Peptide Research Cheat Sheet

What the Evidence Actually Shows — A Clinician's Quick Reference

How to Read This Guide

The peptide space is flooded with hype. Clinics advertise peptides with claims far exceeding the evidence. Patients arrive with printouts from Reddit. Clinicians need a fast, honest reference. That's this document.

Every peptide below is rated on an evidence scale. We've separated what's well-established from what's promising from what's pure speculation.

STRONG — RCTS, META-ANALYSES, FDA-APPROVED

MODERATE — SMALL RCTS, STRONG OBSERVATIONAL DATA

LIMITED — CASE SERIES, OPEN-LABEL, EMERGING

PRECLINICAL — ANIMAL/IN VITRO ONLY

⚠️ **Regulatory Note:** Many peptides discussed here are not FDA-approved for the uses commonly marketed. Some are classified as research chemicals. This guide summarizes published evidence — not treatment recommendations. Always practice within your regulatory framework.

Category 1: GLP-1 Receptor Agonists

The most evidence-backed category in the peptide space.

Peptide	Evidence Level	What Evidence Shows	Key Studies	Common Claims vs. Reality
Semaglutide (Ozempic, Wegovy)	STRONG	15-17% body weight loss (STEP trials). Cardiovascular risk reduction (SELECT trial — 20% reduction in MACE). T2DM glycemic control.	STEP 1-5, SELECT, SUSTAIN series	**Claim:** "Cures obesity." **Reality:** Weight regain is common after discontinuation (2/3 regained within 1 year in STEP-1 extension). Effective tool, not a cure.
Tirzepatide (Mounjaro, Zepbound)	STRONG	Dual GIP/GLP-1 agonist. Up to 22.5% weight loss (SURMOUNT-1). Superior to semaglutide in head-to-head (SURPASS-2).	SURMOUNT 1-4, SURPASS series	**Claim:** "Better than semaglutide for everyone." **Reality:** Higher efficacy on average, but individual response varies. GI side effects can be more pronounced.

Category 2: Growth Hormone Secretagogues

Where the evidence gets murkier and the marketing gets louder.

Peptide	Evidence	What Evidence Shows	Key Caveats
CJC-1295 / Ipamorelin (combination)	LIMITED	CJC-1295 alone: increases GH/IGF-1 in healthy adults (Teichman 2006). Ipamorelin: GH release without cortisol/prolactin elevation (Raun 1998). Combination: very limited published human data.	The combination is widely used clinically but has almost no published RCT data as a combo. Most evidence is extrapolated from individual peptide studies. Long-term safety unknown.
MK-677 (Ibutamoren)	MODERATE	Oral GH secretagogue. Increases GH and IGF-1. Improved sleep quality in elderly (Copinschi 1997). Increased lean body mass in elderly (Nass 2008). Did NOT improve cognitive function in Alzheimer's (failed Phase II).	Commonly marketed for anti-aging. Evidence for most anti-aging claims is weak. Increases appetite significantly. May worsen insulin resistance. Not FDA-approved for any indication.
Sermorelin	MODERATE	FDA-approved (historically) for pediatric GH deficiency. Increases GH secretion via GHRH receptor. Some data supporting body composition improvements in GH-deficient adults.	Discontinued commercially but available through compounding. Better safety profile than exogenous GH. Less potent than newer secretagogues. Most adult "anti-aging" use is off-label.

Category 3: Healing & Recovery Peptides

Peptide	Evidence	What Evidence Shows	Key Caveats
BPC-157	PRECLINICAL	Gastric pentadecapeptide. Extensive animal data showing accelerated healing of tendons, ligaments, muscle, GI tract, and nerves (Sikiric et al., multiple publications). Oral and injectable forms studied in animals.	**No published human clinical trials.** Despite widespread clinical use, all evidence is animal/in vitro. The gap between animal promise and human proof is enormous. Commonly marketed as proven — it isn't yet.
TB-500 (Thymosin Beta-4)	LIMITED	Role in wound healing and tissue repair. Some human data in corneal healing and cardiac repair post-MI (limited trials). Promotes angiogenesis and cell migration in preclinical models.	Human data limited to specific applications (ophthalmology, cardiology). Musculoskeletal healing claims based primarily on animal studies. Originally a veterinary performance-enhancing substance (horse racing scandals).

