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Longevity

Promote healthy aging and delay the onset of age-related conditions

Klotho_FG



About

Klotho is an anti-aging single-pass membrane protein predominantly produced in the kidney, with shedding of the amino-terminal extracellular domain into the systemic circulation. Circulating levels of soluble Klotho decrease with age, and the klotho gene is associated with increased risk of age-related diseases.

Benefits

- Anti-aging skin regeneration and tightening
- Anti-inflammatory
- Skin regeneration
- Energy Function
- Nervous system repair
- Brain neural pathway regeneration
- Diminishes epigenetic disease expression
- Longevity of life
- Tumor reduction
- Lowers blood pressure
- Weight reduction
- Kidney repair
- Reduces neurodegenerative disease
- Boosts Libido
- Lowers inflammation throughout body
- Helps support fertility

Dosing

Administer .05 ml Intramuscularly 3 days per week (Monday, Wednesday, Friday)

*Administer subq if experiencing side effects

What's Included

- 1 vial of Klotho FG
- (1) 10mL Low Solubility Saline
- (20) 27-30G subq needles
- (1) 5 or 10 mL syringe
- (1) 25G needle with syringe

Duration

3 months

Mechanism of Action



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Reconstitution Instructions

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

*Products are shipped from an FDA approved Lab

Mechanism of Action

1. FGFs in the Klotho-FG Axis

- FGF23 (with α -Klotho):
 - Regulates phosphate and calcium metabolism.
 - Produced by bone osteocytes and acts primarily on the kidneys.
 - Requires α -Klotho to bind to FGFRs and suppress renal phosphate reabsorption and vitamin D synthesis.
- FGF19 and FGF21 (with β -Klotho):
 - Regulate metabolic processes.
 - FGF19 (liver bile acid metabolism): Acts in the liver to regulate bile acid synthesis and energy expenditure.
 - FGF21 (energy homeostasis): Functions in the liver and adipose tissue to modulate glucose uptake, lipid metabolism, and thermogenesis during fasting or stress.

2. Binding and Signal Transduction

a. Klotho as a Co-Receptor:

- Klotho proteins bind to specific FGFs, increasing their binding affinity to FGFRs.
- This co-binding creates a stable FGFR-Klotho-FGF complex that activates downstream signaling pathways.

b. FGFR Activation:

- Ligand binding induces FGFR dimerization and autophosphorylation.
- Triggers intracellular signaling cascades, including:
 - MAPK/ERK Pathway: Regulates gene expression related to metabolism and growth.
 - PI3K/AKT Pathway: Promotes cellular survival and energy metabolism.

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Mechanism of Action

3. Biological Effects:

a. Phosphate and Calcium Regulation (FGF23 and α -Klotho):

- Decreases renal phosphate reabsorption (by downregulating Na⁺/Pi cotransporters in the kidney).
- Suppresses 1,25-dihydroxyvitamin D production, reducing calcium and phosphate absorption in the gut.

b. Metabolic Regulation (FGF19/FGF21 and β -Klotho):

- FGF19:
 - Inhibits bile acid synthesis by repressing CYP7A1 expression in the liver.
 - Promotes glycogen storage and inhibits gluconeogenesis.
- FGF21:
 - Enhances glucose uptake in adipocytes.
 - Stimulates lipolysis and fatty acid oxidation.
 - Promotes thermogenesis by upregulating UCP1 in brown adipose tissue.



