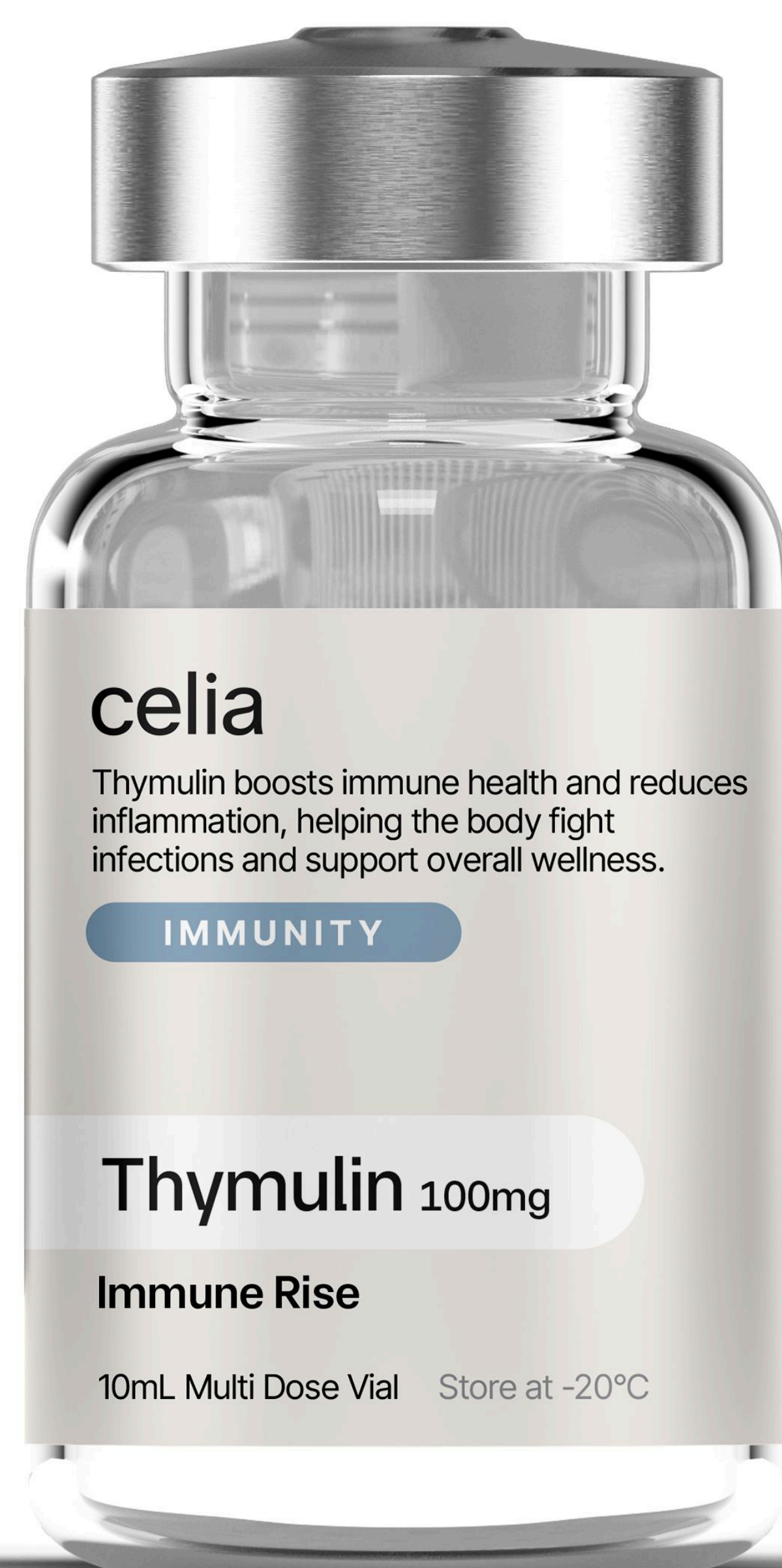


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Immunity

Build resiliency against chronic pain and inflammation.

