

DRY EYE

Dry Eye is a multifactorial disease of the ocular surface caused by reduced tear *quality* and or *quantity* causing symptoms of burning, foreign body sensation, grittiness, light sensitivity, ache, pain, and transiently blurred vision, and possibly reflex tearing. Dry eye can be intermittent and mild, to chronic, severe and debilitating causing visual loss and corneal scarring. There are many factors that can contribute to dry eye including environmental, medications, hormone balance, contact lens wear, age, and excessive visual tasking. Trying to optimize the tear film and heal the ocular surface often involves a multifaceted approach, including environmental modifications, use of artificial tears, gels, and ointments, nutritional supplements, medications, and tear drain (punctal occlusion) occlusion with collagen, silicone plugs or cautery. This therapy can vary depending on symptoms and signs. Often dry eye dramatically improves with therapy in the short term only to worsen months later and require more intense therapy. Everyone is different so often therapy between individuals varies quite a bit.

Artificial tears: Artificial tears are needed to supplement the natural tear volume. Tears without preservatives are best when you need to use them more than 4x per day. Environmental conditions and intense visual tasking can necessitate the need for increased use. Tears to have some therapeutic value, though it is somewhat minimal. Along with providing some temporary improvement in ocular comfort, artificial tears do help “dilute” the tear film. In dry eye, the concentration of salts and other minerals increase, this causes increased “concentration” of the tear film, or osmolarity., which eventually causes an increase in inflammatory mediators. Artificial tears can help reverse this increase in “concentration”, or osmolarity....somewhat.

Gels and Ointments: Moderate to severe dry eye can be aided by more viscous lubricants, like artificial tear gels and even thicker ointments. Gels can be used throughout the day or before bedtime. Thick ointments are usually used right before bedtime to provide lubrication while sleeping. Preferred ointments are Systane Nighttime, or Blink gel.

The Eyelids: The eyelids contain three kinds of oil glands which are vital in that they provide the oily components of the tear film which provide stability and prevent evaporation between blinks. Commercial eyelid scrubs like Steri-Lid and Ocusoft are very good at keeping the eyelids clean and healthy. Hot/Warm-moist compresses (wash rag laid over the eyes for 5 minutes or so) are also good at heating up these oils to lower the viscosity of the oils. Omega-3 fatty acids (Fish oil) is believed to be very beneficial for the eyelid oil glands. Take 3-5 pills (3000-5000mg) of highly refined, purified, pharmaceutical grade fish oil. (OmegaRx from zonelabsinc.com is my preferred form of fish oil). Azasite is often prescribed over the short term to help control inflammation at the eyelid margin.

Medicines: Anti-inflammatory medications (Lotemax and Restasis) are beneficial in reducing inflammatory mediators which are prevalent in dry eye and restoring the ocular surface. These often need to be used initially with severe dry eye, and then occasionally when flare ups occur. Restasis is approved to use on a chronic basis, but typically is not “as strong” as Lotemax or work

as quickly as Lotemax does. Oral medications like Doxycycline can help underlying inflammation as well as the eyelid oil glands. Azasite is a great medication to help control underlying eyelid inflammation as well and help promote better production of quality oils to provide stability to the tear film.

Nutrition: Stay hydrated, limit caffeinated beverages. Please don't smoke, it is much harder to treat and "cure" dry eye symptoms in smokers. Eat lots of fish, better yet, take 3-5000mg of purified, refined fish oil daily. (OmegaRx from zonelabsinc.com is my preferred source for fish oil)

Environment: Take frequent computer breaks, use artificial tears during long sessions of computer work., instill tears before starting. Redirect air vents away from the eyes. Don't use an overhead fan. Set your computer monitor below your line of sight, so you are looking in a slight downward gaze.

If you travel a lot, consider wearing your glasses during flights if you are a contact lens wearer, planes maintain an extremely low humidity and are very dry. Instill artificial tears often during long flights. Redirect overhead air vents on airplanes away from your face on long flights. Consider a room humidifier at home or at the office.

Systemic medications: Many systemic medications can cause dry eye or make it worse, including hypertensive medications(Atacand, Coreg, Cardura, Norvasc, Lotrel, Ziac, Toprel), anti depressants (Effexor, Prozac, Paxil, Elavil, Zoloft, Wellbutrin), hormone replacement (Prempro, Premarin,Ogen,Estrace),diuretics (Bumex, Lasix, Lozol), Anti-cholinergic (Detrol, Ditropan, Oxytrol, Atrexa, Urispas, Sal-Atropine) Anithistamines like Clariten, Zytac, Allegra, and others. Limit daily intake of anti-allergy medications unless needed.

OTC Eye drops : Another cause of ocular surface irritation and dry eye is constant, chronic use of some OTC "red-out" drops with vasoconstrictors, like Visine, and Cleareyes. These drops have preservatives that irritate the ocular surface over time, and the effect of the vasoconstrictors wear off over time, so the eye becomes increasingly more red, with constant use.

TEARS:

GELS:

OINTMENTS:

LID HYGIENE:

MEDICATIONS:

FOLLOW UP:

Disclosure: I have no financial interest in any product mentioned in this handout.