

PRESCRIPTION MONOGRAPH

Compounded Active Ingredients: Tirzepatide/Pyridoxine HCL

Form: Nasal Spray

Drug Class:

- Tirzepatide is a dual GIP and GLP-1 receptor agonist¹ intended to enhance insulin secretion¹.
 - Pyridoxine (Vitamin B-6) is B vitamin has also been found to be useful in preventing nausea and vomiting².
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Mechanism of Action³:

Tirzepatide Nasal Spray is intended to activate both GIP and GLP-1 receptors to:

- Enhance insulin secretion in a glucose-dependent manner
 - Suppress glucagon secretion
 - Slow gastric emptying
 - Promote satiety and reduces appetite, leading to weight loss
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Indications Commonly Prescribed For:

- Type 2 Diabetes Mellitus (T2DM)
 - Adjunct to diet and exercise to improve glycemic control
 - Chronic Weight Management
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Before Use: Let your doctor know if you have had any allergic reactions to nasal sprays in the past. Let your health care provider know if you are pregnant or breast feeding. Let your healthcare provider know of all supplements you are currently taking.

Contraindications:

- Personal or family history of medullary thyroid carcinoma
 - Multiple Endocrine Neoplasia syndrome type 2 (MEN 2)
 - Hypersensitivity to tirzepatide or its components
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Cautions: Let your Healthcare provider know of any changes of vision while on this compounded preparation. Advise all your health care providers that you are taking a GLP-1 before you are scheduled to have surgery or other procedures. GLP-1s may cause serious side effects, including food or liquid getting into the lungs during surgery or other procedures that use anesthesia or deep sedation

How to Use: This medication is a nasal spray and is delivered in a premixed liquid form. Gently blow your nose to clear it from mucous before using the compound. Remove the ring and protective cap to reveal the nasal spray tip. Tilt head slightly forward, hold bottle with thumb on bottom and your index and middle fingers on top. Use your fingers to squeeze down on the pump while you breathe in slowly through your nose. If needed, repeat the process for the second nostril.

Warnings and Precautions:

- Thyroid C-cell tumors (boxed warning)
- Pancreatitis risk
- Hypoglycemia risk (especially with sulfonylureas or insulin)
- Acute kidney injury (due to volume depletion)
- Gastrointestinal adverse events (nausea, vomiting, diarrhea)

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Adverse Reactions:

Common:

- Nausea, vomiting
- Diarrhea
- Constipation
- Abdominal pain
- Decreased appetite

Serious:

- Pancreatitis
 - Hypoglycemia (when used with insulin or sulfonylurea)
 - Thyroid tumors
 - Acute gallbladder disease
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Interactions:

- May alter the absorption of oral medications due to delayed gastric emptying
 - Caution with insulin or insulin secretagogues (increased hypoglycemia risk)
 - Avoid combination with other GLP-1 RAs
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Use in Specific Populations:

- Pregnancy: Limited data; use only if clearly needed
 - Lactation: Unknown if excreted in breast milk
 - Pediatrics: Not established
 - Renal/Hepatic Impairment: No dose adjustment needed, but monitor closely
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Storage:

- Refrigerate at 2°C to 8°C (36°F to 46°F)
 - Can be stored at room temperature (up to 30°C or 86°F) for up to 48hrs
 - Do not freeze
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Monitoring Parameters:

- Blood glucose and HbA1c
 - Renal function (especially during gastrointestinal adverse events)
 - Signs of pancreatitis or thyroid tumors
 - Weight and appetite changes
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Citations:

1. Willard FS, Douros JD, Gabe MB, Showalter AD, Wainscott DB, Suter TM, Capozzi ME, van der Velden WJ, Stutsman C, Cardona GR, Urva S, Emmerson PJ, Holst JJ, D'Alessio DA, Coghlan MP, Rosenkilde MM, Campbell JE, Sloop KW. Tirzepatide is an imbalanced and biased dual GIP and GLP-1 receptor agonist. JCI Insight. 2020 Sep 3;5(17):e140532. doi: 10.1172/jci.insight.140532. PMID: 32730231; PMCID: PMC7526454.
 2. Sahakian V, Rouse D, Sipes S, Rose N, Niebyl J. Vitamin B6 is effective therapy for nausea and vomiting of pregnancy: a randomized, double-blind placebo-controlled study. Obstet Gynecol. 1991 Jul;78(1):33-6. PMID: 2047064.
 3. Rubino DM, Nauck MA, Wadden TA, et al. Continued treatment with tirzepatide for maintenance of weight reduction in adults with obesity: The SURMOUNT-4 randomized clinical trial. JAMA. 2025;333(14):1351-1363. doi:10.1001/jama.2025.11842. Available from: <https://jamanetwork.com/journals/jama/fullarticle/2812936>
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