvious harm in the few small studies that exist. The caution on this page comes from its mechanism: telomerase is the enzyme most cancers switch on to keep dividing, and the one independent replication found the strongest effect in cancer cells. Nobody has done the study that would settle this. Until someone does, read these lists as if they apply to you.

Do not use this if...

- You have had cancer of any kind, or are being investigated for one
- You have a strong family history of cancer, especially breast, ovarian, or bowel
- You are pregnant, breastfeeding, or trying to conceive
- You are under 25; your cells are dividing plenty on their own
- You cannot get a certificate showing identity by mass spectrometry for your vial

Be cautious, and talk to your doctor first, if...

- You have any unexplained lump, bleeding, night sweats or weight loss; get that looked at first, not after
- You have a history of melanoma or many moles; see a dermatologist for a baseline
- You have a sleep disorder or take melatonin; it touches the same system
- You take immunosuppressants or have an autoimmune condition
- You plan to inject it; there is no human safety data for that route at any dose

Stop and get medical help if...

- Any new lump, anywhere
- Unexplained bleeding, night sweats, or weight loss you did not plan
- A mole that changes
- Hives, swelling, or trouble breathing
- Spreading redness or heat at an injection site

Common, and usually mild

- Vivid dreams or lighter sleep if taken late; dose in the morning
- Mild drowsiness in the first days
- A red spot at the injection site
- Nothing at all, which is the most common report

BEFORE YOU START

- ☐ Have a frank conversation with your doctor about your cancer history and your family's
- ☐ If you are over 45 and behind on screening, do the screening first
- ☐ Get a certificate for your lot with a mass-spectrometry identity line
- ☐ Log the baseline on page 7 before day one
- ☐ Decide now that any new lump ends the course and starts an appointment

These lists are drawn from the mechanism, the FDA's 2026 literature review, and general medical caution, because no human safety study exists. They are not complete, and they are not a substitute for a conversation with your own doctor.

Sources and alternatives.

My vendor does not carry Epitalon, and I will not send you to one I have not vetted for a compound whose safety study has not been done. What I can do is show you how to check any vendor that sells it, and point you to two better-supported compounds in the same longevity lane, both of which my vendor does stock.

DIRECT LINK · THE CATALOGUE

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Use code **PEPTIDESCIENCE** at checkout for 15 percent off anything in it. The catalogue is behind a free account, so the listings appear once you have signed in. MOTS-c and GHK-Cu, below, are both there.

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- 01 Open the link or scan the code, and create the free account.
- 02 If you buy Epitalon elsewhere, run the five-point check below on that vendor first, and insist on the mass-spectrometry line.
- 03 Whatever you choose, match the lot number on the vial to the certificate before you use it.



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EVIDENCE: ANIMAL · EARLY HUMAN

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EVIDENCE: SMALL HUMAN TRIALS

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The eight markers on page 7

Grip strength, resting heart rate, waist-to-height and the rest predict how long you live better than a telomere test does, and cost almost nothing to track.

EVIDENCE: LARGE POPULATION STUDIES

Free. Start today.

HOW TO CHECK ANY VENDOR, IN FIVE POINTS

- ☐ **A certificate for your exact batch**, with a lot number you can match to the vial in your hand. “We test” is not a certificate.
- ☐ **A named, independent lab**. Janoshik and MZ Biolabs are the ones the community trusts. An unnamed in-house lab is a red flag.
- ☐ **The right tests**: identity (is it the right molecule), quantity (how much is really in the vial), and endotoxin (is it clean). Purity alone is not enough.
- ☐ **Sensible pricing**. Far below market usually means the corner was cut inside the vial.
- ☐ **A reputation you checked yourself**, on the big peptide forums and on finnricks.com, an independent site that publishes test results and sells nothing.

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06 EPITALON · THE LONGEVITY BASELINE

Measure the thing you are trying to change.

A telomere test costs \$100 to \$300 and its year-to-year noise is larger than any change you could hope to see, so skip it. These eight markers move with biological age, predict lifespan in large studies, and most cost nothing. Log them now and every quarter. **If a compound is not moving any of them in a year, it is not doing what the vial promised.** Print this, or screenshot it and mark it up on your phone.

Free

Six of the eight need a chair, a tape measure, a phone and twelve minutes of walking.

\$25

A hand dynamometer. Grip strength is one of the best single predictors of how long you live, and almost nobody measures it.

Quarterly

Often enough to see a trend, rare enough that noise averages out. Same time of day, same conditions.

Yearly

The bloods. Ask for hsCRP and ApoB by name; they are not on the default panel.

MARKER	HOW	DIRECTION	BASELINE	+3 MO	+6 MO	+12 MO
Resting heart rate	First thing, before standing. Seven-day average	Lower is better. Watch the trend				
Heart-rate variability	Any phone or watch app, morning, seven-day average	Higher is better. Watch the trend				
Grip strength	A \$25 hand dynamometer. Best of three, each hand	Predicts lifespan. Keep it rising				
30-second sit-to-stand	Chair, arms crossed, count full reps	Over 20 at fifty. Over 15 at seventy				
Waist to height	Waist at the navel divided by height	Under 0.5				
12-minute walk or run	Flat route, distance covered. The Cooper test	More is better. The best free proxy for fitness				
Sleep midpoint	Halfway between lights-out and waking, weekday vs weekend	Within an hour. Consistency beats duration				
Bloods, once a year	Fasting glucose, HbA1c, hsCRP, ApoB	Glucose under 100, hsCRP under 1, ApoB under 90				

COURSE LOG: DOSE, ROUTE, START DATE, LOT NUMBER, HOW IT WENT



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The catalogue I use. Page 6 has what I would buy for this goal.

If you run a course, write the dose, route, start date and lot number in the notes box. The lot number is there because the day you feel unusual is the day you will want to know exactly what you took.