



Patients with progressive normal tension glaucoma may benefit from elevation of the head of the bed when they sleep

The Science behind the Tip

Intraocular pressure (IOP) is significantly higher in the supine position than in the sitting position. Progressive visual field loss in normal tension glaucoma (NTG) has been reported to be associated with the level of IOP in the supine position and the magnitude of IOP elevation accompanying postural change¹.

During sleep, the average IOP is 3.2mmHg lower in the 30° head-up position than in the flat position, although there is considerable variation between patients². In support of this, a recent study shows that the average IOP is 1.5mmHg lower in a 20° head-up position than in a supine position in normals and in patients with glaucoma³.

To prevent the rise in IOP associated with sleeping in a supine position, elevation of the head of the bed is simple and could be beneficial in some patients with progressive NTG.

References

- 1) Kiuchi T, Motoyama Y, Oshika J. Relationship of progressive visual field damage to postural changes in intraocular pressure in patients with normal-tension glaucoma. *Ophthalmology* 2006; 113: 2150-5
- 2) Buys YM, Alasbali T, Yin YP et al. Effects of sleeping in a head-up position on intraocular pressure in patients with glaucoma. *Ophthalmology* 2010; 117: 1348-51.
- 3) Lazzaro EC, Mallick A, Singh M et al. The effect of positional changes in intraocular pressure during sleep in patients with and without glaucoma. *J Glaucoma* 2014; 23: 282-7.