Thymulin



About

Thymulin is an immune-boosting peptide that enhances immune system function, reduces inflammation, and supports overall immune balance, promoting resilience against infections and illnesses.

Benefits

- Boosts immune system function
- Reduces inflammation
- Builds T-cells to help support immune system
- Raises white blood cells to boost immune system

Dosing

Pull 0.25ml (25cc) dose into a syringe and administer, subcutaneous injection once a day for 21 days.

Duration

1 months

What's Included

Reconstitution and Administration Kit

- (20) 27-30G subq needles per vial
- (1) 5 or 10 mL syringe
- (1) 25G needle with syringe
- (1) 10mL Saline Water

*Products are shipped from an FDA approved Lab

Mechanism of Action

Learn more on page 2.

Reconstitution Instructions

Reconstitute with 10ml of saline into Thymulin vial. You will put 10ml of the saline into the vial. It will take two x to do this if you pull the saline into the larger syringe in your reconstitution kit.



Thymulin

Mechanism of Action

1. Immune Modulation

- T-Cell Differentiation and Activation:
 - Thymulin is essential for the maturation and differentiation of T-lymphocytes in the thymus.
 - It enhances the activity of cytotoxic T cells (CD8+) and helper T cells (CD4+), boosting immune surveillance and response.
- Enhancement of Natural Killer (NK) Cell Activity:
 - Increases the cytotoxic activity of NK cells, improving innate immune defense against infections and tumors.
- Regulation of Cytokine Production:
 - Thymulin modulates the production of key cytokines such as interleukin-2 (IL-2) and interferon-gamma (IFN- γ), both critical for robust immune responses.

2. Neuroendocrine-Immune Axis

- Interaction with Hormonal Systems:
 - Thymulin operates at the intersection of the immune and endocrine systems.
 - Its activity is influenced by zinc ions (Zn²⁺), which are necessary for its biological activity. Thymulin binds zinc to form an active complex that interacts with immune cell receptors.
- Feedback with Hypothalamic-Pituitary-Adrenal (HPA) Axis:
 - Thymulin influences the HPA axis by modulating the release of hormones such as cortisol, which can suppress excessive immune responses and inflammation.

3. Anti-Inflammatory Effects

- Regulation of Inflammatory Mediators:
 - Thymulin downregulates pro-inflammatory cytokines, reducing excessive inflammation in conditions like autoimmune diseases or chronic inflammation.
- T Regulatory (Treg) Cell Promotion:
 - Enhances the activity of Treg cells, which help maintain immune tolerance and prevent autoimmune reactions.

continued on page 3





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Thymulin

Mechanism of Action

4. Cellular Receptor Activation

- Binding to Thymulin Receptors:
 - Thymulin interacts with specific receptors on T-cells, monocytes, and other immune cells, triggering intracellular signaling cascades that modulate their activity.
- Signal Transduction Pathways:
 - Activates pathways like JAK/STAT and MAPK, which are involved in cell survival, proliferation, and cytokine production.

Clinical and Therapeutic Implications

Thymulin has potential therapeutic applications due to its immune-regulating properties:

Immune Deficiency Disorders:

- Enhances immune function in immunocompromised individuals.

Autoimmune Diseases:

- Regulates immune tolerance, potentially mitigating diseases like rheumatoid arthritis or lupus.

Chronic Inflammatory Conditions:

- Reduces inflammation in disorders such as asthma or inflammatory bowel disease.

Aging and Immunosenescence:

- Rejuvenates immune function, which declines with age, making it a candidate for anti-aging therapies.



