PROTOCOL / RESEARCH DOSING GUIDE

Retatrutide Protocol Guide: Dosing, Reconstitution & Safety (2026)

Step-by-step retatrutide research dosing reference: 1–12 mg once-weekly titration, full reconstitution chart, supplies-by-cycle math, Phase 3 results, and the dysesthesia safety signal. Educational reference only — not medical advice.

Retatrutide Quick Start

Retatrutide is a research peptide being studied as a once-weekly shot for weight and metabolic outcomes. Researchers study it because it acts on three hormone pathways at once: GLP-1, GIP, and glucagon. In plain English, that means it may touch appetite, blood sugar, and how fast the body burns calories at the same time.

This guide covers the typical research-protocol structure: the 1 mg start, the slow titration up to 12 mg, how to reconstitute the vial, how to plan supplies, and what the Phase 2 and Phase 3 trial data show. It is an educational reference. It is not medical advice and not a personal treatment plan.

ROUTE
Subcutaneous injection, once per week, on the same day each week.

SCHEDULE
Titrate every 4 weeks. Starting dose 1 mg — do not skip steps.

1 mg → 2 mg → 4 mg → 6 mg → 9 mg → 12 mg

MEASURE
U-100 insulin syringes — vial size and BAC water volume set how many units equal each dose.

SUPPLIES
Reconstituted vial · Bacteriostatic water (BAC water) · U-100 insulin syringes · Alcohol swabs · Calculator for unit math. All supplies available at **lalabpeptides.co.za**

RESEARCH STATUS
Investigational — not FDA-approved as of June 2026. Phase 2 and Phase 3 trial data available in published literature.

DISCLAIMER
This page is an educational research reference. It is not medical advice, not a treatment plan, and not a recommendation to use retatrutide outside of a clinical trial or qualified medical care. For research purposes only — lalabpeptides.co.za

Retatrutide Dosing Protocol & Schedule

The retatrutide dosing protocol is built as a slow climb, not a dose to jump into. The starting dose in clinical trials is 1 mg once weekly. The titration schedule then steps up every 4 weeks so the body can adjust before higher doses are reached.

There are two main schedules in the published research. Phase 2 (NEJM, 2023) used 1→2→4→8→12 mg with no 6 mg step. Phase 3 TRIUMPH adds an intermediate 6 mg step and treats 4 mg, 9 mg, and 12 mg as target maintenance doses depending on the trial arm.

Phase 3 TRIUMPH Titration (Current Standard)

PHASE	WEEKS	WEEKLY DOSE	NOTES
Initiation	Weeks 1–4	1 mg	Starting dose. Limited weight effect expected; the goal is tolerance, not results.
Early escalation	Weeks 5–8	2 mg	First step up. GI side effects (nausea) may begin.
Mid escalation	Weeks 9–12	4 mg	Appetite suppression usually becomes noticeable. Weight loss starts accelerating.
High escalation	Weeks 13–16	6 mg	Phase 3 added this intermediate step. Phase 2 jumped from 4 mg straight to 8 mg.
Therapeutic range	Weeks 17–20	9 mg	Phase 3 target dose for many TRIUMPH arms.
Maximum studied	Weeks 21+	12 mg	Maximum dose studied. 24.2% weight loss at 48 weeks (Phase 2); 28.7% at 68 weeks (Phase 3 TRIUMPH-4).

Data: Jastreboff et al., NEJM 2023 (Phase 2); Eli Lilly TRIUMPH-4 topline, December 11, 2025 (Phase 3).

Phase 2 NEJM Titration (Still Common in Research)

PHASE	WEEKS	WEEKLY DOSE
Initiation	Weeks 1–4	1 mg

PHASE	WEEKS	WEEKLY DOSE
Early escalation	Weeks 5–8	2 mg
Mid escalation	Weeks 9–12	4 mg
High escalation	Weeks 13–16	8 mg
Maximum	Weeks 17+	12 mg

Source: Jastreboff et al., NEJM 2023: Phase 2 trial protocol, 48 weeks.

