

11.6 Glaucoma

Chronic Open Angle Glaucoma

First line treatments

Choice	Drug	Dosage
1st choice Prostaglandin analogue	Latanoprost 50micrograms/mL 2.5mL eye drops	Dose: Apply once daily, preferably in the evening
1st choice Beta- Blocker	Timolol 0.25%, 5mL eye drops Timolol 0.5%, 5mL eye drops	Dose: Apply twice daily

Prescribing notes:

- Treatment should be initiated and monitored by specialists. Please refer to NICENG81 Glaucoma: diagnosis and management, 2017 <https://www.nice.org.uk/guidance/ng81> and <http://cks.nice.org.uk/glaucoma> for full details
- NICE recommends selective laser trabeculoplasty as first-line treatment for ocular hypertension or glaucoma in suitable eyes. Availability of this laser treatment may vary.
- Prostaglandin analogues (PGAs) are recommended as first line pharmacological treatment as they are significantly more likely to achieve a greater fall in baseline Intra-Ocular Pressure (IOP) and to achieve a greater number of patients with acceptable IOP than beta-blockers (BBs). **Generic latanoprost is recommended first line**
- **Secondary care clinicians should prescribe latanoprost generically on discharge information**
- Promote the correct use of eye drops and adherence to treatment to optimise the likelihood of preserving sight. It is important to ensure that the patient is able to use the product prescribed for them. They should be shown how to administer drops. *First line products may not be suitable for some patients.*
 - If physical problems hinder the correct use of eye drops an eye drop dispenser (compatible with their bottle) can help position and squeeze the bottle. For example: Opticare® and Opticare® Arthro dispensers are prescribable and are compatible with various eye drop bottles. Opticare® dispensers are designed for people whose hands shake, or have difficulty squeezing the bottle. Opticare® Arthro dispensers are designed for people with poor hand grip or limited mobility of the hand.
 - Other eye drop dispensers are available (not all are prescribable)

- If a first-line treatment is unsuccessful, or not tolerated, second-line treatment options that may be considered by the ophthalmologist include:
 - Switching to an alternative generic PGA.
 - A topical beta-blocker.
 - Switching to, or adding in, a second-line drug treatment, which are: a non-generic PGA, a topical sympathomimetic, a topical carbonic anhydrase inhibitor, a topical miotic or a combination of drops
- Where a combination PGA+BB product is required, generic latanoprost / timolol 2.5ml bottle is the most cost-effective option
- Latanoprost unit dose preservative free eye drops are the preferred formulation in patients with proven intolerance to benzalkonium and in patients with ocular surface disease drop induced toxicity
- **Avoid inadvertently selecting a 'special' when selecting a preservative-free eye drop**

Cautions:

- The **Xalatan® brand** of latanoprost was reformulated to allow for long-term storage at room temperature (by reducing pH from 6.7 to 6). Following this reformulation there has been increased reporting of eye irritation. Patients should be advised to tell their health professional if they experience severe eye irritation. See MHRA advice <https://www.gov.uk/drug-safety-update/latanoprost-xalatan-increased-reporting-of-eye-irritation-since-reformulation>

Other treatment options

Choice	Drug	Dosage
1st choice Carbonic anhydrase inhibitor eye drop	Brinzolamide 10mg/ML, 5mL	Dose: Apply twice daily increased to max. 3 times daily if necessary
1st choice Sympathomimetic	Brimonidine tartrate 0.2%, 5mL eye drop (generic)	Dose: Apply twice daily

Prescribing notes

- Carbonic anhydrase inhibitors (CAIs) and sympathomimetics are not recommended as first line treatments.

- The NICE guidelines suggest where there is progression of glaucomatous changes then surgery or laser therapy should be offered. However not all patients in this situation will be appropriate candidates for surgery and there is therefore a need for second-line treatment options
- CAls are in regular use and have a place as second line treatment where further lowering of IOP is desirable and surgery is not considered appropriate
- Sympathomimetics should similarly be used as third line treatment where further lowering of IOP is desirable and surgery is not considered appropriate
- Miotics have largely been superseded by newer drugs