Exogenous influences on intraocular pressure

Kim YW (1), Park KH (2)

1 Ophthalmology, Seoul National University Hospital, Seoul, Republic of Korea.
2 Ophthalmology, Seoul National University College of Medicine, Seoul, Republic of Korea

kihopark@snu.ac.kr.

Intraocular pressure (IOP), the pressure within the eyeball, is a function mainly of the production and elimination of aqueous humour. Balanced IOP helps to maintain the eyeball contour, allowing proper refraction of light in the anterior segment of the eye. Increases in IOP can cause injury to the ocular structure, typically the optic nerve head and retinal ganglion cells. IOP increase, additionally, is a risk factor for glaucoma progression. However, it is not unusual that glaucoma worsens despite well-managed IOP; indeed, glaucoma can develop and progress even within the normal IOP range. IOP measured once during daytime office hours might not provide sufficient information for effective glaucoma management.

In fact, IOP is not a fixed value but rather changes over time: it fluctuates with the intrinsic circadian rhythm and can also change in various lifestyle-related situations (eg, with body posture, during exercise, while holding breath and according to dietary habits). It is therefore worth exploring the various factors that can affect IOP and glaucoma risk. In this review, the various exogenous influences on IOP in the literature are investigated.

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