Cycle Guidelines

APPROACH	DURATION	REVIEW POINT	BEST FOR
Phase 2 reference	48 weeks	Every 4 weeks at each dose step	Matches the original NEJM trial structure.
Phase 3 TRIUMPH reference	68–72 weeks	Every 4 weeks; review at 4 mg, 9 mg, 12 mg	Mirrors current Phase 3 maintenance aims.
Slow titration	Add 2–4 weeks per dose step when GI symptoms persist	Each dose step	When nausea, vomiting, or diarrhoea is hard to tolerate.

Trial protocols allowed participants to stay at the current dose for an extra 2–4 weeks when GI side effects were significant. This is not a personal recommendation.

TITRATION PACING MATTERS

In the Phase 2 NEJM trial, GI side effect rates nearly doubled when participants jumped to 8 mg instead of climbing gradually from 1–2 mg. Slower titration was the main lever for adherence.

Retatrutide Supplies Needed

Plan based on the once-weekly schedule above, using LA LAB's **30 mg vial reconstituted with 3.0 mL bacteriostatic water (10 mg/mL)**. The standard climb is 1→2→4→6→9→12 mg weekly.

Peptide Vials — 30 mg Vial (3 mL BAC)

LA LAB stocks Retatrutide as a 30 mg vial. With 3.0 mL BAC water, concentration is 10 mg/mL — so 1 mg = 10 units on a U-100 syringe.

CYCLE LENGTH	PLANNING NOTE
4 weeks	1 mg × 4 = 4 mg total — one 30 mg vial covers it easily.
8 weeks	1 mg + 2 mg phases = 12 mg total — one 30 mg vial.
12 weeks	Through the 4 mg phase ≈ 28 mg total — one 30 mg vial covers it; a second gives margin.
16 weeks	Through the 6 mg phase ≈ 52 mg total — 2 × 30 mg vials.
24 weeks	Through the 9–12 mg phases ≈ 136 mg total — 5 × 30 mg vials give margin.

Insulin Syringes — U-100, 0.3 mL or 0.5 mL

One syringe per weekly injection. 0.3 mL syringes work well at lower doses; 0.5 mL syringes are easier when the draw is closer to 0.40–0.80 mL.

CYCLE LENGTH	PLANNING NOTE
4 weeks	4 syringes per weekly injection.
8 weeks	8 syringes per weekly injection.
12 weeks	12 syringes per weekly injection.
24 weeks	24 syringes per weekly injection; recommend a 100-count box.

Bacteriostatic Water — 3 mL per Vial

Reconstitute each 30 mg vial with 3.0 mL BAC water. 10 mL bottles are the common research-supply size (covers ~3 vials).

CYCLE LENGTH	PLANNING NOTE
8 weeks	1 × 30 mg vial → 3.0 mL. One 10 mL bottle covers it. 1 × 10 mL bottle.
16 weeks	2 × 30 mg vials → 6.0 mL. One 10 mL bottle covers it. 1 × 10 mL bottle.
24 weeks	5 × 30 mg vials → 15.0 mL. Two 10 mL bottles. 2 × 10 mL bottles.

Round up for priming losses, dropped syringes, damaged swabs, and any protocol adjustments. Math assumes Phase 3 TRIUMPH titration above.

Retatrutide Reconstitution Guide

Reconstitution answers two questions. First, how much bacteriostatic water to add to the lyophilised vial. Second, how many syringe units match each weekly dose after mixing. Read across the row for the vial size you have.

Reconstitution Math — 30 mg Vial (3 mL BAC)

TARGET DOSE	UNITS (U-100)	DOSES / VIAL
2 mg	**20.0 units**	15
2.5 mg	**25.0 units**	12
3 mg	**30.0 units**	10
4 mg	**40.0 units**	7.5
6 mg	**60.0 units**	5
8 mg	**80.0 units**	3.8

*Reconstitute the 30 mg vial with **3.0 mL bacteriostatic water** → 10 mg/mL. U-100 syringe = 100 units per mL. Swirl gently — do not shake. Refrigerate 2–8°C.*

Step-by-Step Reconstitution

01 **Bring vials to room temperature**
Let the lyophilised retatrutide vial and the BAC water sit at room temperature before mixing.