Pentadecarginine (AOD-9604)	LIMITED	Modified GH fragment. Anti-obesity effect without GH side effects (Phase II data). Failed Phase III for obesity. Some data for cartilage repair (ongoing research).	Failed its primary indication (obesity). Pivoting to joint health. TGA-approved in Australia for specific formulations. Often oversold given its Phase III failure.

Category 4: Cognitive & Neuroprotective Peptides

Peptide	Evidence	What Evidence Shows	Key Caveats
Selank	LIMITED	Synthetic tuftsin analog. Approved in Russia for anxiety and nootropic effects. Some Russian clinical trials showing anxiolytic effects comparable to low-dose benzodiazepines without sedation.	Most studies are Russian-language only. Not replicated in Western RCTs. Regulatory approval in Russia doesn't meet FDA/EMA standards. Intranasal bioavailability uncertain.
Semax	LIMITED	Synthetic ACTH analog. Approved in Russia for stroke recovery and cognitive enhancement. Some data showing BDNF upregulation and neuroprotective effects.	Same limitations as Selank — Russian studies, limited Western replication. Interesting mechanism but inadequate evidence for clinical recommendations.
Dihexa	PRECLINICAL	Angiotensin IV analog. 7 orders of magnitude more potent than BDNF in promoting HGF/Met signaling (animal data). Improved cognitive function in rat dementia models.	**Zero human studies.** One of the most overhyped peptides. Animal potency does not predict human safety or efficacy. Unknown long-term effects including cancer risk (HGF/Met signaling is implicated in tumor progression).

Category 5: Immune & Anti-Inflammatory

Peptide	Evidence	What Evidence Shows	Key Caveats
Thymosin Alpha-1 (Zadaxin)	MODERATE	Immune modulator. Approved in 35+ countries for hepatitis B/C adjunct. Phase II/III data for melanoma, HCC, and vaccine adjuvant. Studied in severe COVID-19 (mixed results).	Best-studied immune peptide. Real clinical use in Asia/Europe. Not FDA-approved in US. Evidence strongest for chronic viral hepatitis.
KPV (α-MSH fragment)	PRECLINICAL	Anti-inflammatory fragment of alpha-melanocyte stimulating hormone. Reduced inflammation in colitis models. NF-κB pathway modulation in vitro.	No human clinical trials. Marketed widely for gut inflammation and autoimmune conditions based entirely on preclinical data. Oral bioavailability not established.

The Evidence Hierarchy — Why It Matters for Peptides

> **Most peptide marketing operates at Level 5-7 of the evidence hierarchy.** Only GLP-1 agonists consistently reach Level 1-2. When evaluating peptide claims, always ask: "What level of evidence supports this?"

Level	Type	What It Means	Peptide Examples
1	Systematic reviews / Meta-analyses	Strongest. Multiple RCTs analyzed together.	Semaglutide, Tirzepatide
2	Randomized controlled trials	Strong. Controlled, blinded, adequate power.	MK-677, Thymosin Alpha-1
3	Controlled trials without randomization	Moderate. Comparison group but not randomized.	Sermorelin (some)
4	Case-control / Cohort studies	Moderate. Observational, prone to bias.	CJC-1295 (limited)
5	Case series / Case reports	Weak. No comparison group. Anecdotal.	BPC-157 (human use reports)
6	Animal / In vitro studies	Preclinical. May not translate to humans.	BPC-157, KPV, Dihexa
7	Expert opinion / Mechanism theory	Weakest. "It should work because..."	Many "stacking" protocols

Red Flags When Evaluating Peptide Clinics

1. **"Research proves..."** followed by citations to animal studies presented as if they were human evidence
2. **No mention of side effects or risks** — every intervention has risks
3. **"Proprietary blend"** — you don't know what you're getting or the dose
4. **Claims that span every system** — "anti-aging, fat loss, muscle gain, cognitive enhancement, immune boost, and gut healing" from one peptide
5. **No lab monitoring offered** — peptides that affect GH, IGF-1, or immune function need monitoring
6. **Third-party testing not available** — compounding pharmacy peptides should have COAs (certificates of analysis)

> 💡 **What to Look For in a Quality Peptide Provider:** Third-party testing (mass spectrometry), clear dosing protocols with citations, regular lab monitoring (IGF-1, metabolic panel, CBC), informed consent that discusses evidence level honestly, and willingness to say "we don't know" about long-term effects.

Want the full database? Visit **peptide-evidence-database.wedgekit.com** for searchable, regularly updated evidence summaries on 50+ peptides, with direct links to primary sources and clinical trial registrations.