GHK-Cu

COPPER TRIPEPTIDE—ROUTE-SPECIFIC EVIDENCE

Benefits, research claims, evidence boundaries, and safety context—in one page.

COPPER TRIPEPTIDE

ROUTE MATTERS

WHAT THE EVIDENCE IS STUDYING

GHK-Cu is a naturally occurring copper-binding tripeptide studied in skin remodeling, wound biology, and cell signaling. Evidence varies sharply by formulation and route.

RESEARCH PROFILE

- **Structure**
  Gly-His-Lys + copper
- **Best-known research**
  Topical skin biology
- **Injectable status**
  Not FDA-approved

EVIDENCE REALITY CHECK

Topical and laboratory findings should not be used to justify injectable or systemic claims. Small cosmetic studies and preclinical work do not establish broad anti-aging, hair-growth, or healing benefits.

BEST WAY TO DESCRIBE IT

A biologically active cosmetic-research peptide with route-specific limits.

SCAN FOR THE LIVE GUIDE

Opens the current printable PDF at rippedtidebiolabs.com.

Permanent Education Center resource link.

1 SKIN REMODELING

GHK-Cu has been studied for collagen, elastin, glycosaminoglycan, and matrix-remodeling signals. Clinical cosmetic evidence is limited and formulation dependent.

2 WOUND BIOLOGY

Cell and animal studies explore repair, angiogenesis, antioxidant, and inflammatory pathways. These are not established treatment effects for human wounds.

3 HAIR CLAIMS

Copper peptides appear in scalp and hair products, but robust evidence for meaningful hair regrowth from GHK-Cu is limited.

4 ROUTE CHANGES THE QUESTION

A topical cosmetic, microneedling adjunct, and injectable preparation have different exposure, sterility, dosing, and safety considerations.

IMPORTANT SAFETY + REGULATORY NOTE

Injectable GHK-Cu is not FDA-approved, and adequate systemic safety and dosing data are lacking. Topical products may cause irritation or sensitivity; avoid use on infected or severely damaged skin without clinical guidance. Injectable products add sterility, impurity, immune-reaction, and copper-exposure uncertainties.

Sources: Pickart et al., Biomed Res Int. 2015;2015:648108; Maquart et al., FEBS Lett. 1988;238:343-346; small clinical cosmetic literature, including post-laser GHK-Cu studies.