02 **Clean both vial stoppers**
Wipe with an alcohol swab and let them dry fully.

03 **Draw the BAC water**
Use a sterile syringe to draw the volume from the reconstitution chart for your vial size.

04 **Inject down the vial wall**
Push the BAC water slowly down the inside wall of the retatrutide vial. Do not spray it directly into the powder.

05 **Swirl gently**
Swirl the vial until the solution is clear. Do not shake.

06 **Label the vial**
Write the concentration (mg/mL) and the date you reconstituted it on the vial label.

07 **Refrigerate**
Store at 35.6–46.4°F (2–8°C) and plan to use within 2–4 weeks.

How Retatrutide Works

Retatrutide acts on three hormone pathways at the same time: GLP-1, GIP, and glucagon. Most other research peptides in this class only act on one or two. The simplest way to picture it: one pathway helps the body feel full, one helps it handle blood sugar and stored fuel, and one may push energy use up.

GLP-1 RECEPTOR (THE 'FEEL FULL' LEVER)

This is the same general pathway used by semaglutide. It slows digestion and helps people feel fuller longer, which is one reason retatrutide can reduce appetite. Researchers coming from GLP-1 work will recognise this part of the mechanism.

GIP RECEPTOR (THE 'HANDLE FUEL' LEVER)

GIP is short for glucose-dependent insulinotropic polypeptide. It is part of why retatrutide is studied as a broader metabolic compound rather than only an appetite tool. In plain English, it helps the body manage blood sugar and how it stores energy.

GLUCAGON RECEPTOR (THE 'BURN MORE' LEVER)

This is the third lever, and it is what separates retatrutide from tirzepatide. Glucagon receptor activity is linked to higher energy expenditure and fat oxidation. It is a likely reason why the weight loss and liver fat numbers in trials look stronger than older single- or dual-pathway compounds.

Structurally, retatrutide is a 39-amino acid single-chain peptide with a C20 fatty diacid attachment. That attachment lets it bind to albumin in the blood. The longer circulation time is the technical reason for the ~6-day half-life and once-weekly dosing.

Who Retatrutide Is For and Who Should Avoid It

Retatrutide is currently studied in adults with obesity, adults with type 2 diabetes, and adults with weight-related conditions like knee osteoarthritis, sleep apnea, and metabolic dysfunction-associated steatotic liver disease (MASLD). It is not approved for any use as of June 2026, so eligibility is defined by the trials, not by a label.

TRIAL EXCLUSION PATTERNS

Phase 2 and Phase 3 retatrutide trials commonly excluded participants with a history of pancreatitis, medullary thyroid carcinoma, multiple endocrine neoplasia syndrome type 2 (MEN 2), severe gastroparesis, recent major cardiovascular events, severe kidney impairment, type 1 diabetes (in the obesity studies), and pregnancy or breastfeeding. These exclusions follow the same general pattern used in semaglutide and tirzepatide trials.

PREGNANCY, BREASTFEEDING, AND TRYING TO CONCEIVE

Retatrutide has not been studied in pregnant or breastfeeding people. Trials require effective contraception. Anyone in those situations should not be considering retatrutide outside qualified medical care.

CONDITIONS THAT NEED CLINICIAN OVERSIGHT

- Personal or family history of medullary thyroid carcinoma or MEN 2
- History of pancreatitis or gallbladder disease
- Severe kidney or liver disease
- Diabetic retinopathy or active retinal disease
- Severe GI conditions (gastroparesis, IBD flare)
- Active cardiovascular disease, recent heart attack, or unstable angina
- Use of insulin or sulfonylureas (hypoglycaemia risk)

> **CLINICIAN OVERSIGHT MATTERS**
> Retatrutide is investigational. The points above are research-population exclusion patterns, not personal medical advice. Anyone in these categories should talk to a qualified clinician.

Retatrutide Side Effects & Safety

Retatrutide side effects look broadly similar to other incretin-based research compounds. The simplest way to think about them is in two buckets: stomach symptoms during dose escalation, and a separate skin-sensation signal at the highest dose in Phase 3.

