



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, eye drops may be prescribed 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: (rarely used any more except in emergency glaucoma situations)

- Acetazolamide (Diamox)
- Methazolamide (Neptazane)

Generic versions of the eyedrop formulations are not yet available.

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, stinging (especially with Trusopt)
- 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
- Possible cross reaction if allergic to sulfa medication.

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..

Medication Tips:

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

Systemic complications from eye drops are rare. Although not mandatory, one can decrease these risks as follows. After putting in eye drops, blot away any excess drops with a tissue. Close your eyes for three minutes without blinking, then resume normal activities. Feel free to call Dr. Beck's office to report any concerns.