

## Medicines Optimisation *Key Messages* – *Bulletin 44*

### Management of Dry Eyes

**KEY MESSAGE: Treatments for dry or sore tired eyes should not be routinely prescribed in primary care as per NHS England Guidance<sup>1</sup>**

- For patients with intermittent dry eye where symptoms can also be alleviated by lifestyle measures **self-care** should be the main stay of treatment.
- Self-care may involve both **non-pharmacological measures** and use of **ocular lubricants** which are available to purchase over the counter (OTC).
- Measures to alleviate dry eyes and reduce the need for treatment include <sup>2,3</sup>:
  - Maintaining good eyelid hygiene by; applying a warm compress (clean cloth warmed with hot water) to the closed eyelids for 5-10mins; massaging closed eyelids in a circular motion across the length of the lid and cleaning the eyelid by wetting a cloth/cotton wool pad with baby shampoo diluted 1:10 with warm water and wiping along the eyelid margins. For more information on eyelid hygiene see the [CKS topic on Blepharitis](#).
  - Limiting contact lens wear to shorter periods and removing lenses when dry eye symptoms appear; changing lens type or solution may help.
  - Using a humidifier to moisten ambient air and avoiding prolonged periods in air-conditioning.
  - Placing computer monitors at or below eye level, avoiding staring at the screen and taking regular breaks.
  - Stopping smoking and avoiding exposure to cigarette smoke.
- For more advice on management of dry eyes, refer patient to <https://www.nhs.uk/conditions/dry-eyes/>
- **Medications** with **anticholinergic** side effects can exacerbate dry eye syndrome and should be reviewed and stopped where appropriate.

#### Choice of Ocular Lubricants

- **Self-care** using OTC products should be recommended for **intermittent dry eye** which can also be alleviated by the above lifestyle measures.
- Treatments may be prescribed for chronic dry eye where frequent lubricant administration is required (i.e. at least **3 to 4 times daily**), a preservative-free product is indicated, dry eye caused by Sjögren's syndrome or when diagnosis is made by an **ophthalmologist**.
- Treatment should be tried for **4–6 weeks** before assessing benefit
- There is a **limited range of lubricants**, which are available in a large number of **branded products**.
- Evidence from systematic reviews suggest that whilst ocular lubricants are efficacious in treating dry eye symptoms, there is **insufficient robust evidence to differentiate between the different products**<sup>4</sup>.

- Products should be prescribed in a prioritised manner in order to ensure optimal use of available resources – see [Norfolk & Waveney Formulary](#), [Dry Eye Pathway](#) and Cost effective Switching Guidance document for cost effective, formulary choices of brands.
- **Hypromellose** is the **first line choice** of treatment and should be appropriate for the majority of patients with mild dry eye syndrome. Hypromellose eye drops may need to be instilled frequently (at 60-minute intervals) initially until symptoms improve, then applied less frequently. **Carbomers** and **polyvinyl alcohol** require less frequent administration but may have a greater impact on vision.
- **Lubricant ointments** containing **liquid paraffin** may be used at **night**. They should **not** be used during the **day** as they can be uncomfortable and blur vision. Never use with contact lenses.
- Lubricants containing **sodium hyaluronate** may be used as 3<sup>rd</sup> line choices

### **Toxicity from preservatives: Biodegradable preservative versus preservative-free**

- Eye lubricants containing preservative are often **well tolerated** for patients with mild dry eye and using treatments **4 to 6 times a day**.
- However, for patients with **moderate to severe dry eye** ocular surface **inflammation** associated with dry eye syndrome can be **exacerbated by preserved lubricants**. For patients on more than one product, potential exposure to preservatives is increased. The most common preservative that causes eye irritation is benzalkonium chloride.
- Some eye drops contain **biodegradable preservatives**. This means that while the solution is preserved in the bottle, on contact with tears it breaks down into natural salts and oxygen.
- Biodegradable preservatives are known to be quite **safe** in patients with **mild-moderate dry eye** syndromes and are much preferred than eye drops containing chemical preservatives. However, for patients with **severe dry eye**, **biodegradable preservatives may not totally break down** due to the decrease in tear volume and may cause **irritation**.
- **Preservative-free formulations** should be considered for patients with **true preservative allergy or intolerance** for example, evidence of epithelial toxicity from preservatives, severe dry eye with impairment of lacrimal gland secretion, multiple topical eye medications and prolonged daily frequency of administration >6 times a day. Preservatives are contraindicated in corneal ulcer or transplants as they can delay healing.
- Preservative-free formulations are available as both **10ml bottles** and as **individual dose (UD) units**. Once opened, some daily dose unit doses can be kept in the fridge and used over a 24 period, whilst others are single use only.

## References

- 1 <https://www.england.nhs.uk/wp-content/uploads/2018/05/over-the-counter-quick-reference-guide.pdf>
- 2 National Institute for Health & Clinical Excellence Clinical Knowledge Summaries Dry eye syndrome (last revised in August 2017). <https://cks.nice.org.uk/dry-eye-syndrome>.
- 3 All Wales Strategy Group Dry Eye Syndrome Guidance December 2016 <https://awmsg.nhs.wales/medicines-appraisals-and-guidance/medicines-optimisation/prescribing-guidance/dry-eye-syndrome-guidance/>
- 4 Midlands Therapeutic Review and Advisory Committee Commissioning Support Ocular Lubricants June 2018 [https://ccg.centreforoptimisation.co.uk/files/MTRAC%20Dry%20eye%20products%20guidance%20June%202018\\_public%20extract.pdf](https://ccg.centreforoptimisation.co.uk/files/MTRAC%20Dry%20eye%20products%20guidance%20June%202018_public%20extract.pdf)

<b>Title</b>	KEY MESSAGES Bulletin 44 Management of Dry Eye
<b>Description of policy</b>	<i>To inform healthcare professionals</i>
<b>Scope</b>	To promote self management and guidance of cost effective prescribing where appropriate.
<b>Prepared by</b>	Prescribing & Medicines Management Team
<b>Other relevant approved documents</b>	Dry eye pathway and eye formulary
<b>Evidence base / Legislation</b>	Level of Evidence: <i>A. based on national research-based evidence and is considered best evidence</i> <b>B. mix of national and local consensus</b> <i>C. based on local good practice and consensus in the absence of national research based information.</i>
<b>Dissemination</b>	Is there any reason why any part of this document should not be available on the public web site? Yes / No
<b>First Approved by</b>	Norfolk & Waveney Prescribing Reference Group March 2019 <input type="checkbox"/> <input checked="" type="checkbox"/>
<b>First Authorised by</b>	Norfolk & Waveney Drug & Therapeutics Commissioning Group April 2019
<b>Review date and by whom</b>	January 2023 - Medicines Optimisation Team
<b>Date of first issue</b>	March 2019

## Version Control (To be completed by policy owner)

Version	Date	Author	Status	Comment
1.0	March 2019	Medicines Optimisation Team (LB)	Final	Agreed PRG Feb 2019
2.0	January 2021	Medicines Optimisation Team (FM)	Final	Agreed MOST Dec 20-Jan21
2.1	January 2023	NHS Norfolk & Waveney ICB Medicines Optimisation Team (NC)	Update	Reviewed and updated to reflect new Eye Formulary