COMMON GASTROINTESTINAL EFFECTS (PHASE 2 NEJM)

EFFECT	RATE AT 12 MG
Nausea	Up to 25%
Diarrhoea	Up to 23%
Vomiting	Up to 26%
Constipation	Up to 16%

GI symptoms were most common during dose escalation and were usually mild to moderate. Source: Jastreboff et al., NEJM 2023.

DYSESTHESIA SIGNAL (PHASE 3)

TRIUMPH-4 topline results, released December 11, 2025, reported dysesthesia in about 20.9% of participants at the highest dose. Dysesthesia means unusual skin sensitivity, tingling, or tenderness to touch. It is the most distinct safety signal that separates retatrutide from older GLP-1 class compounds.

CARDIOVASCULAR AND METABOLIC SIGNALS

- Resting heart rate increased by about 5–10 bpm on average. It peaked near week 24 and eased by weeks 36–48.
- Phase 2 reported no increase in serious cardiovascular events.
- Temporary ALT/AST elevations occurred in a minority of participants and were generally tied to dose increases.
- Injection site reactions (redness, itching, small nodules) were observed in roughly 5–15% of participants.

DISCONTINUATION

In Phase 2, 6–16% of participants stopped because of adverse events versus 0% on placebo. Slow titration improved adherence. That is the main practical reason the protocol uses a 4-week climb at each step.

> **QUALITY CONTROL MATTERS**
> Retatrutide is research-grade and not standardised for human use. COA verification, batch testing, and storage matter. Bad reconstitution, repeated freeze-thaw cycles, or contaminated BAC water can show up as injection site issues that look like side effects.

Retatrutide Timeline & What to Monitor

Retatrutide builds up slowly. Steady-state plasma concentrations land after about 4–5 half-lives, or roughly 4 weeks at each dose step. That is why each titration phase is 4 weeks long: it gives the dose time to reach a steady level before the next step up.

HALF-LIFE AND STEADY STATE

Retatrutide's half-life is about 6 days (around 144 hours). After stopping, it takes roughly 5 half-lives (about 30 days) for the compound to clear. The 6-day half-life is the technical reason for once-weekly dosing.

DOSE-BY-DOSE WEIGHT LOSS IN PHASE 2 (NEJM)

DOSE	24 WEEKS	48 WEEKS
1 mg	-7.2%	-8.7%
4 mg	-12.9%	-17.5%
8 mg	-16.7%	-19.8%
12 mg	**-17.5%**	**-24.2%**
Placebo	-1.6%	-2.1%

Source: Jastreboff et al., NEJM 2023. 100% of 12 mg participants lost at least 5%; 83% in the 12 mg arm lost at least 15%.

REASONABLE MARKERS TO TRACK

- Weekly body weight on the same scale at the same time of day.
- Resting heart rate (a basic wearable or fingertip pulse oximeter is enough).
- Routine labs (CBC, CMP including ALT/AST, lipid panel, fasting glucose, HbA1c) before starting and on a regular schedule under clinician oversight.
- Notes on GI symptoms by dose phase. This is the single most useful data point for deciding when to stay at a dose.

WHAT CANNOT BE PROMISED

Trial averages are not personal predictions. Phase 2 saw -24.2% at 48 weeks at 12 mg, but individual results varied widely. The dysesthesia signal in Phase 3 did not appear at the same rate in earlier studies. Read trial data as range, not guarantee.

Retatrutide Clinical Evidence Context

Retatrutide has the strongest evidence in obesity, with Phase 3 data now available in obesity without diabetes, obesity with knee osteoarthritis, and type 2 diabetes. Additional Phase 3 readouts across the TRIUMPH and TRANSCEND-T2D programs are expected through 2026 and 2027.

HUMAN EVIDENCE — PHASE 3 TRIUMPH-1 (ELI LILLY, MAY 21, 2026)

2,339 adults with obesity or overweight without diabetes. The 12 mg dose produced 28.3% average body weight loss at 80 weeks, and a higher-BMI two-year subgroup reached 30.3% average loss at 104 weeks. Results are topline only; full peer-reviewed data has not been published yet.

