Glaucoma treatment during pregnancy and breastfeeding

General guidelines

- A discussion of treatment goals (target pressure), treatment options, and a treatment strategy (stopping or changing current treatments) should ideally be held in the preconception period
- Treatment decisions during preconception, pregnancy, and breastfeeding should be shared with the entire health care team including obstetrician, pediatrician and others as necessary
- Pregnancy might alter the course of glaucoma, so a tailored, close follow-up is recommended
- Drops can be safely administered, and laser therapy can be safely performed in pregnancy and breastfeeding. Glaucoma surgery is rarely required during pregnancy, but in the rare cases it is needed, good outcomes are the norm.
- Sleeping position and delivery method choice are unlikely to cause clinically meaningful pressure increases
- Drops should be administered with nasolacrimal occlusion, and closely after a feeding session when breastfeeding
- See tables below for specific recommendations

** Data regarding glaucoma medications during pregnancy and breastfeeding is very limited in humans, high-level safety evidence is generally unavailable, and reports are often anecdotal. Therefore, clinical judgment with a careful risk-benefit consideration using best available current evidence is recommended on a case to case basis.*

Belkin A, et al. A Practical Guide to the Pregnant and Breastfeeding Glaucoma Patient. Ophthalmology Glaucoma. 2020;3:79-89.

Treatment guide for the glaucoma patient in preconception, pregnancy and breastfeeding

	PRECONCEPTION	PREGNANCY	BREASTFEEDING
Medication	• Evaluate risk • Consider decreasing medication burden • Nasolacrimal occlusion	• Evaluate risk • Consider decreasing medication burden • Nasolacrimal occlusion	• Evaluate risk • Consider decreasing medication burden • Nasolacrimal occlusion • Instill medications immediately after, rather than before, breast feeding
Laser Trabeculoplasty	Consider performing to decrease medication burden and/or lower IOP		
Surgery	Consider if target pressure not achieved using other treatment modalities		

Summary of pregnancy categories for glaucoma medications

CLASS	CATEGORY	WHEN TO AVOID/USE CAUTION
Alpha-adrenergic agonist – Brimonidine	B	Close to delivery due to neonatal effects
Alpha-adrenergic agonist – Apraclonidine	C	
Beta-blockers	C	Close to delivery due to neonatal effects
Prostaglandin Analogues [excluding Latanoprostene bunod 0.24% (Vyzulta)]	C	First two trimesters Avoid Vyzulta in all trimesters
Carbonic Anhydrase Inhibitors	C	First two trimesters
Pilocarpine	C	
Rho Kinase Inhibitor	N/A	OK in all trimesters based on limited animal studies

category B- possibly safe to use in pregnancy; category C- adverse effects reported in animal studies

Recommendations for glaucoma medications during breast feeding

CLASS	SAFETY	COMMENT
Alpha-adrenergic agonist – Brimonidine	Contraindicated	Risk of CNS depression, apnea, lethargy, bradycardia
Beta-blockers	Safe	Caution in infants with cardiopulmonary disease
Prostaglandin analogues (excluding latanoprostene bunod 0.24% (Vyzulta))	Likely safe	Short half life
Carbonic anhydrase inhibitors	Safe	
Pilocarpine	Unknown	Short half-life; Risk of cholinergic symptoms
Rho kinase inhibitor	Unknown	No data available

- CNS – Central nervous system
- 'Safe' refers to being deemed compatible with lactation by the American Academy of Pediatrics
- 'Likely safe' refers to assessment by authors given available data