PRESCRIBING GUIDELINES FOR DRY EYE SYNDROME

BLMK Position Statement

This guideline is to support in advising on management and treatment choices for dry eye syndrome.

Dry eye lubrication for mild and moderate dry eye syndrome should be purchased over the counter as part of self-care. Patients are expected to follow self-care advice and where necessary purchase dry eye lubricants to manage their dry eye symptoms.

Prescribing of dry eye lubrication is supported ONLY where it's use is essential to preserve sight function e.g. Severe ocular surface disease (OSD) caused by the following conditions: Sjogren's syndrome, auto immune disease (e.g. Rheumatoid arthritis, ulcerative keratitis), neurotrophic cornea, previous corneal conditions, recurrent corneal erosions, corneal injury.

Prescribing advice:

- Primary Care: Prescribe the most cost effective product by BRAND. 1st choice eye drop, and suitable cost effective alternatives, as advised by Scriptswitch/ Optimise.
- Secondary care: Prescribe generically. Prescriptions should be changed to the most cost effective brand once care is transferred to primary care.
- All lubricating eye drops highlighted in this guidance can be purchased OTC and patients should be encouraged to do this where appropriate.

What is Dry Eye Syndrome

Dry Eye Syndrome (also known as keratoconjunctivitis sicca) is the final common outcome of a number of different conditions which affect the tear film that normally keeps the eye moist and lubricate. Prescribers should consider if dry eye syndrome is a symptom of an underlying condition and refer appropriately.
Tears are a complex mixture of water, salts, lipids, proteins and mucins. The lacrimal glands produce the aqueous components (water, salts, proteins), the Meibomian glands produce the lipids, and conjunctival goblet cells produce the mucins.

- Tears are produced under nervous and hormonal control
- A steady basal flow maintains the tear film that protects the eye

A reflex increases the flow as a response to motion, irritation of the eye, and other nervous stimuli. Excess tearing frequently occurs in people with dry eye syndrome, for example in windy conditions.
Tears are distributed across the eye surface by blinking and are drained by the lacrimal ducts into the nose.
The external surface of the eye, the tear secreting glands, Meibomian gland and eyelids function as an integrated unit to secrete and clear tears. Abnormalities in any component of the functional unit can result in an unstable and unrefreshed tear film and the set of symptoms called Dry Eye Syndrome.

Ways of helping patients with dry eyes

Advise that by taking suitable precautions, the symptoms of dry eyes can be lessened, and in mild cases, this may be sufficient to avoid the need for treatment. These include:

- **Eyelid hygiene** to control the blepharitis that most people with dry eye syndrome have – see the CKS topic on Blepharitis
- **Contact lenses:** Limiting the use of contact lenses, if these cause irritation
- **Medication that can cause dry eyes:** Stopping medication that can exacerbate dry eyes, such as Antihistamines, TCAs, SSRIs, diuretics, beta-blockers, isotretinoin, possibly anxiolytics, anti-psychotics, alcohol.
- **Dry air:** Using a humidifier to moisten ambient air
- **Smoking cessation:** If smoking tobacco, stopping smoking may help – see the CKS topic on smoking cessation
- **Computer and other VDU use:** If using a computer for long periods, ensure that the monitor is at or below eye level, avoid staring at the screen, and take frequent breaks to close/blink eyes
- Direct patients to the **Royal College of Ophthalmologists Booklet for patients** Understanding Dry Eyes

Prescribers may consider assessing the severity of the dry eye syndrome with an Ocular Surface Disease Index score (OSDI)

When to refer

Try at least two products prior to stepping up to next level of treatment. Finding an effective treatment can vary between patients.