HUMAN EVIDENCE — PHASE 3 TRIUMPH-4 (ELI LILLY, DECEMBER 11, 2025)

Adults with obesity and knee osteoarthritis. Achieving 28.7% body weight loss at 68 weeks at the 12 mg dose (about 71.2 lbs / 32.3 kg average loss). WOMAC pain score improved by 4.5 points. Dysesthesia reported in about 20.9% at the highest dose.

HUMAN EVIDENCE — PHASE 3 TRANSCEND-T2D-1 (ELI LILLY, MARCH 19, 2026)

537 adults with type 2 diabetes, randomised 1:1:1 to retatrutide 4, 9, or 12 mg or placebo. A1C reduction of 1.7–2.0% across doses at 40 weeks. Average 16.8% body weight loss at 12 mg (about 36.6 lbs). No weight plateau reached at 40 weeks. Detailed results scheduled for the American Diabetes Association Scientific Sessions, June 2026.

HUMAN EVIDENCE — PHASE 2 NEJM (JASTREBOFF ET AL., 2023)

338 adults with obesity but no diabetes, 48 weeks. 12 mg: -24.2% body weight at 48 weeks. 8 mg: -22.8%; 4 mg: -17.5%. 100% of 8 mg and 12 mg participants lost at least 5%; 83% in the 12 mg arm lost at least 15%.

HUMAN EVIDENCE — PHASE 2 TYPE 2 DIABETES (ROSENSTOCK ET AL., LANCET 2023)

Adults with type 2 diabetes, 36 weeks. Up to -16.9% body weight loss. HbA1c improved by -2.2%; 82% reached HbA1c at or below 6.5%.

HUMAN EVIDENCE — PHASE 2 MASLD SUBSTUDY (SANYAL ET AL., NATURE MEDICINE 2024)

Adults with MASLD and at least 10% liver fat. Up to 82% relative reduction in liver fat at 24 weeks.

PHARMACOKINETICS (COSKUN ET AL., CELL METABOLISM 2022)

Phase 1 PK data established the ~6-day half-life and once-weekly dosing rationale. Albumin binding via the C20 fatty diacid attachment is the technical mechanism.

EVIDENCE BOUNDARY

Retatrutide is investigational. Phase 3 readouts are landing on a rolling basis, but FDA approval has not happened as of June 2026. Treat current numbers as the best available evidence, not a final label.

Retatrutide Storage & Handling

Lyophilised powder is more temperature-tolerant than reconstituted solution. Short shipping exposure for sealed powder is usually less of a concern than poor storage after the vial is mixed.

STATE	STORAGE	NOTES
Lyophilised (powder), sealed	-4°F (-20°C) or below (frozen)	Long-term; up to 12+ months.
Lyophilised (powder), sealed	35.6–46.4°F (2–8°C)	Several months.
Lyophilised (powder), short shipping	Room temperature short-term	Stable for several weeks; powder tolerates short-term temperature swings.
Reconstituted (liquid form)	35.6–46.4°F (2–8°C)	Use within 2–4 weeks; protect from light.

STATE	STORAGE	NOTES
Reconstituted (liquid form)	-4°F (-20°C) (frozen aliquots)	Up to 3–4 months; avoid repeat freeze-thaw.

Bacteriostatic water (0.9% benzyl alcohol) is the standard choice for multi-dose vials.

FREEZE-THAW RULE

If long-term storage is needed, freeze single-use aliquots rather than the same vial over and over. Repeated freeze-thaw cycles can degrade peptide quality.

Protocol Mistakes & Troubleshooting

Most retatrutide protocol issues fall into a small number of buckets. Use this as a quick checklist when something feels off.

MISSED DOSE

If a scheduled weekly dose is missed and 5 or fewer days have passed, the dose can be taken when remembered. If more than 5 days have passed, skip it and resume on the next scheduled day. Do not double up. This rule comes from clinical trial protocols and is not a personal medical recommendation.

CLOUDY OR OFF-COLOUR VIAL

Reconstituted retatrutide should be clear. A cloudy, particulate, or strongly off-colour solution is a sign to stop using that vial and check storage, BAC water, and reconstitution technique.

