



Thymalin

Thymic Peptide Complex (Khavinson-line Bioregulator)

What It Is & What It Does

Thymalin is a polypeptide complex extracted from calf thymus, developed by Morozov and Khavinson in the Soviet Union to restore T-cell immunity. Its active fragments — the dipeptides KE (Lys-Glu) and EW (Glu-Trp), and the tripeptide EDP — are proposed to bind DNA and histones directly, regulating immune-gene expression rather than acting through a conventional receptor.

What The Research Shows

- Khavinson & Morozov's landmark 6-8 year trial followed 266 elderly patients (60+) split into four groups (control, Thymalin only, Epithalon only, Thymalin+Epithalon) and reported a 28% reduction in all-cause mortality and a 45% reduction in cardiovascular mortality in the treated groups.
- A 2021 trial in severe elderly COVID-19 patients (n=36 receiving Thymalin 10mg/day intramuscularly for 10 days, added to standard therapy) reported faster clinical improvement, quicker recovery from lymphopenia, faster normalization of inflammatory markers, and roughly halved hospital mortality compared to standard therapy alone.
- Mechanistically, Thymalin has been shown to stimulate maturation of T-cell precursors into CD28+ lymphocytes, normalize the CD4/CD8 ratio, raise natural killer (NK) cell activity, and lower IL-6 and TNF-alpha — a coherent, biologically plausible immune-modulation profile.

Reported Side Effects

- Limited systematic adverse event reporting in available published literature
- Injection site reactions reported anecdotally
- The 266-patient mortality trial was unblinded and non-randomized, and its full methodology is not available in English

Regulatory Status

Not FDA-approved. The mortality and COVID-19 data above come from a single Russian research group and its collaborators; independent replication by Western research groups is minimal. Research use only.