

Epithalon

Patient Education Guide — What It Does, Why a Physician Would Prescribe It, and What the Evidence Says

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This information is not medical advice and is provided only to help begin your research. All clinical and dosing decisions must be made with a licensed, experienced physician and a licensed, experienced compounding pharmacist, supported by published clinical studies. This material was compiled using Artificial Intelligence, statements from videos and websites by apparent qualified professionals, and available published research. Anyone starting a medication they have never taken before should take an extremely conservative approach. We are not affiliated with any of the doctors whose videos are referenced below.

Epithalon

Investigational

Compounded

Also known as: Epitalon, Epithalone (AEDG tetrapeptide)

Category: Anti-Aging & Cellular Repair — Pineal Peptide

How it works. Epithalon is a synthetic four-amino-acid peptide (Ala-Glu-Asp-Gly) developed by Professor Vladimir Khavinson's group in St. Petersburg, modeled on Epithalamin, a natural pineal gland extract studied in Russia since the 1970s. Its most-discussed mechanism is activation of telomerase—the enzyme that maintains telomeres, the protective caps on the ends of chromosomes that shorten as cells age. It has also been shown in research settings to influence melatonin synthesis and circadian rhythm, modulate antioxidant enzyme activity, and exert antimutagenic effects. In plain English: it is studied as a compound that works on the cellular machinery of aging itself, rather than on any single organ system.

Why a physician might discuss it. Epithalon is most commonly discussed for patients specifically interested in longevity protocols, sleep and circadian support, and cellular-maintenance strategies—typically in cycles rather than continuous use. The most cited human data comes from long-term Russian studies of Epithalamin in elderly patients, which reported normalization of melatonin secretion, improved metabolic and immune markers, and, in extended follow-up, reduced mortality versus control groups. Those studies are genuinely interesting, but they were conducted with the pineal extract predecessor, largely in one research ecosystem, and have not been replicated in Western randomized trials.

What to know before starting. Epithalon is not FDA-approved, and Western human trial data on the synthetic tetrapeptide itself is limited. Reported side effects in the literature are generally mild— injection-site irritation, occasional headache or fatigue. Because it influences telomerase activity and gene expression, there is a theoretical concern about supporting abnormal cell proliferation, so active or recent cancer is a reason for caution and disclosure, even though existing studies have not confirmed an increased cancer risk—and some animal work suggests the opposite. As with every compound in this guide: physician evaluation first, conservative approach always, and grey-market vials are never worth the risk.

Published Evidence: A 2003 study by Khavinson, Bondarev, and Butyugov reported that Epithalon induced telomerase activity and telomere elongation in human somatic cells in culture. Long-term studies of the parent compound Epithalamin in elderly cohorts reported improved melatonin rhythms, metabolic and immune indices, and lower mortality over 6–12 years of follow-up. A 2025 review (PMC) summarizes 25+ years of in vitro, in vivo, and in silico work documenting geroprotective, antioxidant, and neuroendocrine effects—while noting the absence of large Western randomized controlled trials.

Key Studies:

- Khavinson VKh, Bondarev IE, Butyugov AA. "Epithalon peptide induces telomerase activity and telomere elongation in human somatic cells." *Bull Exp Biol Med*. 2003;135(6):590-2.
- Anisimov VN, Khavinson VKh. "Peptide bioregulation of aging: results and prospects." *Biogerontology*. 2010;11(2):139-49.

Recommended Videos (educational, independent sources)

► **Jacob Nachinson** — I Tested The Russian Super Soldier Serum (My Honest Results with Epitalon)

<https://www.youtube.com/watch?v=SGRH8BTJ6yI>

► **I.J** — The Only Peptide Proven to Extend Telomeres | Epitalon Explained

<https://www.youtube.com/watch?v=-OsKwXkMNZw>

► **Dr. Alex Tatem, MD** — The Fountain of Youth Peptide? The Truth About Epitalon

<https://www.youtube.com/watch?v=LgDthPOHg1Q>

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njweightloss.us/Peptide-Guide-Dosing.html