

COPPER PEPTIDE COMPLEX · GLY-HIS-LYS-Cu<sup>2+</sup>

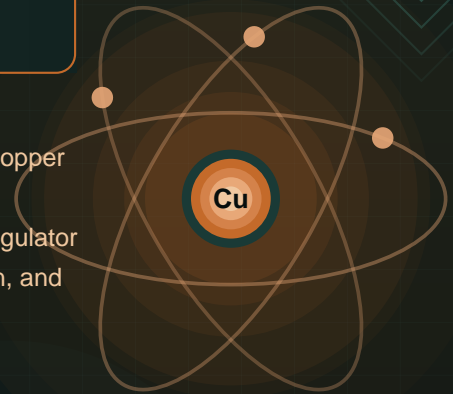
# GHK - Cu

Renew Your Skin. Reset Your Genes.

Restore Your Body From Within.

SKIN RENEWAL · GENE RESET · WOUND REPAIR · ANTI-AGING

Discovered in human plasma in 1973, **GHK-Cu** is a naturally occurring copper peptide complex that does something extraordinary — it resets the gene expression of aging cells back toward a more youthful state. A master regulator of repair, it simultaneously rebuilds skin, heals tissue, fights inflammation, and modulates the activity of over **4,000 human genes**.



4,000+

GENES INFLUENCED

1973

YEAR DISCOVERED

Cu<sup>2+</sup>

COPPER COMPLEX

Plasma

NATURAL ORIGIN

# What Is GHK-Cu?

A copper peptide that rewrites how your cells behave

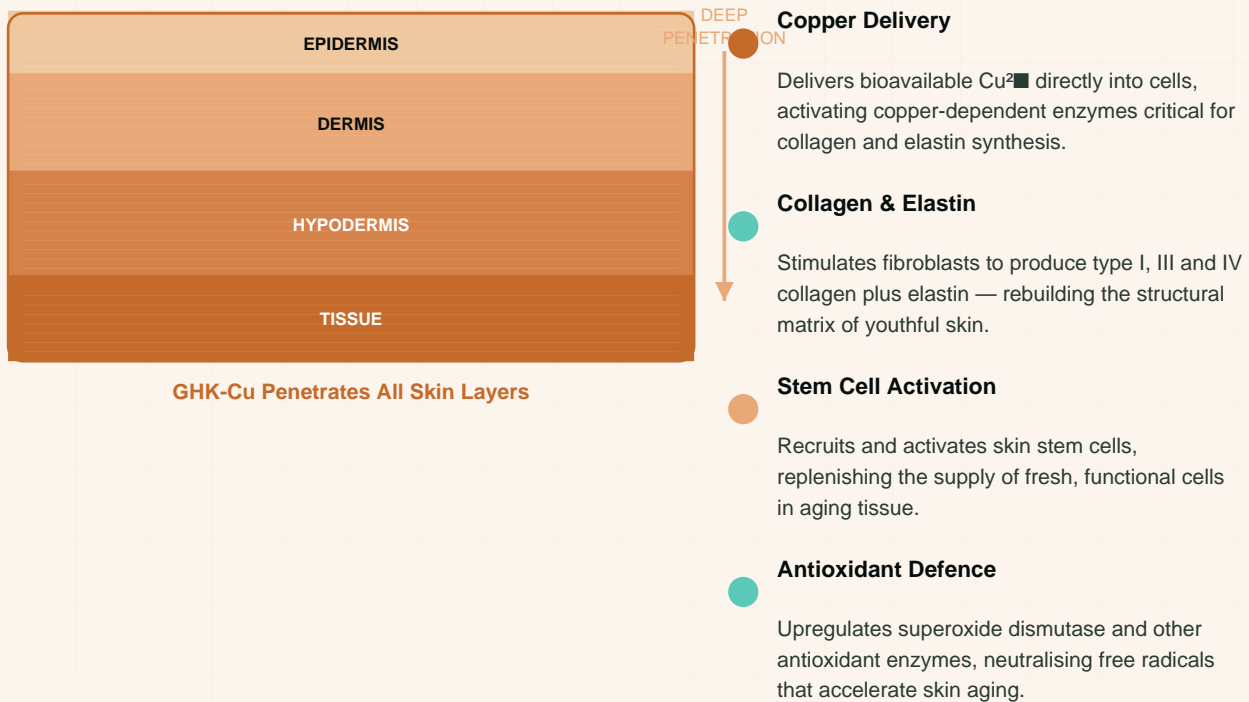
## Discovered in Human Blood — Naturally

