

TOPICAL INSULIN IN CORNEAL RE-EPITHELIALIZATION AND NEUROREGENERATION



Insulin eye drops have been used as an adjunctive therapy to **hasten corneal wound healing and promote corneal nerve regeneration.**

What Is It?

Insulin is a peptide hormone traditionally used for blood glucose regulation. In recent years, **insulin ophthalmic solutions** have been reported to support corneal re-epithelialization and neuroregeneration. Systemic insulin delivers insignificant concentrations to the ocular surface making **compounding necessary for eye drops.**

Why Topical Insulin?

Insulin is thought to:

- Stimulate **epithelial cell proliferation and migration**
- Decrease inflammation
- Improve **corneal sensitivity and homeostasis** via neuroregeneration

These effects may be particularly beneficial in compromised corneas where standard therapies alone are insufficient.

Clinical Applications:

Several small studies have reported promising results in:

- Persistent Corneal Epithelial Defects
- Neurotrophic Keratopathy
- Dry Eye Disease

Dosing & Precautions:

Clinical studies commonly report Insulin R 1 unit/mL used **four times daily**. Patients generally tolerate the solution well with minimal reports of irritation. Based on insulin's mechanism of action, hypothetical concerns with long term use include corneal angiogenesis and/or corneal fibrosis.

Is It a Standard Treatment?

There are no FDA-approved insulin eye drops. Its use is supported by published clinical reports and is available only through a compounding pharmacy. The FDA does not review compounded medications for safety or efficacy.

Massey  **Drugs**
We Compound Solutions

Prescribing Information

Drug/Strength/Form:

Insulin Regular 1 unit/mL
Ophthalmic Solution

Price:

\$125 + Next-Day Shipping
(Required)

Qty:

8mL

Sig:

Place one drop in affected eye(s) 4
times daily or as directed.

- 1 Login to our Practitioner Portal at masseydrugs.com and download Rx form or call us at **833.540.3500**.
- 2 Complete Rx form and **FAX to: 800.637.2601**.
- 3 We contact the patient to **confirm address**.
- 4 **Medication ships to patient Next-Day** upon processing.

*Compounded medications are available by prescription only.
The FDA does not evaluate compounded medications for safety or efficacy.*

Questions?

Contact your **Massey Drugs Medical Liaison** or call **833.540.3500** to speak with a pharmacist.



Massey Drugs

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