

## [Latanoprost](#)

Essential medicine status

Section:

[21. Ophthalmological preparations](#) [21.4. Ophthalmological preparations > Miotics and antiglaucoma medicines](#)

ATC codes: [S01EE01](#)

Indication

Primary open-angle glaucoma ICD11 code: [9C81.0](#)

INN

Latanoprost

Medicine type

Chemical agent

List type

Core

Formulations

**Local > Ophthalmological > Solution (eye drops):** 50 µg per mL eye drops

EML status history

First added in 2013 ([TRS 985](#))

Sex

All

Age

Adolescents and adults

Therapeutic alternatives

The recommendation is for this specific medicine

Patent information

Patents have expired in most jurisdictions

Read more [about patents](#).

Wikipedia

[Latanoprost](#)

[DrugBank](#)

[Latanoprost](#)

Summary of evidence and Expert Committee recommendations

An application was submitted by the International Council of Ophthalmology for the addition of latanoprost for the treatment of glaucoma. Glaucoma is the second leading cause of blindness worldwide (1), and acetazolamide tablets and timolol and pilocarpine eye drops are included in the EML for glaucoma. The application summarized the older clinical trials for once-daily latanoprost in open-angle glaucoma. These showed a sustained decrease of intraocular pressure in 84% of patients, lasting up to 24 months. Bron & Emmerich concluded: "Timolol, the leading topical beta-adrenergic antagonist, is often used as a first line therapy for the treatment of glaucoma. Dorzolamide, the first topical carbonic anhydrase inhibitor to become available on the market, is often prescribed as an add-on therapy. A review of studies comparing the efficacy of latanoprost to combined timolol and dorzolamide suggested that the intraocular pressure lowering effect of latanoprost is equivalent to that of concomitant timolol dorzolamide therapy. In addition, data suggests that adding latanoprost to timolol and dorzolamide leads to a further 16% reduction of intraocular pressure"(2). A recent systematic review judged the prostaglandin agents to be superior to other monotherapies "We judged the strength of evidence from these 3 most recent trials to be low. However, with the addition of the consistent high-quality systematic reviews, the conclusion that topical glaucoma medications decrease intraocular pressure (IOP) is well supported, as is the conclusion that prostaglandin agents are superior to other monotherapies with regard to decreasing IOP"(3). A meta-analysis that evaluated trials comparing latanoprost with timolol found latanoprost to be more effective than timolol. Additionally, latanoprost had the advantage of once-daily administration (4). The main adverse effect is iris pigmentation which is seen in 12% of patients with light-coloured irises and which occurs with long-term use. It is seen in 18% of patients when used for two years. Other adverse effects are mild, are not very common and do not lead to stopping treatment. The Expert Committee decided to recommend that latanoprost be added to the core list in the EML. Timolol is to be retained as there is evidence that timolol and latanoprost have additive effects. References: 1. Quigley HA. Glaucoma. *Lancet*. 2011;377(9774):1367-77. [http://dx.doi.org/10.1016/S0140-6736\(10\)61423-7](http://dx.doi.org/10.1016/S0140-6736(10)61423-7) PMID:21453963 2. Bron AM, Emmerich KH. Latanoprost versus combined timolol and dorzolamide. *Surv Ophthalmol*.2002;47 Suppl 1:S148-54. [http://dx.doi.org/10.1016/S0039-6257\(02\)00290-4](http://dx.doi.org/10.1016/S0039-6257(02)00290-4) PMID:12204712 3. Boland MV, Ervin AM, Friedman DS, Jampel HD, Hawkins BS, Vollenweider D, et al. Comparative effectiveness of treatments for open-angle glaucoma: a systematic review for the U.S. Preventive Services Task Force. *Ann Intern Med*. 2013;158(4):271-9. <http://dx.doi.org/10.7326/0003-4819-158-4-201302190-00008> PMID:23420235 4. Zhang WY, Po AL, Dua HS, Azuara-Blanco A. Meta-analysis of randomised controlled trials comparing latanoprost with timolol in the treatment of patients with open angle glaucoma or ocular hypertension. *Br J Ophthalmol*. 2001;85(8):983-90. <http://dx.doi.org/10.1136/bjo.85.8.983> PMID:11466259