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Instructions

Heal your gut for a lasting impact on overall health

Thymulin Reconstitution



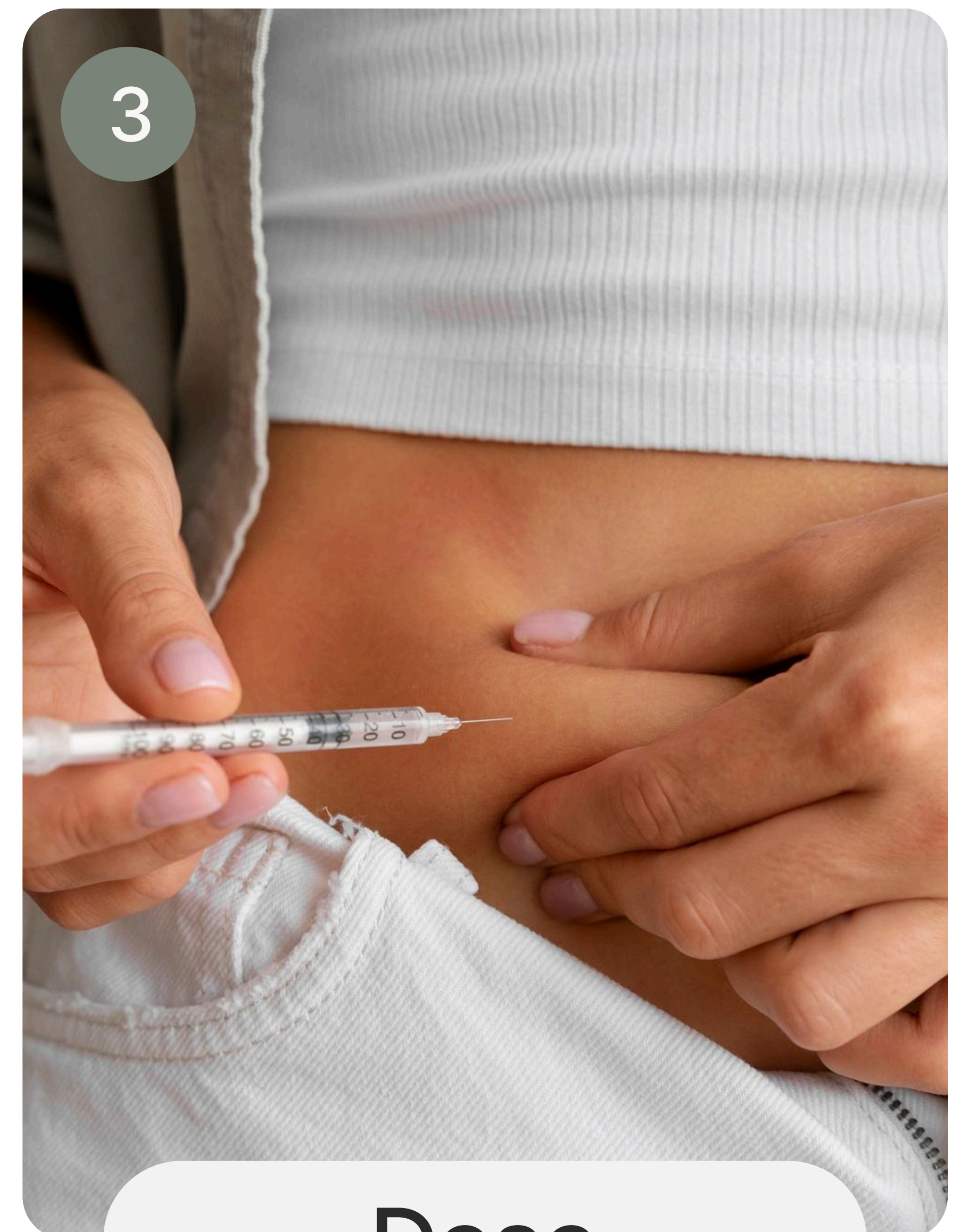
Pull

Using the large syringe from your administration kit, pull air into the syringe first to about 0.50mL (50cc), then plunge syringe all the way back into vial. Then pull out 10mL Low Soluble Saline Solution to fill the syringe. It may take a few repetitions to load your syringe with the full 10mL with no air pockets.



Inject

Once you've loaded your syringe, inject the Low Soluble Saline into your Thymulin vial on its side to not damage the bonds of the product. **Do not shake.** Allow the solution to sit for at least 5 minutes before dosing.



Dose

Clean both your injection area and the product top before dosing. Pull 0.50mL (50cc) of the Thymulin and Saline mixture into the small syringe from your kit. Inject subcutaneously into abdomen (at least 3 inches from belly button) or thigh once per day. Repeat dose for 20 days.

