

JON C. KINTNER, M.D.

DENNIS E. OTTEMILLER, M.D.

DEBRAA. GRAHAM, M.D.

JANE GILBERT, M.D.

JOHN T. FLAXEL, M.D.

Physicians and Surgeons

EYE M.D.s

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Carbonic Anhydrase Inhibitors (CAIs) for the Treatment of Glaucoma

While there is no cure for glaucoma, it can be controlled.

Elevated intraocular pressure (IOP) may damage the optic nerve, which can lead to vision loss. Treatment for glaucoma focuses on lowering IOP to a level that is unlikely to cause further optic nerve damage. This is known as the "target pressure" or "goal pressure." The target pressure differs from individual to individual. Your target pressure may change during your course of treatment.

If you have glaucoma, your ophthalmologist (Eye MD) may prescribe medication to lower your eye pressure. There are many more choices for topical treatment today than there were only a few years ago. Your ophthalmologist has chosen a carbonic anhydrase inhibitor medication to treat your glaucoma.

How Do Carbonic Anhydrase Inhibitors (CAIs) Work? Carbonic anhydrase inhibitor medications are very reliable at lowering the intraocular pressure. They work by decreasing the production of the fluid that the eye continually makes, called the aqueous humor.

What are Carbonic Anhydrase Inhibitor Medications?

Topical drugs:

- Dorzolamide (Trusopt)
- Brinzolamide (Azopt)

Oral Medications:

- Acetazolamide (Diamox)
- Methazolamide (Neptazane)

Generic versions of the eyedrop formulations are not yet available.



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Possible Side Effects of Carbonic Anhydrase Inhibitors All medications, including eyedrops, have benefits but may also have side effects. Some people taking carbonic anhydrase medications may experience:

- Blurred vision
- Change in taste (especially with carbonated beverages)
- Dry Eye
- Eye irritation or allergy with a red eye and/or red eyelids
- Headache or dizziness
- Upset stomach

The oral (pill) form of these medications has more side effects, including:

- Increased need to urinate
- Tingling sensation in fingers and toes
- Rarely, severe allergic reactions or blood disorders can occur

WARNING: These medications are sulfonamides, therefore, if you are allergic to sulfa antibiotics, the same types of adverse reactions can occur with carbonic anhydrase inhibitors. Also, rare adverse drug interactions have occurred in patients taking high doses of aspirin and carbonic anhydrase inhibitors.

For glaucoma medications to work, you must take them regularly and continuously as prescribed by your doctor.

Medication Tips: With each new medication that your ophthalmologist prescribes, make sure you understand the following:

- The name of the medication
- How to take it
- How often to take it
- How to store it
- If you can take it with your other medications (make sure each of your doctors knows about all the different medications you take including non-prescription medications)
- What the possible side effects may be
- What you should do is you experience side effects
- What you should do if you miss a dose