



THE FAMILY PHARMACIST

A QUICK READ FOR YOUR OTC NEED!

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OVER-THE-COUNTER EYE PRODUCTS

Now that many of us are wearing masks due to the pandemic and our smiles are not visible, our eyes are more important than ever. To keep our eyes bright and healthy looking there are many high quality products available on pharmacy shelves.

Our eyes need help in staving off disease, adapting to vision problems as a result of heredity or aging, allergy, and protection from environmental factors such as contaminants and ultraviolet light. However, none of the non-prescription eye medications are intended to treat infection. Over-the-counter (OTC) eye drops are safe and effective in relieving only minor eye symptoms such as burning, stinging, itching, tearing, tiredness, or eye strain. Dry eye in the mild to moderate stage is also treatable with over-the-counter drops.

All eye drops have *expiration dates* on the package, so be sure they are in date when you purchase them. Once opened, discard any unused portion after 3 months (or sooner if contamination is evident). Eye products are more susceptible to contamination during use than most other pharmaceuticals because they are liquids handled from a small container and come close to your face when applied.

OTC eye formulations will clearly state on the front of the container that they are “sterile”. If they don’t, don’t buy them. In many cases, eye drops will have chemical preservatives added to them to maintain sterility after they are opened and for a short period of time (usually 90 days) during use. Check the “inactive ingredients” part of the label on the container to see the preservatives and make sure you are not sensitive or allergic to any of these ingredients. If you intend to use the drops more than *four times a day*, get the *preservative-free* ones to avoid unnecessary chemicals. These eye drops are packaged as small single use containers with only 8 drops or so per vial.

When you’re trying to decide which eye product to purchase for your symptom it’s easy to be confused. It helps to consider which ingredients in eye drops do what.

Redness, Bloodshot Eyes. One of the most common mild eye symptoms people experience is redness due to irritation. This may be caused by a variety of conditions from eye strain to allergies. The redness occurs when irritated blood vessels in the eye become enlarged. That is why some OTC eye drops contain one of the older decongestants, like *naphazoline* in Clear Eyes™ Redness Relief, or *tetrahydrozoline* found in Visine™ A.C. These decongestants constrict or tighten up the blood vessels, which in turn makes the eyes appear less red. However, eye professionals shy away from these because just like nasal sprays, decongestant eye drops will cause a *rebound* reaction making the redness return with a vengeance. A more recent OTC product for eye redness is Lumify,™ which contains *brimonidine*. This drug has been around for a long time, first approved by the FDA in 1996 for use as a prescription drug for glaucoma, but a lower dose was approved by the FDA in 2018 for OTC use as an eye decongestant. It’s a long acting (up to 8 hours) eye drop that constricts blood vessels to reduce redness and begins to work in only one minute. Lumify™ is unique because it alleviates the risks seen with other redness relievers including rebound redness and tolerance to the drug that can cause loss of effectiveness after a few doses.

Itching, Swelling, Allergies. In February of this year the FDA approved the brand name eye drop Pataday™ for OTC use to treat the symptoms of itchy allergy eyes. Its ingredient, *olopatadine*, is probably the most effective eye drop ingredient used to treat allergy eye symptoms to date. Olopatadine is an antihistamine, but not your ordinary antihistamine. Referred to as a “dual-acting” antihistamine, it’s particularly good at relieving itching and irritation associated with seasonal allergies. Olopatadine is called dual-acting because it works like a traditional antihistamine to reduce irritation in the eye *and* at the point in cells where allergy causing irritants work their greatest mischief, in-

side mast cells. These are the cells that especially release histamine when they are damaged in an allergic reaction. Olopatadine has been available on prescription since 1996. It’s only been OTC since March 2020. Two strengths are available, “Once Daily Relief” and “Twice Daily Relief.” The once daily option is a little more expensive, but more convenient.

Another dual-acting antihistamine found in the brand name eye drops Alaway™ and Zaditor™ is *ketotifen*. Ketotifen is also long acting, 8 to 12 hours. CVS, Walmart, and Walgreens have store generics that compare to both Alaway™ and Zaditor™ which are at least half the cost of the brand names.

Combination products for allergy eyes like Naphcon A™ and Opcon-A™ use an older antihistamine and decongestant, are shorter acting, and are most likely to cause rebound eye redness. It’s best to avoid them.

Dry Eye. This is a condition that has many and varied causes and can affect people of all ages, but particularly it is troubling as we get older. A simple explanation for dry eye is that as we age our eyes do not produce enough lubrication or there may be an imbalance in the chemical composition of our tears. Numerous medications are also known to aggravate the symptoms of dry eye.

OTC eye drops for this condition contain chemicals that are designed to mimic the composition of slippery mucous and oil that our eyes produce naturally. *Dextran, glycerin, mineral oil, carboxymethylcellulose, hypromellose, and propylene glycol* are some of the active ingredients in over-the-counter products for dry eye. All of these chemicals provide some degree of comfort and lubrication, but some ingredients may work better than others. For example, *dextran* is a large molecule that has been shown to have prolonged adherence to the surface of the eye. Dextran is in products

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like Genteal™ Tears eye drops and Genteal Tears™ Preservative Free single use vials. The effect still tends to be short-lived and the drops must be applied several times throughout the day. Patients are sometimes frustrated that eye drops for dry eye don't seem to work, however, these artificial tears may need to be applied at least 3 to 4 times throughout the day to be effective.

There are also sterile eye ointments and gels which can be used at bedtime for dry eye. Ointments and gels are very effective, but they are not practical for daytime use since they cause blurring for some time after being applied.

Eye Washes for First Aid. Every home should have a fresh, sterile, unopened bottle of eye wash (not drops) around the house for use in an emergency. Eye washes are very simple, don't contain drugs, and are balanced to be the same pH and salt concentration as your tears. Eye washes come packaged with a small eye cup. Fill the eye cup with the eye wash solution and hold it tightly over the eye with head tilted back. Open the eye and roll it around from side to side. This is very helpful in removing a foreign particle from the eye. But eye washes are not limited to emergencies. An eye wash can be used to refresh your eyes, and even used routinely. Because eye washes come in much larger containers, usually 4 ounces or so, they are less convenient than eye drops. But using them at home can be very refreshing at the end of the day to recover from pollen, dirt, grit, smoke and smog. But remember to keep a separate emergency bottle unopened and within date.

One last tip is a little first-aid trick I learned from an ophthalmologist years ago to remove a foreign particle or an eyelash from your eye. Squish a blob of a bland, sterile eye ointment (like Stye™ Lubricant Eye Ointment or Systane™ Lubricant Eye Ointment) onto a cotton swab and sweep the inner surface of your eyelid *with only the sterile ointment touching the foreign particle*. The irritant will stick to the ointment and be easily removed.

While all of these products are useful for treating *simple* eye problems at home, they are no substitute for consulting a professional such as an ophthalmologist or optometrist when you have a serious or chronic concern regarding the health of your eyes.

My Recommendations:

| Eye Drop | Symptom | Ingredient |
|----------------------------------|--|---------------------------------|
| Pataday™ Eye Allergy Itch Relief | Itching, swelling, redness, irritation (allergy) | Olopatadine |
| Lumify™ Eye Drops | Redness, bloodshot eyes | Brimonidine |
| Genteal™ Tears | Mild to moderate dry eye | Dextran, glycerin, hypromellose |

References on file

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