
Lasik Surgery:
Secret Behind Success
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LASIK

As a surgical treatment, LASIK is a neat process and provides good results only when certain guidelines are followed before, during and after LASIK.

Good Refraction

- A good LASIK surgeon should have good knowledge of the Art of Clinical Refraction.
- Refraction should be done on different visits by the Surgeon himself and by attending Optometrist.
- Cycloplegic Refraction for Hypermetropic cases
- Full correction to achieve maximum acuity.
- Effect of corneal warpage due to contact lens wear should be taken into consideration.
- Stable refractive error in last one year.

Correction of Refractive Error

V/A achieved should be demonstrated to the patient before the surgery.

Always aim for full correction by adjusting First OZ (at least mesopic size or nearby), then by cylinder and lastly by spherical power.

Age Factor : Nearly 40 yrs under correct by -0.25D
More than 40 yrs under correct by -0.50D

Follow your own nomogram

Select a Suitable Patient

- Motivated and has reasonable expectations
- Understands the fact that LASIK removes dependence upon glasses and contact lenses, not the refractive error
- Eyes are otherwise healthy
- Large eye
- Avoid patients who asks same questions repeatedly
- Avoid patients who forces to undergo treatment quickly
- Avoid patients who are not careful, & not good listener

Knowledge of Machine

- The surgeon understands the machine technology
- Has experience on the same machine
- Know the use of microkeratome
- Knows the importance of machine maintenance for good results
- Calibrate the LASER system himself before each eye of a patient or under his supervision

Regular LASIK surgeon

- Surgeon should be attached to a LASIK centre as regular surgeon
- Ready to learn from an experienced surgeon
- During first few cases, have an experienced LASIK surgeon
- Practices the use of microkeratome before starting LASIK surgery

Standardized Technique

- Same amount of fluid in each case, excess hydration can cause under correction
- Same time to complete the procedure, excessive time can alter results
- Same amount of drying, excessive drying can cause over correction.
- Follows his own standardized nomogram

No Haste

- Spend sufficient time to counsel the patient
- Spend time to create reasonable expectations in the minds of guardians of the patient.
- Spend time to explain pre and post treatment care
- Take enough time to satisfy himself about IOP build up
- Meticulously places the microkeratome to create flap
- Allow enough time for flap to stick back in place

Watchful

- Monitor the ablation field
- Clean the fluid and blood, if he sees
- Do not ablate the hinge, protect it
- Clean the interface thoroughly before reposing the flap

Minimum Flap Handling

- Float the flap back on the bed gently
- Do not squeeze the flap excessively
- Do not clean the flap aggressively
- Use light sponge to absorb the water from flap and bed gutter.
- Get a good sized flap
- Use ablation zone smaller than flap size.

Maintain the Corneal Thickness

- Leave at least 250 to 280 microns on the stromal bed
- Less than 460 micron: No LASIK
- Difference of more than 20 micron in two eyes, repeat topography
- Difference of more than 100 micron from 7 mm OZ to the thinnest point, think before doing LASIK

Max. K & Min. K

- 49.00D & 39.00D (May vary with experience)
- Post LASIK K: Must not be less than 29.00D & more than 51.00D
- Difference of more than 3.00D in 3 mm zone, think
- Irregular Astigmatism more than +&- 2.50D in 3 mm zone, patient will not benefit

Suction Ring Selection(Hansatome)

• K reading 42 – 46 D :	Use 8.5 mm
• K reading Less than 42 :	Use 9.5 mm
• K reading more than 46 :	Use 8.5 mm
• Small cornea :	Use 8.5 mm
• Significant Neovascularisation:	Use 8.5 mm
• Hypermetropia :	Use 9.5 mm
• Larger astigmatism :	Use 9.5 mm
• Wavefront LASIK :	Try using 9.5 mm

Re LASIK

Always lift the flap

Orbscan

Wonderful diagnostic equipment to rule out the cases suspected to have keratoconous

Orbscan

Quad Maps

1 Map Abnormal : Be careful

2 Maps Abnormal : Be concern

3 Maps Abnormal : Contraindication

Ratio between Radius of curvature of Anterior Elevation BFS and Ratio of curvature of Posterior Elevation BFS

- 1.21 or Less : OK
- 1.22 To 1.27 : Suspect KC
- Above 1.27 : No Go

- Example: Ant Elevation BFS is 45.5 D and Posterior Elevation BFS is 55.2, implies 55.2 / 45.5 = 1.24

Power of Posterior BFS

Up to 55.00 D : Ok

Above 55.00D: Suspect KC

Corneal Thickness Index

Up to 1.16 OK

Above 1.16 Suspect KC

Irregularity of Cornea

Within 3 mm zone

+/- 1.50D	Ok
Above 1.50D	Suspect

Within 5 mm zone

+/- 2.50D	Ok
Above 2.50D	Suspect

If the Axial Keratometric Map shows butterfly or broken bowtie pattern : Suspect KC

That's all