



## Medications for Glaucoma

### PROSTAGLANDIN ANALOGS/OCULAR HYPOTENSIVE LIPIDS

#### Commonly Used Drugs

Latanoprost (Xalatan)  
Bimatoprost (Lumigan)  
Travoprost (Travatan)  
Unoprostone (Rescula)

#### Uses of This Medicine

Prostaglandin analogs and ocular hypotensive lipids are used to lower eye pressure in eyes with glaucoma. They may be used alone or in combination with other medications. Prostaglandin analogs and ocular hypotensive lipids lower eye pressure by increasing the drainage of aqueous humor (eye fluid) from the eye.

#### Before Using This Medicine

Be sure to tell your doctor if you:

- \* Are allergic to any medicines
- \* Are using contact lenses
- \* Are pregnant or breast feeding
- \* Have any other health problems
- \* Are using any other prescription or non-prescription medications

#### Dosage and Administration

The usual dose is 1 drop in the affected eye at bedtime. Use this medicine only as directed by your doctor.

#### Side Effects

*(This is a list of the most common side effects; for a complete list, see the insert provided with your medication)*

The most frequent side effects are temporary stinging and burning and blurred vision upon instillation. Some patients also have a slight redness of the eye upon waking in the morning. This is normal, and usually clears up after a couple of hours. In patients with hazel-colored iris, there is a 15% chance of darkening of the iris. If this occurs, the eye color changes from hazel to brown. This only occurs in certain eyes. Ask your doctor if you are at risk for this change in eye color. Other side effects can include growth of the eye lashes, darkening of the skin around the eyes, and inflammation inside the eyes.

Some patients develop flu-like symptoms, skin rash, or muscle and joint pains.

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### **Special Precautions**

If you notice a persistent change or worsening of your vision, especially if you have had prior eye surgery, notify your doctor immediately.

You must keep your regularly scheduled appointment with your eye doctor so the effect of this medicine can be monitored. All medicines should be taken exactly as prescribed. If you experience any problems with this medication, call your doctor immediately.



## BETA BLOCKERS

### Commonly Used Drugs

Timolol (Timoptic, Betimol)  
Carteolol (Ocupress)  
Betaxolol (Betoptic)  
Metipranolol (OptiPranolol)  
Levobunolol (Betagan)

### Uses of This Medicine

Beta blockers are used to lower eye pressure in eyes with glaucoma. They may be used alone or in combination with other medications. Beta blockers lower eye pressure by reducing the production of aqueous (eye fluid).

### Before Using This Medicine

Be sure to tell your doctor if you:

- \* Are allergic to any medications
- \* Have any medical problems particularly diabetes, heart disease, abnormal blood pressure, asthma, or depression
- \* Are taking any other prescription or non-prescription medications
- \* Are using contact lenses
- \* Are pregnant or breast feeding
- \* Have any other health problems

### Dosage and Administration

The usual dose is 1 drop in the effected eye once or twice daily. Use this medication only as directed by your doctor. Do not try to catch up on missed doses by applying more than one dose at a time.

### Side Effects

*(This is a list of the most common side effects; for a complete list, see the insert provided with your medication)*

The most frequent side effects are temporary stinging, burning and blurred vision upon instillation. Most patients experience a slight decrease in heart rate and may have a decrease in blood pressure. Patients with lung or breathing problems may have shortness of breath. Other side effects include fatigue, drowsiness, inability to exercise, impotence, and depression.

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### **Special Precautions**

Patients with diabetes should closely monitor their blood sugar when using these medicines, since symptoms of low blood sugar may be masked. Patients with slow heart rate or low blood pressure may experience dizziness or fainting spells.

You must keep your regularly scheduled appointment with your eye doctor so the effect of this medicine can be monitored. All medicines should be taken exactly as prescribed. If you experience any problems with this medication, call your doctor immediately.



## CARBONIC ANHYDRASE INHIBITORS

### Commonly Used Drugs

Dorzolamide (Trusopt)

Brinzolamide (Azopt)

Acetazolamide (Diamox) 125mg, 250mg, 500mg

Methazolamide (Neptazane) 25mg, 50mg

### Uses of This Medicine

Carbonic anhydrase inhibitors are used to lower eye pressure in the treatment of glaucoma. Carbonic anhydrase inhibitors lower eye pressure by reducing the pressure of aqueous (eye fluid). They may be used alone or in combination with other medications. These medications are given either as eye drops, or as pills that are taken orally.

### Before Using This Medicine

Be sure to tell your doctor if you:

- \* Are allergic to any medications, especially Sulfa drugs
- \* Are pregnant or breast feeding
- \* Are taking prescription or non-prescription medications, especially aspirin.
- \* Have any other medical problems including severe kidney disease, kidney stones, liver disease (cirrhosis), adrenal dysfunction, or gout

### Dosage and Administration

In glaucoma, carbonic anhydrase inhibitors are given as eye drops or as oral tablets or slow release capsules. The usual dose of Trusopt or Azopt is 1 drop in the affected eye every 12 or 8 hours. The usual dose of Diamox for an adult ranges from 125mg to 250mg every 6 hours, or a 500mg sustained release capsule every 12 hours. Neptazane is usually given as 25 to 50mg every 12 or 8 hours. Use this medication only as directed by your doctor. If you miss a dose, do not try to catch up on this dosage by taking more than one dose at a time, since serious side effects may occur.