Refer to Specialist for Review in the following cases:

- Failure to resolve symptoms
- Reduced vision
- Patients with Sjögren's Syndrome or other inflammatory eye disorders whose symptoms do not resolve
- Eye redness and pain

Preservative toxicity from eye drops

Benzalkonium chloride (BAK) is the most frequently used preservative in topical ophthalmic preparations, as well as in topical lubricants. Its epithelial toxic effects are well established. The toxicity of BAK is related to its concentration, frequency of use, the level or amount of tear secretion, and the severity of the ocular surface disease. For patients with moderate to severe dry eye disease, the absence of preservatives is of more critical importance than the particular polymeric agent used in ocular lubricants. The ocular surface inflammation associated with dry eye is exacerbated by preserved lubricants and, if patients have more than one eye condition for which they are using eye drops, their potential exposure to preservatives is increased. Preservative-free formulations are absolutely necessary for patients with severe dry eye with ocular surface disease and impairment of lacrimal gland secretion, or for patients on multiple, preserved topical medications for chronic eye disease. In a patient with mild dry eye, preserved drops are often well tolerated when used 4-6 times a day or less.

Choice of Therapy

	Product	Contains preservative?	Suitable for contact lenses?	Preservative free option available*?	Self care?	Prescribing Notes	Traffic Light Status
Add on (all stages)	Light liquid paraffin and Vitamin A ointment (Hylonight®)	No	Wait 15 minutes after application before putting contact lenses in	Already PF		Not suitable for use with VisuXL® products	Green
Mild Dry Eye	Hypromellose 0.3% drops	Yes-benzalkonium chloride	Wait 15 minutes after application before putting contact lenses in	Yes*	Self care		Green
	Carbomer 0.2% gel	Yes-cetrimide	Wait 15 minutes after application before putting contact lenses in	Yes*	Self care		Green
	Carmellose 0.5% drops	No	Yes	Already PF	Self care		Green
Moderate Dry Eye	Carbomer 0.2% gel	Yes-cetrimide	Wait 15 minutes after application before putting contact lenses in	Yes*	Self care		Green
	Carmellose 1% drops	No	Yes	Yes*	Self care		Green
	Hyaluronate 0.1% drops	No	Yes	Already PF	Self care		Green
Severe Dry Eye	Hyaluronate 0.2% drops	No	Yes	Already PF			Green
	Hyaluronate 0.4% drops	No	Yes	Already PF			Green
	Hyaluronate 0.2%/carbomer/glycerol drops (Evolve Revive®)	No	Yes	Already PF		2nd line after hyaluronate product has failed	Amber/Amber1
	Thealoz Duo® drops	No	Yes	Already PF			Green
If Corneal staining occurs:							
	VisuXL® gel	No	Yes	Already PF		Patients on this eye gel will not require an eye ointment for night-time use	Amber/Amber2
	OR VisuXL® drops	No	Yes	Already PF		Second line for patients unable to tolerate gel. To be used as a single agent where appropriate and care should be taken to avoid duplication of prescription of other eye drops.	Amber/Amber2

*Preservative free option should only be prescribed on ophthalmologist advice for patients with true preservative allergy, soft contact lens wearers or those on long term treatment (>3 months or usage more than six times a day).

Specialist Use	Product	Contains preservative?	Suitable for contact lenses?	Preservative free option available*?	Self care?	Prescribing Notes	Traffic Light Status
Mucus production/corneal filaments	Acetylcysteine 5% drops	Yes-Benzylkonium chloride	Wait 15 minutes after application before putting contact lenses in	-			Amber/Amber2
	Acetylcysteine 10% drops	Unlicensed special		-		Filamentary keratitis where 5% acetylcysteine is not effective	Red
Evaporative eye	Optive plus® drops	Yes-purite	No	-			Amber/Amber2
Meibomian gland disease	VisuEvo®	No	Yes	Already PF			Amber/Amber1
Keratitis	Ciclosporin 1mg/mL drops	Yes-cetalkonium chloride	Contact lenses should be removed before instillation of the eye drops at bedtime and may be reinserted at wake-up time.	-		For use in accordance with NICE TA369	Amber/Amber3