

At Issue: Hyperopic correction

AT ISSUE posed the following question to a panel of experts:

“What is your highest limit for hyperopic correction in laser refractive surgery, and why?”

NOEL A. ALPINS, MD, FACS

Depends on laser and age of patient

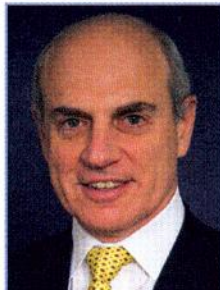
The upper limit for hyperopic correction in laser refractive surgery is primarily dependent on the ability of the laser machine used and the age of the patient.

From my experience, the most unhappy refractive surgery patients were those who had hyperopic corrections exceeding the limit. For these patients who received an excessive hyperopic correction, although the desired unaided vision may have been achieved, poor quality of the vision is a frequent complaint. However, patients who under-reacted to their very large hyperopic correction might eventually need part-time or full-time spectacle correction. This also would be a disappointment to the patient.

Currently my maximum limit is 5 D of hyperopia measured cycloplegically up to the age of mid-30s. For every decade of age into the mid-50s, this limit is decreased by around 1 D. For those who are aged mid-50s and beyond, refractive lens exchange or cataract surgery will become the preferred method to treat hyperopia. This procedure would give these patients better quality of vision after the surgery. With the advance of multi-focal IOLs, this would

also give them the advantage of unaided reading vision.

Another point to consider with the maximum treatment limit is that if the hyperopic laser correction steepens the cornea to be 50 D or more in keratometry after the surgery, laser surgery should not be recommended, as this would also degrade optical quality. These maximum hyperopic correction limits are used with the Visx S4 laser machine. Each surgeon should methodically determine the limits for his or her own laser machine and, whenever possible, avoid exceeding that limit.



“Patients who under-reacted to their very large hyperopic correction might eventually need part-time or full-time spectacle correction.”

— Noel A. Alpins, MD, FACS