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Instructions

Heal your gut for a lasting impact on overall health

Klotho_FG Recontitution



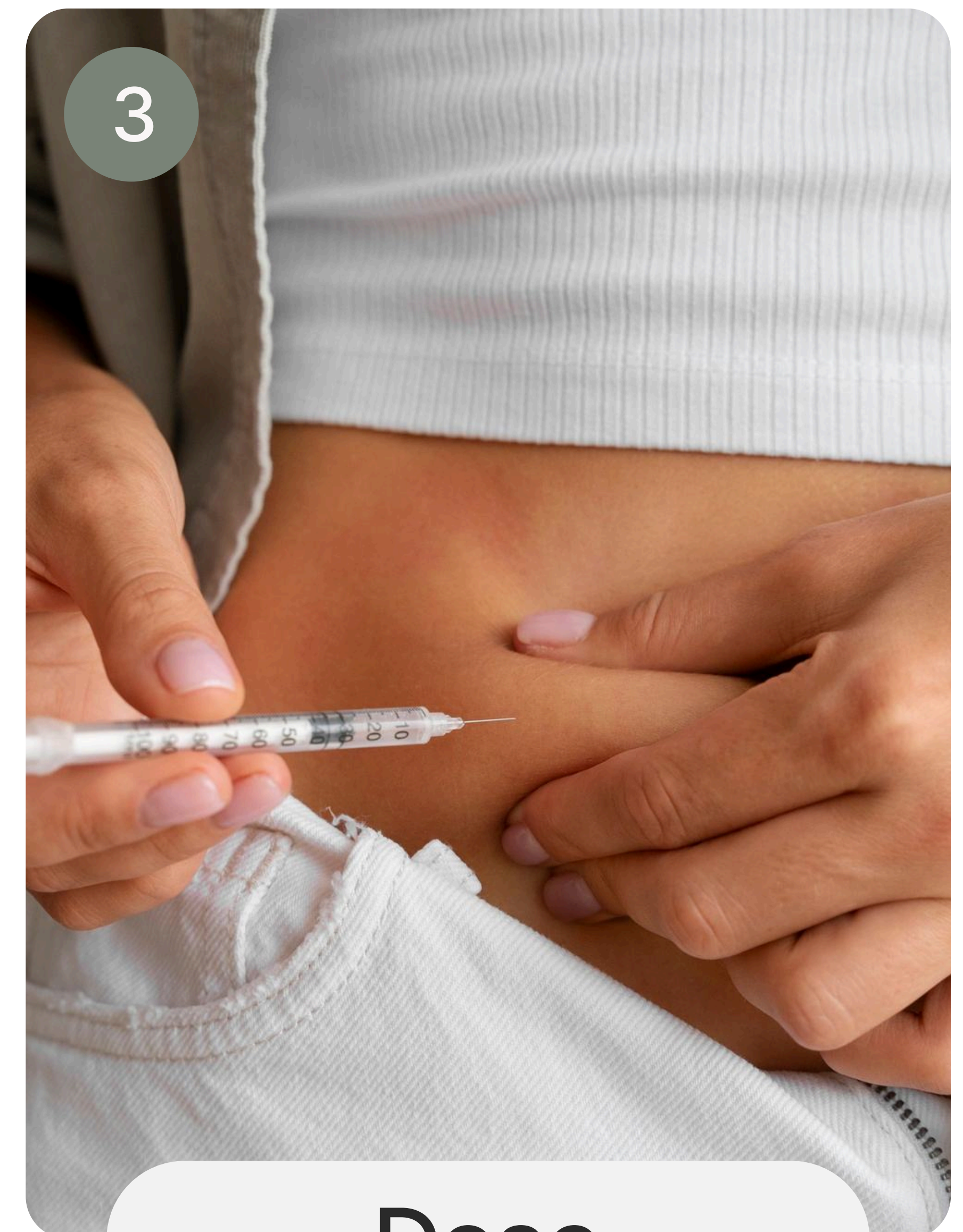
Pull

Using the large syringe from your administration kit, pull air into the syringe first to .50mL, then pull out 10mL Low Soluble Saline Solution as possible. It may take a few repetitions to load your syringe with the full 10mL.



Inject

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



Dose

Make sure to clean the area of injection and the product top before you pull .50mL of the Klotho FG and Saline mixture into the small syringe from your kit. Inject intramuscularly into the arm or thigh. Repeat 3 times per week for a 3 month duration, unless prescribed otherwise by your Celia practitioner.