WRONG BAC WATER VOLUME

Adding too much or too little BAC water changes the concentration and the syringe units per dose. If the volume was off, recalculate using the actual amount added rather than the planned amount. Use the reconstitution chart on this document to redo the math.

SIDE EFFECTS FEEL TOO STRONG

Trial protocols allowed staying at the current dose for an extra 2–4 weeks when GI side effects were significant. Slowing the climb is the main lever. Splitting the weekly dose across two injections (microdosing-style) is a research-community pattern but is not a Phase 3 standard.

INJECTION SITE REACTION

Small redness, itching, or a tender bump at the injection site is common. Persistent lumps suggest the same area is being used too often. Rotate sites by at least an inch each week. Persistent or growing reactions need a clinician.

STORAGE MISTAKE

If reconstituted vials sat at room temperature for an extended period, or went through repeated freeze-thaw cycles, the safer choice is to discard the vial. Peptide quality and sterility cannot be visually verified.

WHEN TO SEEK MEDICAL CARE

Severe persistent vomiting, signs of pancreatitis (severe upper-abdominal pain, often radiating to the back), severe allergic reactions, or any reaction that is getting worse rather than better are reasons to stop and seek qualified medical care. This page is not emergency advice.

Retatrutide Regulatory Status

As of June 2026, retatrutide is not approved by the FDA, the EMA, or any other regulatory agency. It is investigational and is being studied in Eli Lilly's Phase 3 TRIUMPH (obesity-focused) and TRANSCEND-T2D (type 2 diabetes) programs.

RECENT REGULATORY MILESTONES

- December 11, 2025: Eli Lilly released TRIUMPH-4 topline results (obesity + knee osteoarthritis). 28.7% weight loss at 12 mg at the highest dose.
- March 19, 2026: Eli Lilly announced TRANSCEND-T2D-1 topline results in adults with type 2 diabetes. Met primary endpoint and all secondary endpoints. Detailed results scheduled for ADA Scientific Sessions in June 2026.
- May 21, 2026: Eli Lilly announced TRIUMPH-1 topline results in adults with obesity or overweight without diabetes. The 12 mg arm averaged 28.3% weight loss at 80 weeks; a higher-BMI subgroup reached 30.3% at 104 weeks.
- Lilly stated all of these announcements that retatrutide remains investigational and has not been approved by any regulatory agency. Additional Phase 3 readouts are expected through 2026 and 2027.

RESEARCH-USE PEPTIDE MARKET

Retatrutide sold by research peptide suppliers is not the same product as a future FDA-approved drug would be. It is research-grade material labelled for laboratory use. COA verification, batch testing, and storage are buyer-side responsibilities. Compounded retatrutide is a separate category and the FDA has issued public statements warning about online sellers using research-use labels.

INTERNATIONAL NOTE

Retatrutide is also not approved in the UK, EU, Australia, Canada, or any other major market as of June 2026. It remains investigational globally.

Retatrutide vs Tirzepatide vs Semaglutide

The simplest way to compare these three is by how many metabolic pathways each one acts on. Semaglutide hits one. Tirzepatide hits two. Retatrutide hits three. The extra pathway is the main reason retatrutide has shown stronger weight loss and liver fat numbers in trials so far.

CATEGORY	RETATRUTIDE	TIRZEPATIDE	SEMAGLUTIDE
Receptor targets	**GLP-1 + GIP + Glucagon (triple)**	GLP-1 + GIP (dual)	GLP-1 only (single)
Half-life	~6 days	~9 days	~7 days
Dose frequency	Once weekly	Once weekly	Once weekly
Max studied dose	12 mg/week	15 mg/week	2.4 mg/week
Peak weight loss in trials	**-28.7% at 68 weeks (Phase 3 TRIUMPH-4)**	-22.5% at 72 weeks (SURMOUNT-1)	-15.8% at 68 weeks (STEP-1)
FDA status (June 2026)	Investigational, Phase 3	Approved (obesity + T2D)	Approved (obesity + T2D)
Liver fat	**Up to 82% reduction (Phase 2 substudy)**	Significant reduction	Moderate reduction
Unique angle	Triple agonism may raise energy expenditure via glucagon pathway	Dual agonism balances effect and tolerability	Longest clinical track record; CV outcomes data (SELECT)

These compounds are not interchangeable. Reconstitution math, dose ranges, approval status, and evidence depth differ for each.

