

Dry Eyes

Dry eyes are a source of common ocular complaints. Symptoms of dry eyes frequently include a foreign body sensation, grittiness, burning, photophobia (light sensitivity), and blurred vision. Severely dry eyes escalate the above symptoms and can even lead to eye infections. Dry eye patients will frequently exhibit tearing (*epiphora*), making them question the diagnosis of dry eyes: "how can my eyes be dry when they tear so much?" In fact, this tearing response is paradoxical. This is because dryness can be of two basic types: qualitative or quantitative. Those with qualitatively dry eyes will have paradoxical tearing; those with quantitatively dry eyes produce little tears and will not have paradoxical tearing.

Causes of dry eyes may include weather, aging changes, contact lenses, medications (such as antihistamines and various cold remedies), hormonal changes, and autoimmune diseases such as Sjögren's syndrome. Recent research indicates that lacrimal gland and ocular surface inflammation may also play a role in dry eyes. Such inflammation can decrease tear production and release various inflammatory factors. (This knowledge suggests that anti-inflammatory medications may benefit some dry eye patients.)

Tears are composed of three basic layers. In many dry eye patients the watery component is normally produced, but the other layers are insufficient. This leads to poor quality of tears (the above *qualitatively* dry eye patient). In an effort to produce the deficient components, the watery part is over produced, leading to the tearing response: quantity is produced rather than quality.

Treatment for dry eyes is typically palliative using supplemental artificial tears and lubricating ointments. There are many such over-the-counter (OTC: not requiring a prescription) eye drops. When eye drops are used, patients are best treated with non-preserved (aka preservative-free artificial tears; PFAT). Preservatives may make the dry eye symptoms worse, leading to other problems. Almost all eye drops in a bottle have preservatives. (Also avoid eye drops that advertise "get the red out". These eye drops contain chemicals that in the long run will make your eyes more red and irritated.)

PFAT are produced by many different companies and have various features, but one common feature is that they're stored in unit dose containers with twist off tops. These twist off tops can be snapped back on to keep the drops clean for use that same day. Simply put: avoid artificial tears in a bottle and use those in twist-off containers.

Flax seed meal (or flax seed oil capsules) can be ingested to also help with dry eyes and dry skin.

In addition to eye drops, quantitatively dry eye patients can also have improvement with plugging of the drainage system of the eye using canalicular plugs made of silicon. These plugs behave as little corks, stopping the flow of tears away from the ocular surface. One advantage of using silicon plugs is that they are reversible. Other less frequently used methods of plugging the tear drainage system are thermal cautery, laser cautery (as expensive source of thermal cautery), and sutures.

Finally, Restasis™, a prescription eye drop, is a useful therapeutic adjunct for dry eye patients. It is the only way to stimulate production of better quality tears. Restasis must be used twice-a-day for about 6 weeks before any benefits are seen. If it is stopped for any significant length of time, it will again take 6 weeks or so to begin working once more. When using Restasis, PFAT are still required, but their use will be less frequent.