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Carbonic Anhydrase Inhibitors for the Treatment of Glaucoma

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

Elevated **intraocular pressure (IOP)** can 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.” The target pressure differs from individual to individual. Your target pressure may change during your course of treatment. If you have glaucoma, your ophthalmologist 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 (CAI)** medication to treat your glaucoma.

How Do CAIs Work?

CAI 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 CAI Medications?

Topical drugs:

- dorzolamide (Trusopt); and
- brinzolamide (Azopt).

Oral medications:

- acetazolamide (Diamox, AK-Zol);
- acetazolamide sustained-release (Diamox Sequels); and
- methazolamide (Neptazane, GlaucoTabs).

Generic versions of the eyedrop formulations are not yet available.

Possible Side Effects of CAIs

All medications, including eyedrops, can have side effects. Some people taking topical carbonic anhydrase medications (eyedrops) experience:

- blurred vision;
- bitter taste in the mouth;
- dry eyes;
- eye irritation or allergy with a red eye or red eyelids;
- headache or dizziness; and
- upset stomach.



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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;
- change in taste (especially with carbonated beverages); and
- unusual tiredness or weakness.

WARNING

These medications are **sulfonamides**. 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 all your doctors knows about all the different medications you take, including any nonprescription medications);
- what the possible side effects may be;
- what you should do if you experience side effects; and
- what you should do if you miss a dose.