celia
Research Protocols

Weight and Metabolism

TG-2 20mg

About

TG-2 is a next-generation peptide being studied for its dual action on GLP-1 and GIP receptors, with potential to support weight loss, improve insulin sensitivity, and enhance metabolic health.

***These products are for research use only and are not intended for human consumption, medical use, therapeutic use, or diagnostic purposes.** They are not to be used in foods, drugs, cosmetics, dietary supplements, or any products intended for humans or animals. Peptides are not sterile, have not been tested for safety or efficacy in humans, and must not be injected, ingested, inhaled, applied to the skin, or administered in any form. No product sold is intended to treat, cure, mitigate, or prevent any disease.

What's Included

- One vial, concentration: 20mg/4mL
- Vial duration varies based on goals

Reconstitution kit

- (20) 29-30G subq needles
- (1) 5mL syringe
- (1) 25G needle with syringe
- (1) 10 mL bacteriostatic water

Clinical Research Potential Benefits:

- May improve insulin sensitivity
- May enhance weight loss
- May help regulate blood sugar levels
- May reduce inflammation
- May increase metabolic rate

Clinical Research Suggested Use:

- **Micro:** 250-500mcg
- Draw 5 units (250mcg)
- Draw 10 units (500mcg)
- **Basic:** 2.5mg up to 10mg once weekly
- Draw 50 units (2.5mg)
- Draw 100 units (5mg)
- Duration: RN consult for titration schedule
- Reconstitute: add 4mL bacteriostatic water to the to the lyophilized powder vial
- Injection type: subcutaneous injection
- Inject once weekly on the same day

Reconstitution & Administration*

*Instructions start on page 2

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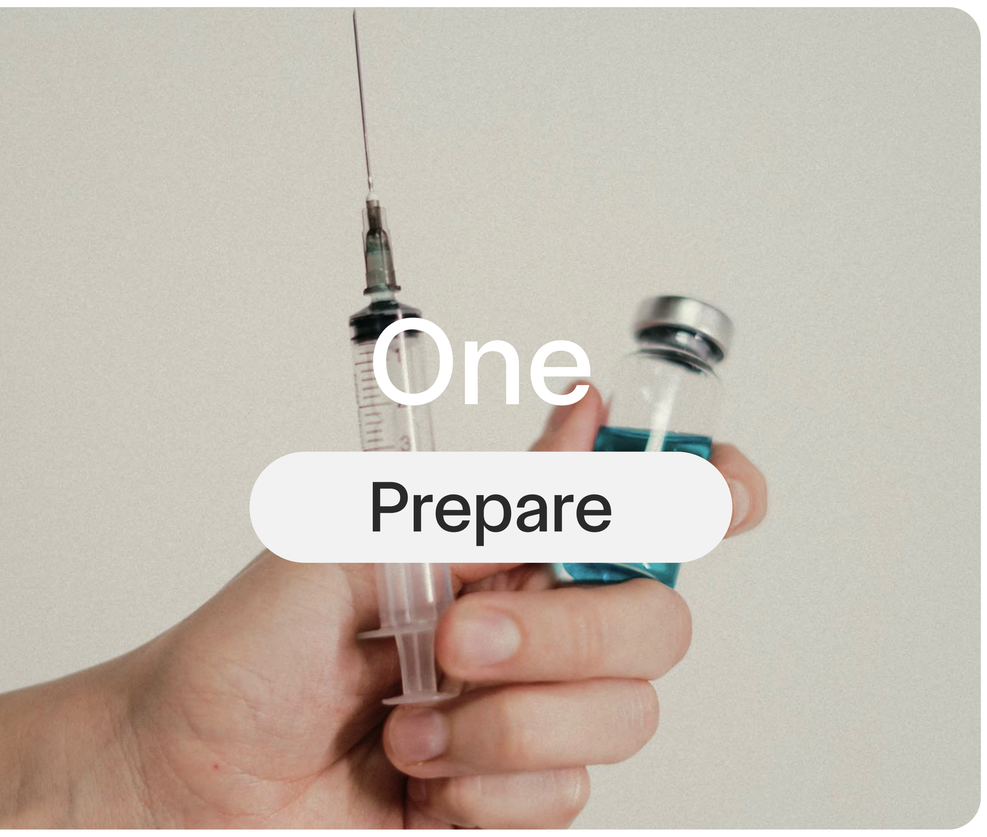
Tirzepatide Reconstitution



STEP 1: Remove plastic covers, clean vial and bacteriostatic water top with alcohol pad for 15 seconds

STEP 2: Using the large syringe from your administration kit, pull out 4mL of Bacteriostatic water

- It may take a few repetitions to load your syringe with the 4mL with no air pockets.

