LIPOSOMAL

EPITALON

THIS INFORMATION IS PROVIDED AS A MEDICAL AND SCIENTIFIC EDUCATIONAL RESOURCE FOR THE USE OF PHYSICIANS AND OTHER LICENSED HEALTH CARE PRACTITIONERS ("PRACTITIONERS"). THIS INFORMATION IS INTENDED FOR PRACTITIONERS TO USE AS A BASIS FOR DETERMINING WHETHER TO RECOMMEND THESE PRODCUTS TO THEIR PATIENTS. ALL RECOMMENDATIONS REGARDING PROTOCOLS, DOSING, PRESCRIBING AND/OR USAGE INSTRUCTIONS SHOULD BE TAILORED TO INDIVIDUAL NEEDS OF THE PATIENT CONSIDERING THEIR MEDICAL HISTORY AND CONCOMITANT THERAPIES. THE DIETARY SUPPLEMENTS OFFERED BY QUICKSILVER SCIENTIFIC ARE NOT INTENDED FOR USE BY CONSUMERS AS A MEANS TO CURE, TREAT, PREVENT, DIAGNOSE, OR MITIGATE ANY DISEASE OR OTHER MEDICAL CONDITION.

Liposomal Epitalon delivers epitalon, a short-chain tetrapeptide (Ala–Glu–Asp–Gly) modeled after the naturally occurring pineal peptide epithalamin, in a highly absorbable oral liposomal format. This peptide bioregulator has been studied for its potential to influence key pathways involved in telomere integrity, cellular maintenance, oxidative balance, immune regulation, neuroendocrine activity, and circadian rhythm alignment.

By supporting balanced genetic and hormonal signaling associated with healthy aging, epitalon may promote optimal cellular performance, metabolic efficiency, and physiological resilience throughout the body.

Quicksilver Delivery Systems® technology provides a bioavailable, practitioner-grade, non-injectable alternative to support the delivery of this important longevity peptide.

Supplement Facts

Serving Size: 1 mL (2 Pumps) Servings Per Container: 30

	Amount Per Serving	% Daily Value
Epitalon	2.5mg	**

****Daily Value not established**

Other Ingredients: Water, glycerin, highly purified phospholipids, ethanol, tocofersolan, natural mixed tocopherols

EDUCATION

THE PINEAL GLAND AND PEPTIDE BIOREGULATORS

The pineal gland is a small endocrine gland in the brain that helps regulate circadian rhythm through the secretion of melatonin and 5-methoxytryptophol, and also influences metabolic and endocrine signaling.[1] With age, the pineal gland undergoes structural and functional changes, including calcification, glial cyst formation, and shifts in hormone output, which can contribute to sleep disruption, cognitive decline, metabolic imbalance, and altered thermoregulation.[1,2] While these changes are often considered part of normal aging, research suggests that supporting pineal health may help maintain its normal physiological function over time.[3]

Peptide bioregulators, short amino acid sequences that influence gene expression and protein synthesis, are being studied for their potential to support healthy cellular and tissue function. The natural pineal peptide epithalamin has been associated with supporting telomerase activity, neuroendocrine signaling, immune vitality, and antioxidant defense. Its synthetic analog, epitalon, demonstrates similar activity, which may support mechanisms associated with healthy aging.[4]

CELLULAR HEALTH AND OXIDATIVE STRESS SUPPORT

The synthetic bioregulator, epitalon, acts at the cellular level to support mechanisms involved in telomere maintenance, chromosomal stability, and antioxidant defenses that help maintain normal cellular function. Preclinical studies have reported increases in telomerase activity and telomere length, and observational studies in elderly individuals have shown similar findings with both epitalon and epithalamin.[5,6,7] The peptide epitalon has been shown in preclinical models to support normal cell renewal and maintain healthy cellular turnover.[8,9]

In both animal and human studies, epitalon has been associated with genomic stability and cellular resilience, helping to preserve DNA integrity under conditions of oxidative stress.[10,11,12,13] It may also support the body's natural antioxidant defenses by modulating redox balance and influencing Keap1/Nrf2 signaling, which regulates endogenous protective enzymes.[13,14,15] Together, these mechanisms help maintain genomic integrity and healthy cellular function, supporting overall physiological balance with advancing age.

