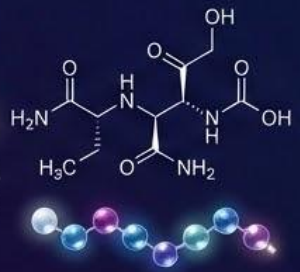
EPITALON

First isolated from Pineal Gland

Epitalon: From Pineal Gland to Clinical Potential

Isolation & Synthesis



Epitalon Peptide
(Ala-Glu-Asp-Gly)

Potential Clinical Applications & Research Areas

Anti-Aging & Geroprotection:
Telomere Lengthening,
Cellular Senescence Delay

Sleep & Circadian Rhythms:
Melatonin Regulation,
Sleep Cycle Normalization

Immune System Support:
Thymus Involution Reversal,
Immunomodulation

Metabolic Health:
Improved Insulin Sensitivity,
Lipid Profile

Neuroprotection &
Cognitive Function

BIOPHYSICAL PROFILE OF EPITALON PEPTIDE

LYMPHOCYTE PROLIFERATION IN THYMUS

Promotes lymphocyte growth during aging

ANTIOXIDANT EFFECTS

Reduces lipid oxidation, improves glutathione pools

IMPROVED INSULIN SENSITIVITY

Enhances glucose utilization, insulin response

TELOMERE LENGTHENING

Increases telomerase activity, extends telomeres

RAISED MELATONIN LEVELS

Restores and regulates pineal gland function

IMPROVED LIPID PROFILE

Decreases LDL/VLDL, increases HDL cholesterol

EPITALON DOSAGE REGIMES

OR

OR

Subcutaneous (SubQ)

- Concentration: 3mg/ml
- Dose: 1 ml
- Frequency: Once daily (AM)
- Duration: 80 days
- Total: 100mg

Intramuscular (IM) - Option 1

- Total: 100mg
- Dose: 10 mg
- Frequency: Daily
- Duration: 10 days
- Schedule: Twice annually

Intramuscular (IM) - Option 2

- Total: 50 mg
- Dose: 10 mg
- Frequency: Every third day
- Duration: 2 weeks
- Schedule: Twice annually

Adverse Effects

Potential Cancer Risk

Potential Cancer Risk: While extending the life of healthy cells is the goal, there is a recognized theoretical risk in the medical community regarding telomerase activators. The concern is that if telomerase is activated in the presence of existing cancer or pre-cancerous cells, it could inadvertently promote their survival and unchecked proliferation. Interestingly, some early Russian studies suggest Epitalon might actually decrease tumor formation in rodents, but the long-term impact of artificial telomerase activation in the human body remains an unproven and heavily debated unknown.

Injection Site Reactions

- Injection Site Reactions
- Headaches
- Fatigue and Drowsiness
- Digestive Discomfort

Short-term use of Epitalon appears to be relatively well-tolerated, with side effects limited mostly to the injection site and temporary fatigue. However, its long-term safety profile is simply unknown.

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Key Medical and Scientific Evidence

Telomere Elongation in Human Cells

Studies on human fetal fibroblast cultures showed Epitalon treatment allowed cells to **bypass Hayflick limit** (34 to **>44 passages**) with increased telomere lengths.

34 → >44 passages

Mechanism of Action (Telomerase Upregulation)

Epitalon increases expression of catalytic subunit (hTERT) and overall **telomerase enzyme activity** in normal fibroblast and epithelial cells.

ALT Activation in Cancer Cells

Recent (2025) studies: In telomerase-positive cancer cells, Epitalon acts via **Alternative Lengthening of Telomeres (ALT) pathway**, not **telomerase elevation**. ALT not observed in normal healthy cells.