STEP 3: Once you've loaded your syringe, slowly inject the 4mL of Bacteriostatic water into your TG-2 20mg vial:

- On its side to not damage the bonds of the product
- Do not shake, gently swirl if needed
- Allow the solution to sit for at least 5 minutes

***Supplies:**5 mL syringe (large), 25G needle, Bacteriostatic water, TG-2 20mg vial, Alcohol pad

STEP 1: With the smaller needle draw up recommended units of the TG-2 into the small syringe from your kit

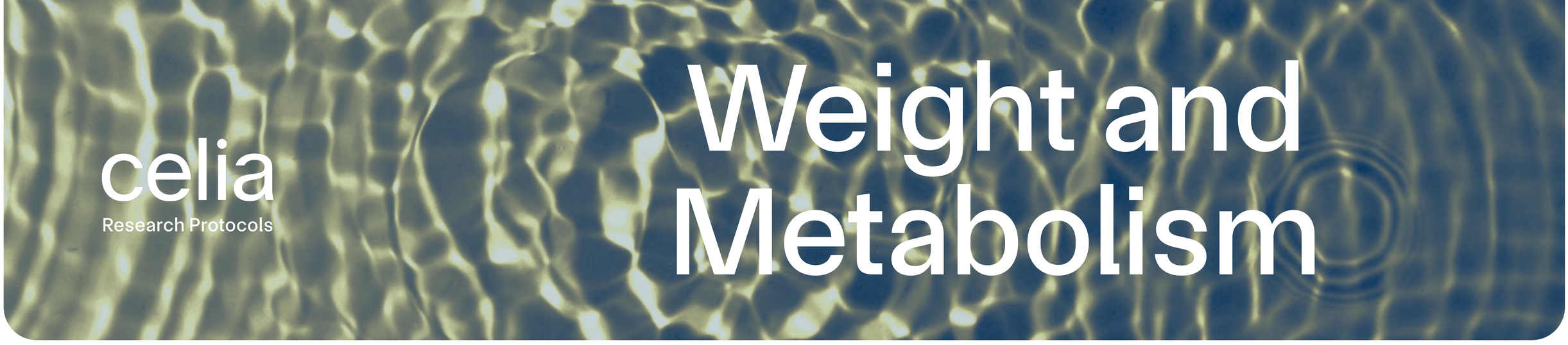
***Supplies:** 29G-30G subcutaneous syringe with needle (small), Alcohol pad

STEP 1: Clean the injection area with an alcohol pad

STEP 2: Inject subcutaneously (see pg 3)

- Duration: 3-6 months based on individual health goals
- Please consult with the RN specialist for a titration schedule

****Caution:** Not indicated if family history of thyroid cancer, pancreatitis, bowel disease, or gallbladder issues. Monitor with pancreatic enzyme test. **



Injection Steps

Subcutaneous Injection steps:

1 Choose & Clean the Injection Site

- Use the abdomen (3 inches from the belly button), thigh, or upper arm. Rotate sites to prevent irritation. Clean the area with an alcohol swab and let it dry.

2 Inject

- Pinch 1 to 2 inches of skin, insert the needle at a 90° angle, and slowly push the plunger down.

3 Remove the Needle & Dispose

- Pull the needle out at the same angle, apply light pressure with gauze (don't rub), and dispose of the syringe in a sharps container.

4 Monitor for Reactions

- Mild redness or soreness is normal. Seek medical help if you experience severe pain, swelling, or an allergic reaction.