NEURONAL HEALTH AND COGNITIVE SUPPORT

The brain is particularly vulnerable to oxidative and inflammatory stress, which can influence mitochondrial function, neuronal signaling, and age-related changes in pineal activity. Chronic neuroinflammation is associated with alterations in synaptic activity and cognitive performance.[16]

Preclinical studies suggest that epitalon may support neuronal health through epigenetic regulation, interacting with chromatin and transcriptional control elements involved in learning and memory.[17] In cellular models of neuronal aging, epitalon was associated with reduced DNA damage, enhanced dendritic branching, and increased synaptic junction formation.[18] Human stem cell studies have also demonstrated upregulation of neuronal differentiation genes and enhanced protein synthesis, which may help maintain neuronal structure and signaling capacity.[19]

The bioregulator epitalon has been shown in preclinical models to help maintain oxidative balance and mitochondrial integrity, supporting normal neuronal metabolism and synaptic activity.[19,20] It also demonstrates selective anticholinesterase activity, which may influence cholinergic signaling, and has been associated with increased production of soluble forms of amyloid precursor protein (APP) in research models.[21] Through these combined mechanisms, this peptide may help support neuronal structure and communication pathways that promote healthy cognitive and cellular function during aging.

IMMUNE FUNCTION AND AGE-RELATED IMMUNE SUPPORT

Immunosenescence, the gradual decline in immune function associated with aging, is characterized by shifts in adaptive responses and overall immune efficiency.[22,23] Preclinical studies suggest that the bioregulator epitalon may support thymic and T-cell function and help maintain balanced immune activity with age.

In animal models, epitalon has been associated with healthy thymocyte activity and the maintenance of normal thymic function, reflecting its potential role in supporting T-cell maturation.[24] It may also influence interferon-gamma activity in T-cells, a cytokine involved in lymphocyte signaling and communication. Long-term studies with epithalamin in preclinical models have reported increased immune-cell production in bone marrow, balanced CD4:CD8 ratios in spleen and thymus, and elevated melatonin and testosterone levels.[23,25] Enhanced T-cell migration from bone marrow to thymus further suggests a role in coordinated immune-neuro-endocrine interactions.

The bioregulator epitalon may also influence circadian rhythms, which are recognized as modulators of immune activity.[26,27] In addition, epitalon may support cellular redox balance and help modulate inflammatory signaling, mechanisms that complement its broader role in maintaining normal immune and cellular function.[8,14,28,29,30]

NEUROENDOCRINE SUPPORT AND HEALTHY AGING

Age-related changes in the pineal gland, hypothalamus, and endocrine networks can influence circadian rhythms, hormone signaling, and metabolic processes, contributing to shifts in cellular function, oxidative balance, and overall physiological resilience.[18,19,21,31,32,33] Preclinical and observational studies suggest that the bioregulator epitalon may support neuroendocrine function and help maintain healthy circadian and metabolic processes, potentially contributing to overall vitality.

In animal models, epitalon has been shown to influence pineal function and melatonin synthesis, with potential effects on circadian rhythm regulation and cortisol patterns.[34,35,36] Preliminary human studies suggest similar associations, indicating that epitalon may support healthy neuroendocrine signaling.[37] Because melatonin can influence glucose metabolism, these effects may also relate to observed metabolic outcomes in preclinical studies.[38,39] By supporting communication within the pineal-hypothalamic-pituitary axis, epitalon may help maintain endocrine and metabolic balance during aging.

Clinical studies with epithalamin, the natural analog of epitalon, provide additional evidence of potential age-related physiological support. Observational studies in older adults suggest that epithalamin supplementation may be associated with improvements in markers related to circadian rhythm, physical endurance, and metabolic regulation[3,40,41] Combined administration with thymulin appeared to influence systemic markers in preliminary studies, indicating possible complementary effects.

Overall, these findings suggest that the bioregulator epitalon may support neuroendocrine function, circadian alignment, metabolic homeostasis, and general physiological resilience, which are associated with healthy aging.

Quicksilver Delivery Systems® improve upon liposomal and emulsification technology with smaller, more stable particles made from the highest-grade ingredients available. In addition to exceptional absorption rates, these tiny liposomal and nanoemulsified particles increase diffusion across mucus membranes, enhance lymphatic circulation of nutrients and support cellular delivery.

References available https://www.quicksilverscientific.com/pages/references/epitalon