

PRESCRIPTION MONOGRAPH

Compounded Active Ingredients: GHK-Cu

Form: Nasal Spray

Drug Class:

- Peptide complex (endogenous tripeptide)
 - Copper-binding growth factor analog
 - Cosmeceutical/anti-aging and regenerative agent
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Mechanism of Action^{1,2}:

GHK-Cu is a naturally occurring copper-binding tripeptide that is intended to:

- Bind copper(II) ions, delivering them to tissues to support wound healing, tissue remodeling, and antioxidant defense
 - Upregulate collagen and glycosaminoglycan synthesis in skin and connective tissue
 - Modulate gene expression involved in anti-inflammation, angiogenesis, hair growth, and cellular repair
 - Scavenge free radicals, reducing oxidative damage
 - Increase stem cell activation and supports epithelial regeneration
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Indications Commonly Prescribed For:

- Skin rejuvenation / anti-aging
 - Wound healing and scar reduction
 - Hair regrowth support
 - Microneedling and post-laser therapy
 - Joint or soft tissue repair
 - Systemic wellness or anti-inflammatory support
 - Neuroprotection
 - Fibroblast activation
 - Metabolic modulation
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Before Use: Let your doctor know if you have had any allergic reactions to nasal sprays in the past. Let your health care provider know if you are pregnant or breast feeding. Let your healthcare provider know of all supplements you are currently taking. Let them know of any thyroid or corticosteroid medications you are prescribed.

Contraindications:

- Known allergy to GHK or copper compounds
 - Wilson's disease (copper metabolism disorder)
 - Active neoplastic disease (caution due to proliferative effects)
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Cautions: Let your Healthcare provider know of any changes of vision while on this compounded preparation

How to Use: This medication is a nasal spray and is delivered in a premixed liquid form. Gently blow your nose to clear it from mucous before using the compound. Remove the ring and protective cap to reveal the nasal spray tip. Tilt head slightly forward, hold bottle with thumb on bottom and your index and middle fingers on top. Use your fingers to squeeze down on the pump while you breathe in slowly through your nose. If needed, repeat the process for the second nostril.

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Warnings and Precautions:

- Monitor for signs of copper overload with prolonged systemic use
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Adverse Reactions:

Common:

- Mild skin irritation
- Transient erythema

Rare:

- Nausea, dizziness
 - Possible metallic taste
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Interactions:

- Chelating agents (e.g., EDTA) may reduce GHK-Cu effectiveness
 - Avoid combining with high-dose zinc (competes with copper binding)
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Use in Specific Populations:

- Pregnancy: Safety not established; avoid systemic use
 - Liver/Kidney Disease: No known hepatotoxicity or nephrotoxicity
 - Pediatrics: Avoid systemic use; topical use unstudied
 - Geriatrics: Frequently used for anti-aging benefit
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Storage:

- Refrigerate at 2°C to 8°C (36°F to 46°F)
 - Can be stored at room temperature (up to 30°C or 86°F) for up to 48hrs
 - Do not freeze
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Monitoring Parameters:

- Skin/hair response over 8–12 weeks
 - Liver function tests if used systemically long-term
 - Copper and ceruloplasmin levels in extended systemic protocols
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Citations:

1. Dou Y, Lee A, Zhu L, Morton J, Ladiges W. The potential of GHK as an anti-aging peptide. *Aging Pathobiol Ther.* 2020;2(1):58-61. doi:10.31491/apt.2020.03.014
 2. Pickart L, Vasquez-Soltero JM, Margolina A. GHK Peptide as a Natural Modulator of Multiple Cellular Pathways in Skin Regeneration. *Biomed Res Int.* 2015;2015:648108. doi: 10.1155/2015/648108. Epub 2015 Jul 7. PMID: 26236730; PMCID: PMC4508379.
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Compounded medications are not FDA-approved and may differ in risks, benefits, and side effects from FDA-approved products. These statements have not been evaluated by the FDA and are not intended to diagnose, treat or cure any disease or condition and do not indicate any claims of safety or efficacy.
Individual results may vary.