### Side Effects

*(This is a list of the most common side effects; for a complete list, see the insert provided with your medication)*

Side effects of the drops include transient burning and stinging of the eye, blurred vision, and a bitter taste in the throat. Some people experience redness, irritation, or eye allergy. Less common effects of the drops include headache, fatigue, skin rash, and nausea.

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Tingling or feeling of pins and needles in the hands, face or feet is the most common side effect of the oral form of this medication. Other side effects of the oral medication include fatigue, loss of appetite, weight loss, depression, gastrointestinal distress, loss of libido, and impotence. Stomach upset may be reduced by taking the medication with food. Kidney stones can occur, but most commonly in people who have a history of kidney stones within the past 5 years. Blood abnormalities and severe allergic reactions are very rare, but are the most severe side effect, and may be a fatal side effect of this medication. These reactions are extremely rare, and impossible to predict. These reactions could potentially occur with drops, also.

### **Special Precautions**

Your doctor must be informed immediately if you notice easy bruising, bleeding, skin rash or if you experience a change in your overall well being while using these medications. Always inform all of your doctors about all medicines you take, so that they may be aware of potential drug interactions.

You must keep your regularly scheduled appointment with your eye doctor so the effect of this medicine can be monitored. All medicines should be taken exactly as prescribed. If you experience any problems with this medication, call your doctor immediately.



## MIOTICS

### Commonly Used Drugs

Pilocarpine (Isoptocarpine) 1%, 2%, 4%, 6% (Pilopine gel) 4%, Ocusert  
Carbachol 0.75%, 1.5%, 3%  
Echothiophate (Phospholine Iodide) 0.06%, 0.12%, 0.25%

### Uses of This Medicine

Miotics are used to lower eye pressure in eyes with glaucoma. They may be used alone or in combination with other medications. Miotics lower eye pressure by pulling on the muscles around the drainage system thereby increasing the drainage of aqueous (eye fluid) from the eye.

### Before Using This Medicine

Be sure to tell your doctor if you:

- \* Are allergic to any medicine
- \* Are pregnant or breast feeding
- \* Are taking other prescription or non-prescription medications
- \* Have any other health problems

### Dosage and Administration

One drop in the affected eye as directed. Most of these drops are used from every 12 to every 6 hours, depending on the medication, and depending on your doctor's instructions. Do not try to catch up on missed doses by applying more than one dose at a time

### Side Effects

*(This is a list of the most common side effects; for a complete list, see the insert provided with your medication)*

Stinging and burning may occur after instillation of these eyedrops. Headache around the eye and eye strain, which is due to pulling of the muscle inside the eye, may occur for the first few days after beginning this type of medication. This headache usually lasts for a couple of hours. Difficulty in reading, redness in the eye, and nearsightedness may also occur in some individuals. Dimness of vision may also occur temporarily after use of these drops, particularly in older patients and in persons with cataracts. A very rare but serious potential side effect is the development of retinal detachment.

Overdosage may result in rapid heart beat, shortness of breath, sweating, nausea, vomiting, and diarrhea.

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### **Special Precautions**

Unexplained flashes of light or an increase in the usual number of floaters seen from an eye may be an early symptom of retinal detachment. If these symptoms occur, call your eye doctor immediately.

You must keep your regularly scheduled appointment with your eye doctor so the effect of this medicine can be monitored. All medicines should be taken exactly as prescribed. If you experience any problems with this medication, call your doctor immediately.



## ADRENERGIC AGENTS

### Commonly Used Drugs

Brimonidine (Alphagan P)  
Apraclonidine (Iopidine)  
Dipivefrin (Propine)

### Uses of This Medicine

Adrenergic agents are used to lower eye pressure in eyes with glaucoma. They may be used alone or in combination with other medications. Adrenergic agents lower eye pressure by reducing the production of aqueous (eye fluid) and increasing the drainage of aqueous from the eye.

### Before Using This Medicine

Be sure to tell your doctor if you:

- \* Are allergic to any medicines
- \* Have any medical problems, especially high blood pressure, hyperthyroidism, or heart disease
- \* Are taking other prescription or non-prescription medications
- \* Are using contact lenses
- \* Are pregnant or breast feeding
- \* Have any other health problems

### Dosage and Administration

The usual dose is 1 drop in the affected eye every 12 or 8 hours. Do not try to catch up on missed doses by applying more than one dose at a time. Use this medication only as directed by your doctor

### Side Effects

*(This is a list of the most common side effects; for a complete list, see the insert provided with your medication)*

The most frequent side effects are temporary stinging and burning, and blurred vision after instillation of the drop. Following prolonged administration, some patients experience allergy with irritation and redness of the eye. Systemic side effects may occur rarely, and include increased heart rate, palpitations, altered heart rhythm, headache, faintness, and high blood pressure with dipivefrin. Dry mouth, fatigue, dizziness, decreased heart rate, and low blood pressure may occur with brimonidine or apraclonidine. These effects occur rarely at usual prescribed doses.

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### **Special Precautions**

Brimonidine and apraclonidine are CONTRAINDICATED for use when taking certain antidepressants and must not be used by young children. ASK YOUR DOCTOR.

You must keep your regularly scheduled appointment with your eye doctor so the effect of this medicine can be monitored. All medicines should be taken exactly as prescribed. If you experience any problems with this medication, call your doctor immediately.