Intramuscular Injection steps:

1 Choose & Clean the Injection Site

- Use the thigh (vastus lateralis), upper arm (deltoid), or glute (ventrogluteal or dorsogluteal muscle).
  - Rotate sites to prevent soreness. Clean the area with an alcohol swab and let it dry.

2 Inject

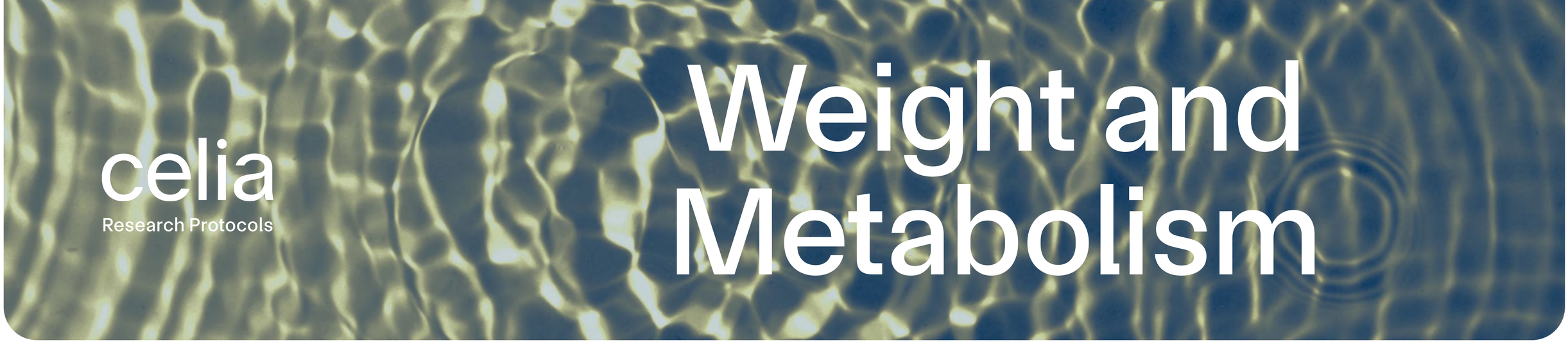
- Stretch the skin taut, hold the syringe like a dart at a 90° angle, and insert the needle quickly and smoothly. Slowly push the plunger down to inject.

3 Remove the Needle & Dispose

- Pull the needle straight out, apply light pressure with gauze (don't rub), and dispose of the syringe in a sharps container.

4 Monitor for Reactions

- Mild soreness or redness is normal. Seek medical help if you experience severe pain, swelling, or an allergic reaction.



TG-2 Mechanism of Action

- **Dual Incretin Receptor Agonism:**
  - TG-2 is a dual agonist of the glucose-dependent insulinotropic polypeptide (GIP) and glucagon-like peptide-1 (GLP-1) receptors. Through coordinated activation of these incretin pathways, TG-2 enhances metabolic efficiency, glucose regulation, and energy balance.

- **GLP-1 Receptor Activation:**
  - Stimulation of GLP-1 receptors increases glucose-dependent insulin secretion, suppresses glucagon release, and slows gastric emptying. These actions collectively reduce postprandial glucose excursions while promoting satiety and appetite control through hypothalamic signaling.

- **GIP Receptor Activation:**
  - Concurrent activation of GIP receptors amplifies glucose-stimulated insulin release and supports lipid metabolism. This mechanism also contributes to improved insulin sensitivity and may preserve pancreatic β-cell function under metabolic stress.

- **Synergistic Incretin Effects:**
  - The combined engagement of GLP-1 and GIP receptors produces additive and synergistic metabolic benefits. These include enhanced glucose utilization, reduced insulin resistance, and greater weight reduction compared to selective GLP-1 receptor agonism alone.

- **Metabolic and Lipid Regulation:**
  - TG-2 improves overall metabolic function by enhancing peripheral glucose uptake and optimizing lipid oxidation. These effects contribute to improved body composition and cardiovascular risk reduction.

- **Energy and Weight Homeostasis:**
  - By integrating hormonal signaling from both incretin pathways, TG-2 effectively lowers appetite, improves energy expenditure, and promotes sustained weight management while maintaining glycemic stability.