

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

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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