Cadet Refractive Eye Surgery Program

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GOALS of this Brief

Refractive Surgery Options:

• PRK
• LASIK
• ICL Surgery (ACTIVE DUTY ONLY)

PREPARATION

EXPECTATIONS
Purpose of Refractive Surgery

- Enhance Soldier Readiness
- Reduce Need for Corrective Lenses
- *Eliminate need for Eyeglasses? NO!*
- Sunglasses
- Protective Eyewear
- Reading Glasses when Older
- Weak Specs for Sharper Image
The EYE’s CORNEA

- Epithelium
- Bowman’s Layer
- Stroma
- Descemet’s Membrane
- Endothelium
Myopia (Near-Sighted)

- Long Eyes
- Focus Image in front of the Retina
Hyperopia (Far-Sighted)

- Short Eyes
- Focus Image *behind* the Retina
Astigmatism

- Ovoid Cornea
- Multiple Focal Points
- No Single Focal Point
PRK & LASIK

- Irreversible LASER Procedures
- Each has Surgical Risks
- 5-10% will not qualify PRK/LASIK
- 5-10% may need additional surgery
- Realistic Expectations...

Nothing is Guaranteed!
PRK/LASIK

Risks & Rewards

• Happy >90%
• 20/25 or Better Visual Acuity
• Quality may be different from Spectacles
• Glasses/Contacts/Re-Tx <10%
• Blurry Vision ~1%
• Lose Vision / Eye ~1:100,000
Military Criteria

• CO or TAC Permission
• No Adverse Actions pending
• Cadets: Cows & Firsties*
• PRK & LASIK waivers for:
  • Aviation
  • SCUBA &/or HALO
  • Special Forces

*Plebes & Yuks may still initiate the process.
PROFILE

• Non-Deployable
• PRK: 3 Months
• LASIK: One Month
• ICL Surgery: One Month
• Cadets
• No Boxing/Combative x 1 mo
Contact Lenses

• STOP wearing your Contacts!

• Why?
  • Reshape your Cornea
  • Inaccurate Pre-Op Measurements
  • Change your Treatment Algorithm
  • Unexpected Post-Op Result
  • Poor Visual Outcome
Contact Lenses

Must be OUT

at least 4 weeks prior to Pre-Op Appt!

Keep them OUT!
No-Go’s

- Pregnant
- Diabetes
- HIV/AIDS
- TBI
- PTSD
- Psoriasis
- Vitiligo

Autoimmune Dz’s

- Grave’s Dz
- Lupus (SLE)
- Sarcoid
- Hepatitis
- Rheumatoid Arthritis

...many more
Pre-Op Appointment

• I see multiple candidates!
• Exam ~ at least 2-3 Hours
  • Review Pre-Op Exam & Studies
  • Quick Slit-Lamp Exam
  • May Repeat Studies (if suspicious)
• I make FINAL Decision…
  Yay!, Nay! or Maybe?
Pre-Op → Surgery

- Ideally within 1-3 Months
- Must be within 6 Months
  - If not, repeat Pre-Op Exam(s)

CONTACTS must REMAIN OUT PRIOR to SURGERY!

Keep them OUT
Eye Hygiene

- Wash Eyelids & Eyelashes
  - Start ~1 week before surgery
  - Warm Wet Washcloth (1-2x/day)
  - Baby Shampoo

- No Eye Make-Up
  - At least 1 week before surgery
  - At least 1 week after surgery
The Day of Surgery

- Please be Punctual
- You need a Driver or Buddy
- Dress Comfortably
- No Perfume or Cologne!
  - Alter Laser’s Wavelength, thus Power
- No Make-Up!
  - Debris & Infection
Post-PRK Meds

- Antibiotic Drop: Vigamox
- Anti-Inflammatory: FML eye drops and oral Motrin
- Artificial Tears: REFRESH
- Pain Pills: Motrin & Lortab
- Vitamin-C
- Eye Ointment: Lacri-lube
Post-LASIK Meds

- Antibiotic Drop: Vigamox
- Anti-Inflammatory: Prednisolone 1%
- Artificial Tears: REFRESH
- Restasis: 2x/day for 3 months
- Pain Pills: Valium 5mg
  - Tape Eye shields over Eyes when Sleeping for Two Weeks!
Intraocular Contact Lens
ACTIVE DUTY ONLY

• Alternate to PRK/LASIK
  • Abnormal Corneas (Topo/CCT)
  • Myopes of -3.00 to -15.00
• Two/Three Separate Procedures
  • LPI’s OU, then in 1-2 Weeks…
  • ICL in One/Both Eye(s)
• One Month Profile
ICL Surgery
Post-ICL Meds

- Antibiotic Drop: Vigamox
- Anti-Inflammatory Drops:
  - Prednisolone 1%
  - Nevanac (also alleviates pain)
- Pain Pills: Tylenol
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<th>LASIK</th>
<th>ICL</th>
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Post-Op Precautions

• Never Rub Eyes
• Sunglasses for 3-12 Months
• Keep Eyes Lubricated
• Use Meds as Instructed
• Make all Follow-Up Appointment’s
• Always Wear Protective Eyewear
Post-Op Pain

- PRK ~ 2-7 Days
- LASIK ~ 1-2 Days
- ICL ~ Hours (if any)
Fluctuating &/or Blurry Vision

- PRK ~1-2 Months
- LASIK ~2-7 Days
- ICL ~1-3 Days
Final Visual Outcome

- PRK ~ 2-3 Months
- LASIK ~ 1-3 Months
- ICL ~ 2-4 Weeks
Glare / Halos

- LASIK ~ 3-12 Months
- PRK ~ 3-12 Months
- ICL ~ 3-12 Months

Sometimes Forever

Night Driving Issues
Dry Eyes

- LASIK ~ 3-12 Months
- PRK ~ 3-6 Months
- ICL ~ Minimal

Sometimes Forever!
Post-Op Infection

- ICL ~1:1000 Risk
- PRK ~1:5000 Risk
- LASIK ~1:5000 Risk
Surgical Risk

- ICL: Invasive Surgery
- Cataract, Glaucoma, etc.
- LASIK ~3% Flap Risk
- Folds, Debris, In-growth, etc.
- PRK: Minimal
Corneal Haze/Scar

- **PRK ~ 2.6% Risk**
  - Mitomycin-C for some Tx
- **LASIK ~ 0.1% Risk**
  - Diffuse Lamellar Keratitis
- **ICL ~ Minimal (if any)**
Corneal Ectasia

- LASIK ~ 1:1000 Risk
- PRK ~ 1:2000 Risk
- ICL ~ Minimal (if any)
Regression (over years)

- PRK ~10-15% Risk*
- LASIK ~10-15% Risk*
- ICL ~Minimal (if any)

* Usually Amenable to Retreatment via PRK/LASIK
Post-Op Trauma

• LASIK: Flap Dislocation/Amputation
• ICL: Open Wound / Globe Rupture
• PRK: Abrasion / Recurrent Erosion

• Ideally, Cows & Firsties complete Boxing & Combative!
Presbyopia

- Occurs ~40-50 years of age
- Unable to Accommodate (See Near)
- Need Reading Glasses / Bifocals
- PRK/LASIK/ICL does not fix Presbyopia
- Monovision is an option…
  - Dominant Eye corrected to see Far
  - Other Eye corrected to see Near