







IOP Medications available in Australia for the management of glaucoma

IOP drops are the optometrists' first-line treatment for glaucoma patients.^{1,2} It is imperative that all practicing optometrists are aware of the IOP medications, potential side effects and contraindications.

Preparations by Class	Mechanism of action	Efficacy	Order of treatment choices	Daily dosage	Ocular side effects	Systemic side effects	Contraindications
 <p>Prostaglandin analogues</p> <ul style="list-style-type: none"> Latanoprost 0.005% (Brand name: Xalatan) Travoprost 0.004% (Brand name: Travatan) Bimatoprost 0.03% (Brand name: Lumigan*) Tafluprost 0.0015% (Brand name: Saflutan*) 	Increase aqueous outflow	25-35% Maximum effect: 8-12 hours	First	Once daily (night)	<ul style="list-style-type: none"> Uncommon - may cause respiratory symptoms in susceptible individuals 	<p>No contraindications</p> <p>Precautions:</p> <ul style="list-style-type: none"> Intraocular inflammation (iritis, uveitis) History of herpetic keratitis Aphakia or pseudophakia (potential for macular oedema) 	
 <p>Beta-blockers</p> <p>Non-selective agents:</p> <ul style="list-style-type: none"> Timolol 0.25%, 0.5%, 1% (Brand name: Timoptol, Nyogel, Timoptic*) <p>Selective agents:</p> <ul style="list-style-type: none"> Betaxolol 0.25%, 0.5% (Brand name: Betoptic) 	Decrease aqueous production	20-25% Maximum effect: 2 hours	First	One to two times daily	<ul style="list-style-type: none"> Headache Bradycardia Decreased libido Bronchospasm Nausea 	<ul style="list-style-type: none"> Sinus bradycardia Overt cardiac failure history Cardiogenic shock <p>Precautions:</p> <ul style="list-style-type: none"> Asthma Severe chronic obstructive pulmonary disease (COPD) (selective agents, i.e. betaxolol preferred) 	
 <p>Alpha2-agonists</p> <ul style="list-style-type: none"> Brimonidine 0.2%, 0.15% (Brand name: Alphagan) Apraclonidine† 0.5% (Brand name: Iopidine) 	Increase aqueous outflow and decrease aqueous production	10-25% Maximum effect: 1-4 hours	Second	Two to three times daily	<ul style="list-style-type: none"> Dry mouth Headache Fatigue 	<p>Patients receiving MAOIs</p> <p>Precautions:</p> <ul style="list-style-type: none"> Severe cardiovascular disease May have loss of effect over time 	
 <p>Carbonic anhydrase inhibitors</p> <p>Topical:</p> <ul style="list-style-type: none"> Dorzolamide 2% (Brand name: Trusopt) Brinzolamide 1% (Brand name: Azopt) 	Decrease aqueous production	15-25% Maximum effect: 2 hours	Second	Two to three times daily	<ul style="list-style-type: none"> Headache Bitter taste Dry mouth Nausea Fatigue 	<ul style="list-style-type: none"> Allergy to sulfonamides Severe renal impairment <p>Precautions:</p> <ul style="list-style-type: none"> Corneal grafts Endothelial dystrophy (may cause corneal oedema) 	
 <p>Cholinergics (miotics)</p> <ul style="list-style-type: none"> Pilocarpine 1%, 2% (Brand name: Isopto Carpine, Pilocarpine minims*†) 	Increase aqueous outflow	15-20% Maximum effect: 3-4 hours	Third	Three to four times daily	<ul style="list-style-type: none"> Headache Nausea Dizziness 	<ul style="list-style-type: none"> Uveitis/Iritis Secondary glaucoma 	
 <p>Combination therapies‡</p> <ul style="list-style-type: none"> Brimonidine 0.2%/timolol 0.5% (Brand name: Combigan) Dorzolamide 2%/timolol 0.5% (Brand name: Cosopt*) Travoprost 0.004%/timolol 0.5% (Brand name: DuoTrav) Latanoprost 0.005%/timolol 0.5% (Brand name: Xalacom) Bimatoprost 0.03%/timolol 0.5% (Brand name: Ganfort*) Brinzolamide 1%/timolol 0.5% (Brand name: Azarga) Brinzolamide 1%/brimonidine 0.2% (Brand name: Simbrinza) 	As for individual components	20-35%	Second	<p>Combigan: Twice daily</p> <p>Cosopt: Twice daily</p> <p>DuoTrav: Once daily</p> <p>Xalacom: Once daily</p> <p>Ganfort: Once daily</p> <p>Azarga: Twice daily</p> <p>Simbrinza: Twice daily</p>	As for individual components		As for individual components

*Preservative-free option

†Currently not available on the PBS

‡Restrictive benefit: the condition must have been inadequately controlled with monotherapy.

1. NHMRC. Guidelines for the Screening, Prognosis, Diagnosis, Management and Prevention of Glaucoma. Canberra, Australia; 2010.

2. MIMS Online [Internet]. Medical Information Management System. [cited 2018 December 12]. Available from <https://www.mimsonline.com.au>.