

Taking glucosamine supplements is linked to significant, but reversible increases in intraocular pressure (IOP) in a very small, retrospective study published in JAMA Ophthalmology online. The investigators were not able to exclude the potential for long lasting damage. To put into context the potential scale and possible implications of these issues, the US prevalence of osteoarthritis is around 27 million, and glaucoma exceeds 2 million.

In this small study, only 17 patients were studied (mean age 76 years) who had a history of glucosamine supplementation and ocular hypertension (IOP > 21 mm Hg) or diagnosed open-angle glaucoma, a desire to discontinue glucosamine, 3 or more IOP measurements within 2 years, and no associated changes in glaucoma medications or eye surgery. The study was limited with its small size and design, but small significant increases in eye pressure were noted with glucosamine use - the rise in eye pressure was about 3mmHg. Clearly further studies are required to establish this association more definitively.

"Many questions are raised by glucosamine supplementation—associated IOP changes," the study authors write. "This study shows a reversible effect of those changes, which is reassuring. However, the possibility that permanent damage can result from prolonged use of glucosamine supplementation is not eliminated."

Glucosamine is a precursor to glycosaminoglycans, and deposits of glycosaminoglycans may be deposited in the trabecular meshwork (the area of the eye where fluid drains out); there are in fact other hypotheses as to how glucosamine might affect eye pressure: possibly glycosaminoglycans might have an "osmotic effect", in effect increasing fluid production inside the eye.

Given the uncertainty that now surrounds glucosamine, it would wise for glaucoma patients to discuss the issue at their eye consultations, to evaluate forthcoming literature. The current study does by its small size carry serious limitations in generalising its applicability to the population at large at present.

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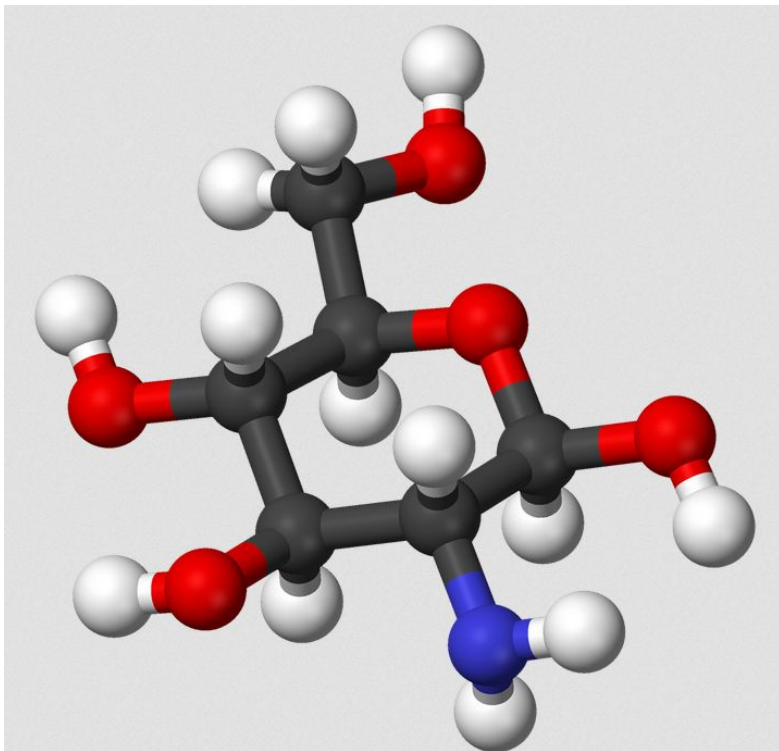
## Glucosamine and glaucoma

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chondroitin  
glucosamine



Chondroitin (which is known) is often supplemented with glucosamine and the effect of these