Animal Studies

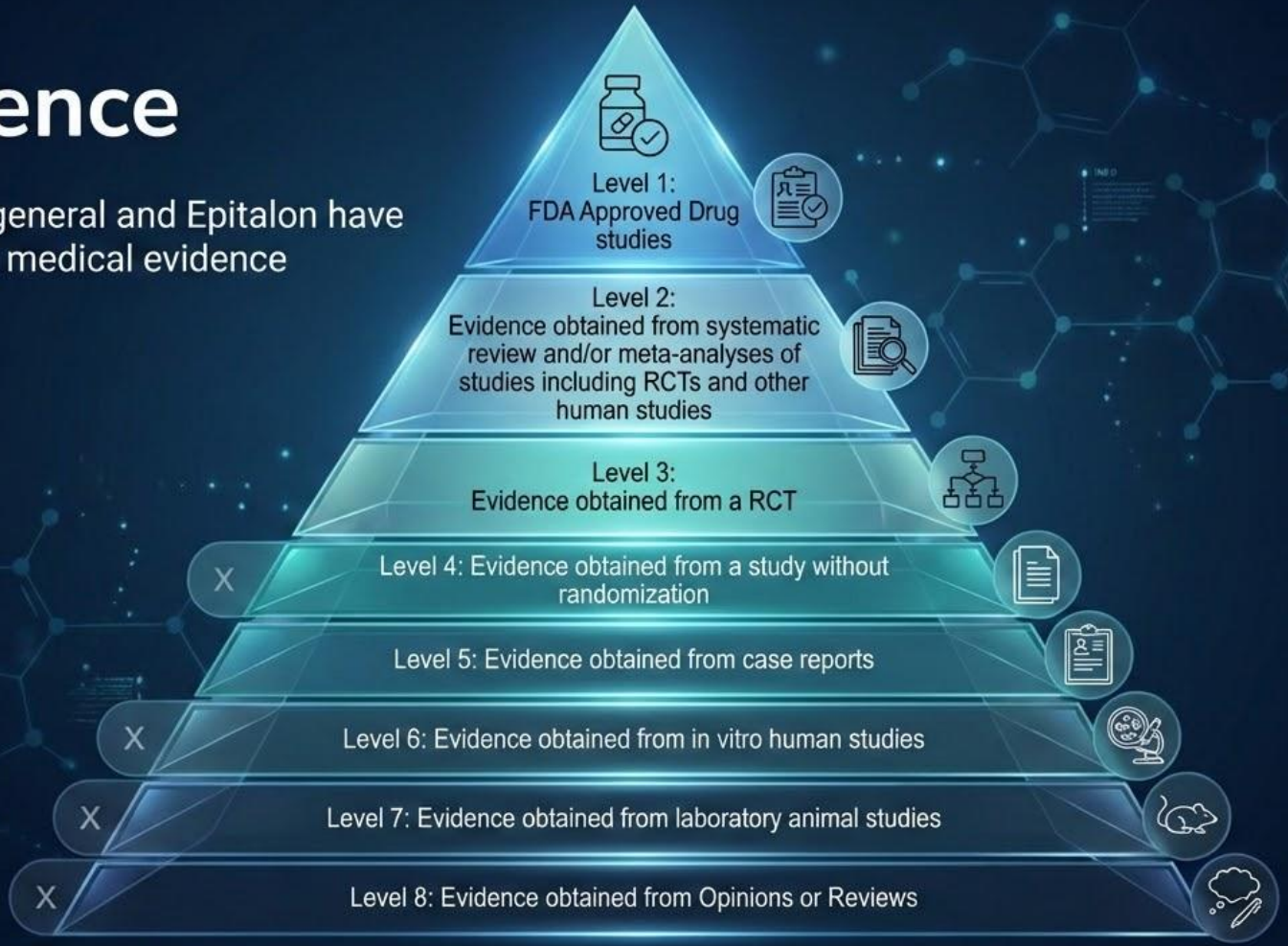
In vivo studies on aging mice and rats showed reduced chromosomal aberrations, decreased tumor incidence, and **increased longevity** (13-30% increase in max lifespan in some studies).

Human Case Study (Recent Evidence)

2024 case study (79-year-old male) combining Epitalon with therapies showed **increased telomere length (6.45 to 6.59 kb)** and **improved cognitive function** over 16 months.

Evidence

Peptides in general and Epitalon have low levels of medical evidence



Compounding Pharmacy Phone Numbers

THERAPATH (Infinity)

0432 791 791

GREEN'S

1300 622 262

ALBION

(07) 3862 6000

Epitalon Level 7

Goncharova ND, et al. Peptide correction of age-related hormonal dysfunction of the pancreas in monkeys. Bull Exp Biol Med. 2004;138(1):80-3.

Kossoy G, et al. Epitalon and colon carcinogenesis in rats: proliferative activity and apoptosis in colon tumors and mucosa. Int J Mol Med. 2003;12(4):473-7.

Sibarov DA, et al. Effects of intranasal administration of epitalon on neuron activity in the rat neocortex. Neurosci Behav Physiol. 2007;37(9):889-93.

Kossoy G, et al. Effect of the synthetic pineal peptide epitalon on spontaneous carcinogenesis in female C3H/He mice. In Vivo. 2006;20(2):253-7.

Epitalon Level 6

Khavinson V, et al. **AEDG Peptide (Epitalon) Stimulates Gene Expression and Protein Synthesis during Neurogenesis: Possible Epigenetic Mechanism.** Molecules. 2020;25(3):609.

Anisimov VN, et al. **Effects of pineal peptide preparation Epithalamin on free-radical processes in humans and animals.** Neuro Endocrinol Lett. 2001;11(1):9-18.

Khavinson VKh, et al. **Epithalon peptide induces telomerase activity and telomere elongation in human somatic cells.** Bull Exp Biol Med. 2003;135(6):590-2.