

## ⊗ | Glaucoma medications may harm the foetus and neonate

### ***The Science behind the Tip***

Human data on adverse effects of glaucoma medications during pregnancy and lactation are sparse because the coincidence of glaucoma and pregnancy is uncommon. Timolol can reportedly cause foetal bradycardia and cardiac arrhythmia<sup>1</sup>. Further, timolol and betaxolol were found to be concentrated in breast milk with milk/plasma ratios as high as 6/1<sup>2,3</sup>. Topical  $\beta$ -blocker therapy may thus harm the foetus and neonate. Any class of glaucoma medication can however present risks. This particularly holds true for the prostaglandin analogues. These drugs are derivatives of  $\text{PGF}_{2\alpha}$ , an endogenous prostaglandin with potent contractile effects on the myometrium, known to play a central role in the initiation of labour<sup>4</sup>. Although the short blood half life of prostaglandin analogues reduces the risk of preterm birth after topical application, the drugs should not be used in pregnancy.

Because not all risks are known, the safest pregnancy-related pharmacy is as little pharmacy as possible. If the rate of glaucoma progression is low, medications can temporarily be discontinued. Women of childbearing age may however have severe glaucoma requiring therapy. Laser trabeculoplasty (LT) is safe and can thus be considered, but the efficacy of LT is often low in these young patients. Filtering procedures without the use of antimetabolites can be an alternative. Women needing medication should be instructed on how to minimize systemic absorption by occluding the nasolacrimal duct with a finger tip or by keeping the eyes closed for 3-5 minutes after drug application.

### ***References***

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4. Olson DM, Zaragoza DB, Shallow MC, *et al.* Myometrial activation and preterm labour: evidence supporting a role for the prostaglandin F receptor - a review. *Placenta*. 2003;24 Suppl A:S47-54.