

## Dry Eye Syndromes

The spectrum of dry eye disease (DED) varies from a mild, self-limiting, irritation to severe, **sight-threatening** disease. The quality of life impact of moderate DED compares to that of life on haemodialysis or with mild angina.<sup>1</sup>

### Triaging DED

Mild	Soreness, irritation, discomfort	Negligible impact on the vision	Temporary treatment 1-2 x day with OTC drops
Moderate	Increased discomfort	Transient blurring of vision	Long-term use of drops 4 or more times per day
Severe	Marked discomfort or pain	Reduction in vision	Use of drops every 1-2 hours

Dry Eye disease is classified into

- Evaporative Dry Eye Disease, where there is poor tear function, usually due to blepharitis or Meibomian Gland Dysfunction
- Aqueous Deficiency Dry Eye disease, where there is insufficient tear production

### Short-term Treatment

As per NHS England Guidance<sup>2</sup> self-care with OTC medication should be encouraged for conditions that are 'self-limiting' or are a 'minor issue'.

Patients may ask for advice on which treatments to purchase. There is significant variety in the quality and value of Dry Eye Disease treatments available OTC. More expensive *preservative-free* treatments may afford better value for a patient as the bottle will last longer with a shelf-life up to 6 months rather than the usual 28 days for a preserved bottle. Patients requiring drops more than 3-4 times per day would be recommended to use preservative-free treatment.

- Thinner/less viscous drops (e.g. hypromellose or polyvinyl alcohol) will provide more temporary relief albeit with less blurring.
- Thicker/more viscous drops (e.g. carboxymethyl cellulose, hyaluronic acid) will cause longer term relief, but may cause blurring of vision.
- Ointments (e.g. VitaPos, Lacrilube) can be recommended for night-time use if the patient complains of symptoms at night-time or on waking.

Evaporative Dry Eye as a result of **blepharitis** or **meibomian gland dysfunction** is the most common form of dry eye disease in clinical practice.<sup>3</sup> For these patients, the daily use of **warm compress** in particular with microwaveable 'bean bag' masks (e.g. EyeBag, Meibopatch) and the occasional use of **lid wipes** (eg. Optase, Blephaclean) is essential.

### Long-term Treatment

NHS England Guidelines state that patients **should continue to have treatments prescribed** if the condition is 'long-term', more complex, 'not minor', 'complex', POM, not responded to OTC or patients who are not capable of self-care.

### Preservative-free treatment

'Ideally' all treatment would be preservative free<sup>4</sup>, as all preservatives cause damage to the ocular surface. Nevertheless, there is generally a higher cost with preservative-free preparations. Preservative-free medication is to be considered if the patient is intolerant/allergic to preservatives, if the treatment is likely to be prolonged or if the patient requires **more than 4 drops/day** especially if the patient has severe symptoms or if associated with a systemic disease (e.g. Sjögren's syndrome).

Advice for patients on administering eye drops: [www.myeyedrops.info](http://www.myeyedrops.info)

<sup>1</sup> Utility assessment to measure the impact of dry eye disease. Ocul Surf. 2006 Jul;4(3):155-61

<sup>2</sup> <https://www.england.nhs.uk/publication/conditions-for-which-over-the-counter-items-should-not-routinely-be-prescribed-in-primary-care-guidance-for-ccqs/>

<sup>3</sup> TFOS DEWS II Epidemiology Report Ocul Surf. 2017 Jul;15(3):334-365.

<sup>4</sup> TFOS DEWS II Management and Therapy Report. Ocul Surf. 2017 Jul;15(3):575-628.

## Recommended Treatments for patients with Moderate to Severe Dry Eye Disease

**Patients with mild DED should be directed to self-care with OTC medication.** The following treatments are suggested for moderate and severe DED only.

**Referral to a Corneal Specialist** should be considered if the patient has continuing clinical signs or symptoms, despite using regular topical lubricants, or if there are other features that might suggest a systemic cause, such as *oral dryness* or enlarged salivary glands.

### Eye Drops

Product	Active ingredient(s)	Unit Price*	Comments
<b>Evolve HA®</b>	Sodium hyaluronate 0.2%	£5.99 (10ml)	
<b>Clinitas Multi®</b>	Sodium hyaluronate 0.4%	£6.99 (10ml)	
<b>Thealoz Duo®</b>	Sodium hyaluronate 0.15%, trehalose 3%	£8.99 (10ml)	
<b>Systane Balance®</b>	Propylene glycol 0.6%	£7.49 (10ml)	In Evaporative Dry Eye Disease with blepharitis/meibomian Gland Dysfunction
<b>VisuXL®</b>	Sodium hyaluronate 0.1%, co-enzyme Q10 0.1%, vitamin E 0.5%	£10.30 (10ml)	If Chronic Keratitis
<b>Ilube®</b>	Acetylcysteine 5%, hypromellose 0.35%	£33.46 (10ml)	If Filamentary Keratitis Specialist initiation only

### Eye Ointments

Product	Ingredient(s)	Unit Price*	Comments
<b>Hydramed Night®</b>	Retinol palmitate 250iu/g, liquid paraffin, white soft paraffin, wool fat	£2.32 (5g)	
<b>Xailin Night®</b>	White soft paraffin, white mineral oil, lanolin alcohols	£2.54 (5g)	
<b>Hydramed Night Sensitive®</b>	Retinol palmitate 250iu/g, liquid paraffin, white soft paraffin ( <i>lanolin free</i> )	£8.34 (5g)	Patients with lanolin allergy

### Anti-Inflammatory Treatments

For patients, under secondary care, with *persistent clinical signs* **despite intensive lubricant treatment**, local anti-inflammatory should be considered.

Product	Active ingredient(s)	Cost per Dose*	Comments
<b>Softacort®</b>	Hydrocortisone 0.3%	£0.37 Single Unit Dose	Specialist initiation only
<b>Prednisolone minims®</b>	Prednisolone 0.5%	£0.61 Single Unit Dose	Specialist initiation only
<b>Ikervis®</b>	Ciclosporin 0.1%	£2.40 Single Unit Dose	Specialist prescribing only

\*Prices MIMS March 2020