REBEL MED NW · PATIENT GUIDE

GHK-Cu (Copper Peptide) Therapy

A patient guide to GHK-Cu — topical (skin) use and compounded subcutaneous injection

This guide is for patients using **GHK-Cu under the direction of a Rebel Med NW physician** — whether as a topical serum or cream (including alongside RF microneedling and skin treatments) or as a prescribed subcutaneous injection. The two forms are **very different** in evidence and regulatory status, and this guide covers both honestly.

> **⚠ Read this first — important context**
>
> **Topical GHK-Cu** is a widely used cosmetic ingredient (copper tripeptide-1) with decades of use in skin care — legal, but not an FDA-approved drug for any medical condition. **Injectable GHK-Cu is not an FDA-approved drug and has never been tested in human clinical trials.** It was *not* part of the FDA advisory committee's July 2026 peptide review (it is expected in a later review round), and compounded injectable GHK-Cu's regulatory status remains unsettled. Compounded peptides are **not reviewed by FDA for safety, effectiveness, or quality before marketing.** Use injections **only as prescribed to you, under our supervision.**

What Is GHK-Cu?

GHK-Cu is a naturally occurring **tripeptide** — just three amino acids (glycine, histidine, lysine) — bound to a **copper ion**. Your body makes it: it circulates in blood plasma and appears in saliva and urine, and it's released from tissue proteins at sites of injury as part of the normal repair signal. Blood levels appear to decline substantially with age. It was first isolated from human plasma in 1973 and has been studied since — mostly in skin biology and wound healing.

How It's Thought to Work

In laboratory and animal studies, GHK-Cu stimulates fibroblasts to produce **collagen, elastin, and glycosaminoglycans** (the skin's structural and moisture-holding molecules), helps balance the enzymes that remodel tissue (MMPs and their inhibitors), supports antioxidant enzymes, calms inflammatory signaling, and delivers copper — a required cofactor for collagen cross-linking and antioxidant defense. In animal models it enlarges hair follicles and accelerates wound closure. Broader claims that GHK "resets" thousands of genes come from computational studies by its discoverer and remain hypotheses.

What the Research Shows — Honestly

Form	What the evidence shows

Topical (skin)	**Modest but real human data.** Facial studies (about 12 weeks) reported improved skin density, thickness, elasticity, and fine lines — though the best-known studies were published only as conference abstracts. One small randomized split-face trial reported significant wrinkle reduction vs. placebo. A randomized trial of topical GHK-Cu gel improved healing of diabetic foot ulcers in the 1990s. A post-laser-resurfacing trial showed *no* objective benefit. Overall: encouraging for skin quality, not definitive.
Injectable (systemic)	**No published human clinical trials.** Effectiveness and safety of injected GHK-Cu in people are untested — use is based on mechanism, animal data, and clinical experience only.
Animal & lab	Consistent wound-healing acceleration across several species; anti-fibrotic effects in lung models; nerve-regeneration support; hair-follicle enlargement.

Potential Benefits

The hoped-for — *not guaranteed* — benefits include support for:

- **Skin quality** — firmness, elasticity, fine lines, and post-procedure recovery (topical; often paired with RF microneedling, which may enhance absorption).
- **Wound and tissue repair** — based on topical wound data and animal studies.
- **Hair and scalp support** — based on follicle effects in animal and mechanism studies.
- **Systemic "repair signaling"** (injectable) — this is the most speculative use, resting on mechanism rather than human evidence.

Honest expectations: Topical GHK-Cu is a reasonable, low-risk addition to a skin program — with gradual, modest effects over weeks to months. Injectable GHK-Cu is **investigational**: we'll be clear about what's hoped-for versus what's proven, and we'll reassess together.

Who Should NOT Use GHK-Cu

Do not use GHK-Cu, and tell your provider, if any of these apply:

- **Wilson's disease** or another copper-handling disorder — avoid injectable/systemic copper peptides entirely.
- **Pregnancy or breastfeeding** — no safety data; avoid injections, and ask us before topical use.
- **Known allergy** to GHK-Cu, copper, or any ingredient in the formulation.
- **Significant liver disease** — tell us first (the liver manages copper).

Athletes

GHK-Cu is **not specifically named** on the 2026 WADA Prohibited List, and topical cosmetic use is generally not an issue — but injected unapproved substances can fall under WADA's broad catch-all category (S0). If you compete in tested sport, **check GlobalDRO.com and ask us before injecting anything.**

Possible Side Effects

Topical

- Mild irritation, redness, or stinging (more likely right after microneedling or on compromised skin), a temporary blue tint from the copper color, and rare contact allergy. Patch-testing is sensible.

Injectable

- **Injection-site reactions** — redness, swelling, itching, or mild pain (most common).
- Reports (unverified in studies) of lightheadedness or lowered blood pressure at higher doses — rise slowly if you feel faint, and tell us.
- Copper exposure: each milligram of GHK-Cu carries a small amount of copper (well under daily dietary limits at typical doses), but injected copper bypasses the gut's natural regulation and **long-term effects are unknown.**
- Unknown long-term risks — no human safety studies exist. Report anything unusual.

