



Topical medication may accelerate cataract formation

The Science behind the Tip

A number of large studies have linked use of topical glaucoma medication with increased risk of nuclear cataract, the cause of which is still unknown. The *Barbados Eye Studies* (a population-based prospective study) reported a 3-fold risk of nuclear cataract in users of glaucoma medications as observed with slit-lamp microscopy after 4 years of follow-up¹. The *Early Manifest Glaucoma Trial* (a clinical trial) corroborated this finding². In 2 more recent studies the association was less strong. It only approached statistical significance in the *Blue Mountains Eye Study*, according to the authors possibly because of insufficient statistical power or of different methodologies³. The *Ocular Hypertension Treatment Study* could not observe a higher incidence of nuclear cataract by lens examinations in users of glaucoma medications, but on the other hand found a significant association with cataract surgery⁴. Then again, a bias on the part of clinicians perhaps wanting to achieve low intraocular pressure levels with early surgery could not be excluded.

Additional prospective studies are required to further quantify the effects of all classes of topical glaucoma medications on cataract formation. In the meantime, the available data underscore the need to avoid unnecessary treatments.

References

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3. Chandrasekaran S, Cumming RG, Rohtchina E, Mitchell P. Associations between elevated intraocular pressure and glaucoma, use of glaucoma medications, and 5-year incident cataract: the Blue Mountains Eye Study. *Ophthalmology*. 2006;113:417-24.
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