WHY THE DYSESTHESIA SIGNAL IS HARD TO COMPARE

The same glucagon pathway that may explain extra weight loss may also help explain the dysesthesia signal at 12 mg in Phase 3. Tolerability comparisons between retatrutide and tirzepatide are not 1:1 for that reason.

Retatrutide Blood Tests & Monitoring

Retatrutide is a GLP-1/GIP/glucagon receptor agonist research compound. Monitoring focuses on glucose control, liver/kidney context, lipids, heart-rate changes, and GI-related dehydration risk.

MARKER	WHY IT MATTERS	TIMING
A1c	Shows longer-term glucose control before and during incretin-pathway protocols.	Baseline
Fasting glucose	Gives a current glucose snapshot, especially when appetite and medication needs change.	Follow-up
Comprehensive metabolic panel (CMP)	Reviews kidney function, liver enzymes, electrolytes, and glucose, which matter with GI symptoms or dehydration.	Baseline
Lipid panel	Tracks cardiometabolic changes during weight-loss and metabolic shifts.	Follow-up
Blood pressure and resting heart rate	Adds cardiovascular context because retatrutide trials reported heart-rate changes in some participants.	Follow-up

Simple Timing Framework

POINT	WHAT TO COVER
Baseline	Discuss baseline labs before starting or escalating, especially with diabetes, gallbladder history, kidney disease, liver disease, or cardiovascular concerns.
Follow-up	Repeat metabolic markers after 4–12 weeks, with closer review during dose escalation or major appetite changes.
Longer-term	For longer protocols, review metabolic, kidney, liver, and cardiovascular trends every 3–6 months with a clinician.

HOW TO INTERPRET THE LABS

- Reduced intake can change diabetes medication needs and dehydration risk.
- Gallbladder symptoms, severe abdominal pain, persistent vomiting, and kidney symptoms need symptom-based review.
- Thyroid cancer history and MEN2 history should be discussed because incretin-class labelling uses this caution for related approved drugs.

DO NOT WAIT FOR ROUTINE LABS

Severe abdominal pain, persistent vomiting, fainting, dehydration, chest pain, or allergic symptoms need medical review. A neck mass, trouble swallowing, or persistent hoarseness should be discussed with a clinician.

Frequently Asked Questions

Q1: What is the starting dose of retatrutide?

The starting dose in clinical trials is 1 mg once weekly for the first 4 weeks. The 1 mg starting point is designed for tolerance, not weight loss. The titration schedule then steps up every 4 weeks: 1 mg → 2 mg → 4 mg → 6 mg → 9 mg → 12 mg in the Phase 3 TRIUMPH protocol.

Q2: What is the half-life of retatrutide?

Retatrutide's half-life is about 6 days (around 144 hours). That is why the protocol uses once-weekly dosing. After stopping, it takes roughly 5 half-lives (about 30 days) for the compound to clear. The technical reason for the long half-life is albumin binding via a C20 fatty diacid attachment.

Q3: How much weight loss does retatrutide produce in trials?

In the Phase 2 NEJM trial (2023), participants on 12 mg lost an average of 24.2% of body weight at 48 weeks. In Phase 3 TRIUMPH-4 (Eli Lilly, December 11, 2025), the 12 mg arm averaged 28.7% weight loss at 68 weeks, and in Phase 3 TRIUMPH-1 (May 21, 2026), 28.3% average loss at 80 weeks; a higher-BMI subgroup reached 30.3% at 104 weeks. Results are dose-dependent and individual outcomes vary.

Q4: How do you reconstitute retatrutide?