When to stop and call us

Stop and contact your provider (or seek urgent care for severe symptoms) for signs of an allergic reaction — **trouble breathing, swelling of the face/lips/throat, hives** — fainting, signs of infection at an injection site, or any reaction that worries you. **Call 911 for any emergency.**

Dosing & How to Use

Your physician will direct your exact regimen. There is **no scientifically validated systemic human dose** — the ranges below reflect common practice, not controlled trial data:

Form	Commonly used approach	Notes
Topical serum/ cream/foam	Apply a thin layer to clean, dry skin 1–2× daily, per product directions	After microneedling, follow our specific post-procedure timing. Avoid mixing in the same routine step with strong acids or high-dose vitamin C (they can destabilize the copper complex) — use at different times of day.

Subcutaneous injection	~1–2 mg SC daily, often in cycles (e.g., 30 days on, then reassess)	Common practice only — not evidence-established.

Important — how much to draw up or click: Injectable doses are prescribed in **milligrams (mg)**, but you'll measure in **units on an insulin syringe or clicks on a dosing pen** — and that conversion depends entirely on the concentration your pharmacy prepared. **Use the exact number of units or clicks your provider or pharmacy gives you — do not estimate.** If you're unsure, call us before injecting.

How to Give a Subcutaneous Injection

If you've been prescribed injectable GHK-Cu, it goes into the fatty layer just under the skin using a small **insulin syringe** or dosing pen. If it came as a powder, your provider will show you how to reconstitute it — follow those specific instructions.

Step by step

1. **Wash your hands** thoroughly with soap and water.
2. **Inspect the vial or pen.** GHK-Cu solution is naturally **blue** — that's normal. Don't use it if it's cloudy, has particles, has changed color unexpectedly, or is past its discard date.
3. **Clean the vial top** (or pen septum) with an alcohol swab and let it dry.
4. **Draw up or dial your exact prescribed dose** (units or clicks, as instructed).
5. **Choose and clean your site.** The abdomen is ideal — at least 2 inches from your belly button — or the front of the thigh. *Rotate sites* each time.
6. **Pinch a fold of skin** gently between your thumb and finger.
7. **Insert the needle** all the way at a 45–90° angle in one smooth motion.
8. **Inject slowly**, then release the pinch.
9. **Withdraw the needle** and apply gentle pressure with clean gauze (don't rub).
10. **Dispose** of the syringe or pen needle immediately in your sharps container — never recap or reuse. Wash your hands.

Storage & sharps

- **Refrigerate** injectable GHK-Cu (do not freeze), protect it from light, and use it within the timeframe your pharmacy specifies. Store topicals per their label.
- **Never reuse or share** needles, pens, or vials. Dispose of all needles in an approved **sharps container.**

Monitoring & Follow-Up

For skin goals we'll track photos and your response over 8–12 weeks. For injectable use — because it's investigational — we'll monitor how you feel, watch for side effects, and decide together whether to continue, adjust, or stop. Keep your scheduled visits, and call sooner if something concerns you.

Questions?

Your Rebel Med NW care team is here to help. If anything about your regimen is unclear — or you're weighing whether this therapy is right for you — **call us first.**

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Medical disclaimer: This guide is educational, for Rebel Med NW patients; it is not medical advice for the general public and does not recommend GHK-Cu for any condition. **Topical GHK-Cu is a cosmetic ingredient, not an FDA-approved drug. Injectable GHK-Cu is not FDA-approved, has no published human trials, and its long-term safety is unknown; compounded peptides are not reviewed by FDA for safety, effectiveness, or quality.** Regulatory status of injectable GHK-Cu is evolving (it was not part of FDA's July 2026 advisory review and is expected in a later round). Benefits are not guaranteed and individual results vary. Always follow the specific instructions from your provider and pharmacy. Report suspected side effects to us, and — if you wish — to FDA MedWatch (1-800-FDA-1088 · fda.gov/medwatch). In an emergency, call 911.

Key references: Pickart L, Margolina A. GHK-Cu review. Int J Mol Sci. 2018;19(7):1987. · Mulder GD, et al. Topical GHK-Cu gel in diabetic ulcers. Wound Repair Regen. 1994;2:259–69. · Leyden J, et al. GHK-Cu facial studies (AAD 2002, abstracts). · Badenhorst T, et al. Split-face GHK-Cu RCT. J Aging Sci. 2016;4:166. · Miller TR, et al. GHK-Cu after laser resurfacing. Arch Facial Plast Surg. 2006;8:252–9. · GHK and lung fibrosis: PMID 29311918; PMID 31809714. · FDA compounding bulk-substances lists (fda.gov, 2023–2026). Educational summary only.