

Flowchart for the use of Ocular Lubricants in Dry Eye Disease
Assess severity of dry eyes

<p>Ocular discomfort: MILD Frequency of discomfort: episodic Visual symptoms: None/episodic mild fatigue Conjunctival staining: None to mild Corneal staining: None to mild Tear break-up time: variable Schirmer score (mm/5 minutes): variable</p>	<p>Ocular discomfort: MODERATE Frequency of discomfort: episodic or chronic Visual symptoms: episodic, activity limiting Conjunctival staining: variable Corneal staining: variable Tear break-up time: ≤ 10 seconds Schirmer score: ≤ 10 mm at 5 minutes</p>	<p>Ocular discomfort: SEVERE Frequency of discomfort: constant and disabling Visual symptoms: constant limiting activity, disabling Conjunctival staining: moderate to marked Corneal staining: marked, severe punctate erosions Corneal signs: Filamentary keratitis, mucus clumping, increased tear debris, corneal ulceration Tear break-up time: ≤ 5 seconds Schirmer score: ≤ 5 mm at 5 minutes</p>
<p>Mild dry eyes (Grade 1)*</p> <p style="text-align: center;">↓</p>	<p>Moderate dry eyes (Grade 2)*</p> <p style="text-align: center;">↓</p>	<p>Severe dry eyes (Grades 3 or 4)*</p> <p style="text-align: center;">↓</p>
<p>Consider one of the following 4 times a day +/- ointment (e.g. Lacri-Lube®) at night:</p> <p><i>Preserved (supplied in a bottle/tubes)</i></p> <div style="border: 1px solid green; padding: 5px; width: fit-content; margin: 10px auto;"> <p>Hypromellose 0.5% Carbomers</p> </div>	<p>Consider a preservative free preparation (6 or more times a day) and ointment (e.g. Lacri-Lube®) at night:</p> <p><i>Multidose bottle - preservative free</i></p> <div style="border: 1px solid blue; padding: 5px; width: fit-content; margin: 10px auto;"> <p>Sodium hyaluronate (e.g. Hyabak® 0.15%; Hylo-Forte® 0.2%)</p> </div>	<ol style="list-style-type: none"> 1. Refer to Cornea and External Eye Disease Clinic 2. Patients may need the following in addition to / instead of any of the above-mentioned lubricants: <div style="border: 1px solid red; padding: 5px; margin: 10px auto;"> <ul style="list-style-type: none"> ▪ Sodium hyaluronate (e.g. Vismed® 0.18%, Clinitas® 0.4%) ▪ Acetylcysteine ▪ Anti-inflammatory agents </div>
<p><i>Preservative free (if patient intolerant to preservatives / unsuitable for preservatives e.g. already on frequent preserved eye drops for co-existing ocular conditions)</i></p> <div style="border: 1px solid green; padding: 5px; width: fit-content; margin: 10px auto;"> <p>Polyvinyl alcohol e.g. Refresh Ophthalmic®</p> </div>	<p><i>Single dose units – preservative free</i></p> <div style="border: 1px solid blue; padding: 5px; width: fit-content; margin: 10px auto;"> <p>Polyvinyl alcohol e.g. Refresh Ophthalmic® Hydroxypropyl-guar (e.g. Systane®) Carmellose (e.g. Celluvisc® 1% or if not tolerated 0.5%)</p> </div>	

* **References:**

1. Behrens A, Doyle J J , Stern L , et al. Dysfunctional tear syndrome. A Delphi approach to treatment recommendations. Cornea 2006; 25:900-7
2. Management and therapy of dry eye disease: report of the Management and Therapy Subcommittee of the International Dry Eye WorkShop (2007). Ocul Surf 2007; 5(2):163-178.

*Authors: Mr Anil Aralikatti, Consultant; Lucy Titcomb, Lead Ophthalmic Pharmacist
 Approved by: Drugs and Therapeutic Committee
 Divisional Governance Group – Surgery B
 Reviewed: December 2013*