Corneal transparency requires that its water content be maintained at 78%.

The corneal water content becomes progressively greater from anterior to posterior.

Intraocular pressure works to desiccate the cornea, while corneal GAGs work to hydrate it.

The difference between IOP and the effect of corneal GAGs is called the imbibition pressure of the corneal stroma.
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Corneal Hydration

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**How do GAGs promote corneal hydration?**
GAGs are negatively charged and thus repel each other. In repelling each other, they expand the intrastromal space, thereby producing a swelling pressure.
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Huh? I thought IOP forced water into the cornea. How does it have a dessicating effect? By pushing against the cornea, IOP in effect ‘wrings out the sponge,’ promoting dessication. An intact endothelium-Descemet’s effectively prevents aqueous ingress, unless IOP is so high as to overwhelm the endothelial pump function.
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