GHK-Cu is a tripeptide — just three amino acids (Glycine, Histidine, Lysine) — that forms a tight complex with copper ions. It occurs naturally in human plasma, saliva, and urine, and its levels are highest in youth, declining significantly with age. First isolated by Dr Loren Pickart in 1973, decades of research have revealed it as one of the most versatile and biologically active molecules the human body produces — a true orchestrator of regeneration.

## The Gene Reset — 4,000 Genes, One Peptide

GHK-Cu's most remarkable property is its ability to modulate gene expression on a massive scale. Studies using DNA microarray analysis found that GHK-Cu influences the activity of over **4,000 human genes** — activating those involved in tissue repair, stem cell recruitment, and antioxidant defence, while simultaneously suppressing genes linked to inflammation, cancer progression, and cellular aging. Put simply: it shifts your cells from an "aging" programme back toward a **youthful repair mode**.

### How GHK-Cu Works



### ★ DECLINING WITH AGE — AND WHY IT MATTERS

At age 20, plasma GHK-Cu levels are around 200 ng/mL. By age 60, they have fallen by more than 60%. This decline tracks closely with the visible and physiological signs of aging — slower wound healing, thinning skin, reduced tissue repair capacity, and increased inflammation. Restoring GHK-Cu levels may be one of the most direct ways to reverse this trajectory.

# The Benefits of GHK-Cu

From skin surface to gene expression — a peptide unlike any other

## 01 Skin Renewal & Anti-Aging

GHK-Cu is arguably the most studied peptide for skin health. It thickens the dermis, tightens loose skin, reduces fine lines, and restores the plump, firm texture of younger skin — by rebuilding the collagen and elastin matrix from the inside out.

## 02 Wound Healing & Tissue Repair

One of GHK-Cu's most well-established properties, supported by decades of research, is its ability to dramatically accelerate wound healing — promoting faster closure, better tissue organisation, and significantly reduced scarring.



## 03 Hair Growth & Follicle Restoration

GHK-Cu stimulates hair follicle size and activity, increases hair density, and has been shown to outperform minoxidil in some studies for promoting hair regrowth and reducing hair loss in both men and women.

## 04 Gene Expression Reprogramming

Perhaps its most profound benefit — GHK-Cu activates over 2,200 genes associated with tissue regeneration and suppresses over 1,800 genes linked to inflammation, disease progression, and cellular aging — effectively resetting the aging cell's programme.

## 05 Lung & Respiratory Protection

Research shows GHK-Cu restores healthy gene expression in damaged lung tissue, with particular relevance to COPD and emphysema, where it reverses many of the destructive gene expression patterns caused by chronic inflammation.

## 06 Anti-Cancer Gene Suppression

GHK-Cu has been shown to suppress the expression of genes involved in cancer progression, aggressive tumour behaviour, and metastasis pathways — representing a compelling area of ongoing oncology research.

## 07 Nervous System Support

By promoting the synthesis of nerve growth factor (NGF) and supporting myelin production, GHK-Cu supports peripheral nerve health, speeds recovery from nerve damage, and may protect against neurodegenerative decline.

## 08 Systemic Anti-Inflammatory Action

GHK-Cu suppresses the TNF-alpha and NF-κB inflammatory pathways that drive chronic, systemic inflammation — addressing one of the most pervasive drivers of aging and age-related disease at the genetic level.

No other peptide matches GHK-Cu's combination of skin-deep beauty and cellular-level biology. From rebuilding the dermis to reprogramming thousands of genes, it represents a unique bridge between cosmetic science and the deepest mechanisms of human longevity.