LA LAB supplies Retatrutide as a 30 mg vial. Add **3.0 mL bacteriostatic water** for a 10 mg/mL solution (1 mg = 10 units on a U-100 syringe). Inject the BAC water down the vial wall, swirl gently (do not shake), refrigerate at 35.6–46.4°F (2–8°C), and use within 2–4 weeks. Use the reconstitution chart in this guide for exact unit math.

Q5: Is retatrutide FDA approved?

No. As of June 2026, retatrutide is not FDA-approved. It is investigational and remains in Phase 3 trials. Eli Lilly has not submitted a New Drug Application. Analyst projections place possible approval in late 2027 or 2028, but those are estimates, not confirmed dates.

Q6: What are the most common side effects of retatrutide?

The most common side effects are stomach-related: nausea, diarrhoea, vomiting, and constipation, especially during dose escalation. In Phase 3 TRIUMPH-4, about 20.9% of participants at the highest dose reported dysesthesia, which means unusual skin sensitivity or tingling. Resting heart rate increased by about 5–10 bpm on average and eased over time. Slow titration was the main lever for tolerance.

Q7: How does retatrutide compare to tirzepatide and semaglutide?

Retatrutide is a triple agonist (GLP-1 + GIP + glucagon); tirzepatide is a dual agonist (GLP-1 + GIP); semaglutide is a single agonist (GLP-1). Retatrutide has shown the highest weight loss numbers in trials so far (-28.7% at 68 weeks in TRIUMPH-4 vs -22.5% at 72 weeks for tirzepatide in SURMOUNT-1, and -15.8% at 68 weeks for semaglutide in STEP-1). Retatrutide is still investigational, while tirzepatide and semaglutide are FDA-approved.

Q8: What vial sizes does research retatrutide come in?

Research-grade retatrutide is most commonly available in 5 mg, 10 mg, 20 mg, 24 mg, and 30 mg vial sizes. Vial size affects reconstitution math and how many doses each vial covers. The 10 mg and 24 mg formats are common in retail research catalogues.

Q9: What happens if I miss a retatrutide dose?

Clinical trial protocols treated missed doses this way: if a scheduled weekly dose is missed and 5 or fewer days have passed, the dose can be taken when remembered. If more than 5 days have passed, skip it and resume on the next scheduled day. Doubling up is not recommended. This is the trial-protocol rule, not a personal medical recommendation.

Q10: How is reconstituted retatrutide stored?

Store reconstituted retatrutide at 35.6–46.4°F (2–8°C) (refrigerator), protected from light, and use within 2–4 weeks. Lyophilised (powder) vials are typically kept at -4°F (-20°C) for long-term storage. Avoid repeat freeze-thaw cycles. If long-term storage is needed for reconstituted solution, freeze single-use aliquots rather than the same vial over and over.

Q11: What is the TRIUMPH clinical trial program?

TRIUMPH is Eli Lilly's Phase 3 obesity-focused retatrutide program. It includes obesity studies and weight-related conditions like knee osteoarthritis (TRIUMPH-4), obstructive sleep apnea, chronic low back pain, cardiovascular and renal outcomes, and MASLD. The separate TRANSCEND-T2D Phase 3 program covers type 2 diabetes (TRANSCEND-T2D-1 reported topline results March 19, 2026).

Q12: What is the maximum dose of retatrutide?

The maximum dose studied in clinical trials is 12 mg once weekly. Phase 2 reported -24.2% body weight at 48 weeks at 12 mg, and Phase 3 TRIUMPH-4 reported up to -28.7% at 68 weeks at 12 mg. Higher doses have not been studied in published trials.

Q13: Is retatrutide medical advice?

No. This guide is an educational research reference. It is not medical advice and not a personal treatment plan. Retatrutide is investigational and not FDA-approved as of June 2026. Anyone considering use outside a clinical trial should talk to a qualified clinician.

Sources & Research

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⚠ **FINAL DISCLAIMER**

This entire document is an educational research reference only. It is not medical advice, not a treatment plan, and not a recommendation to use retatrutide outside of a clinical trial or qualified medical care. Retatrutide is not FDA-approved for any therapeutic use. By purchasing from LA LAB you confirm you are 18+ and that products are for research purposes only.