# PRESCRIBING GUIDELINES FOR DRY EYE

### BACKGROUND

Dry Eye is very common amongst any age of patient. It is a multifactorial disease that can develop due to a problem in any of the three layers of the tear film The tear film consists of:

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- a thick **mucin layer** which coats the surface of the eye
- an **aqueous layer** produced by the lacrimal gland
- a lipid layer produced by the meibomian glands which sits on top and stops evaporation

Dry Eye disease can be loosely categorised as:

### **Aqueous Deficiency**

Refers chiefly to a failure of lacrimal tear secretion and can be characterised by an inability to produce tears when crying or sore eyes on waking without recent history of eye surgery. The classic cause of aqueous deficiency is associated with autoimmune disease including rheumatoid arthritis and Sjögren's syndrome. However, it can be associated with non-autoimmune causes including some medications\*, postmenopause, corneal anaesthesia, etc.

### **Evaporative Deficiency**

Increased evaporation due to Meibomian gland dysfunction, blepharitis, low blink rate (computer use, driving, reading, watching TV, Parkinson's disease). Often characterised by excessive watering on a windy day.

Often there is no single identifiable cause and it is multifactorial.

### ASSESSMENT AND MANAGEMENT

CAUSES		<b>Drug induced dry eye</b> Complete a medication review and stop medications if clinically appropriate. Medications that can exacerbate dry eyes include Antihistamines, TCAs, SSRIs, diuretics, beta-blockers, isotretinoin, possibly, anxiolytics, anti- psychotics, alcohol				
CONSIDER POSSIBLE C		<ul> <li>Environmental Factors</li> <li>Patients should always be advised to apply self care measures in the first instance before considering use of eye lubricants.</li> <li>Advise patients:</li> <li>To avoid excessive heating or air conditioning</li> <li>If they wear contact lens, suggest a contact lens holiday or use lenses for shorter periods of time</li> <li>Cigarette smoke can cause dry eyes - offer smoking cessation advice</li> <li>Suggest use of a humidifier to moisten ambient air</li> <li>If using a computer for long periods, suggest placing the monitor at or below eye level, avoids staring at the screen and take frequent breaks</li> </ul>				
		Consider the	e use of the OSDI <u>(Ocular Surface Disease Index)</u> score to assess the severity			
ĽΤΥ	Consider referral to the community optometrist for further assessment and diagnosis					
ASSESS THE SEVERITY		Consider referral to Secondary Care         Significant pain on waking with recent history of injury         Underlying systemic condition needing specialist management         Waking in the middle of the night with eye pain         Signs of ulcers or corneal damage         Unable to open eye after normal night's sleep         Deterioration of vision         Uncontrolled symptoms after 6 months         Abnormal lid anatomy or function				
μ	Reassurance and self care		Most cases of dry, sore eyes resolve themselves. Patients should always be advised to apply <b>self care</b> measures in the first instance before considering the use of eye lubricants. This involves elimination of environmental causes and lid hygiene.			
TREATMENT			Lubricant eye treatments are readily available to purchase over the counter *Dry eye treatment should be tried for <b>4-6 weeks</b> before assessing benefit*			
Ĩ		Prescription	<b>Only</b> once patients have tried self care measures and OTC products that have failed to improve their condition or following assessment, their symptoms are moderate-severe or secondary to a chronic condition			

# PRESCRIBING GUIDELINES FOR DRY EYE TREATMENT PATHWAY



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			Horer Sources and		
Stage 1a Mild-Moderate	Treatment should be tried fo weeks before assessing benefit	or 4-6	ACTIVE INGREDIENT	PRODUCT CHOICE IF ON PRESCRIPTION ▲ = Preservative-free* <sup>© 28</sup> = 28 day expiry <sup>© 3m or 6m</sup> = 3 or 6 month expiry <sup>®</sup> = Suitable for use with contact lenses	
		SELF CARE OVER THE COUNTER	HYPROMELLOSE 0.3% EYE DROPS	Choice of brand to be guided by ScriptSwitch in Primary Care TLS GREEN	
			CARBOMER 980 0.2% GEL See NPSA alert about use in immunocompromised patients	Clinitas Carbomer <sup>®</sup> 10g gel <sup>ତ28</sup> Lumecare Carbomer <sup>®</sup> 10g gel <sup>ତ28</sup>	
	AQUEOUS DEFICIENCY		CARMELLOSE 0.5% EYE DROPS	VIZcellose <sup>®</sup> ♦ <sup>⊙3m</sup> ⊛	
			CARMELLOSE 1% EYE DROPS	VIZceliose <sup>®</sup>	
			SODIUM HYALURONATE	Choice of brand to be guided by ScriptSwitch in Primary Care <b>TLS BLUE</b>	
			SODIUM HYALURONATE + TREHALOSE	THEALOZ-DUO ♦ <sup>☉6m</sup> Short course where there are signs of inflammation	
	BOTH AQUEOUS AND	отс	CARMELLOSE + COENZYME Q10 + VITAMIN E	VisuXL gel ≜ <sup>₀2m</sup> ⊛	
	EVAPORATIVE DEFICIENCY FOLLOWING SECONDARY CARE REFERRAL	PRESCRIPTION ONLY	CICLOSPORIN	<mark>Ikervis</mark> ® as per <u>NICE TA369</u>	
	EVAPORATIVE DEFICIENCY		HYALURONIC ACID	HyloDual≜ <sup>₀6m</sup> ⊛	
	AT NIGHT FOR BOTH AQUEOUS AND EVAPORA- TIVE DEFICIENCY	отс	PARAFFIN	HydraMed Night <sup>®</sup> ♦ <sup>⊙3m</sup> or Xailin Night <sup>®</sup> ♦ <sup>⊙2m</sup>	

## PRESERVATIVE FREE

Benzalkonium chloride (BAK) is the most frequently used preservative in topical ophthalmic preparations. BAK toxicity is related to its concentration, frequency of use, the level of tear secretion, and the severity of the ocular surface disease. If patients are using multiple eye drops, their exposure to preservatives is increased. In a patient with mild dry eye, preserved drops are often well tolerated when used four times a day or less. Indications for preservative free (PF) ophthalmic preparations:

- history of intolerance or allergies to preservatives
- uses soft or hybrid contact lenses
- moderate to severe dry eye disease or chronic eye disease on multiple preserved (increased BAK\* exposure) topical medications requiring drops more than 4 x a day

#### REFERENCES

Conditions for which over the counter items should not routinely be prescribed in primary care: Guidance for CCGs

NICE CKS Dry eye disease January 2023

<u>NICE TA 369</u> Ciclosporin for treating dry eye disease that has not improved despite treatment with artificial tears

Over the counter artificial tear drops for dry eye syndrome 2016 Cochrane Review

SENSITISING AGENTS

Phosphate, Borax, EDTA can increase sensitivity, irritation, redness of the eye if used in high volumes.

# ADVICE FOR CONTACT LENS WEARERS @

Remove soft contact lenses before instilling drops containing preservatives, and wait at least 15 minutes before re-inserting them.

Eye drops may be instilled whilst wearing rigid (hard) contact lenses (if in doubt as patient to check with their optician)

Do not wear contact lenses when eye ointments or oily eye drops are used.

### PATIENT INFORMATION LEAFLETS

NHS Choices: <u>Dry Eye Syndrome</u> RCOpth <u>Understanding dry eye</u>

UHBW Ophthalmology. Approved by BNSSG APMOC December 2023

Review date: December 2026

Stage 1b Severe\*

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