Refractive Surgery Education and Informed Consent

Tripler Army Medical Center

Refractive Surgery Center

Warfighter Refractive Eye Surgery Program (WRESP)
Goals of this Briefing

- To explain the Warfighter Refractive Eye Surgery Program (WRESP)
- To explain refractive errors (need for glasses)
- To explain the procedures available to treat refractive errors and their risks, benefits, and alternatives
- To explain the process for getting refractive eye surgery
Why Refractive Surgery?
No Contact Lenses Forward Deployed
Warfighter Refractive Eye Surgery Program

US Army-funded program

Enhance active duty warfighter readiness by decreasing dependence on corrective lenses

Available for all branches of service (Army, Navy, Air Force, Marines, Coast Guard)

Only for active duty warfighters with ongoing active duty service who are at least 21 years of age.
Eligibility

- Minimum time remaining on active duty at time of surgery:
  - Army: 18 months
  - Navy/Marines: 12 months
  - Air Force: 6 months (pilots: 12 months)

- Should have at least 6 months remaining in same or similar unit

- No pending adverse personnel actions

- No pending medical boards
Deployment and Travel

- No planned deployment for 90 days after PRK, ICL, or Refractive Lens Exchange (RLE)
- No planned deployment for 30 days after LASIK
- No planned TDY, off-island travel, or work-ups greater than 1 week in duration during these periods
- No travel within 3 weeks after PRK, ICL, RLE and 1 week after LASIK
Flight Status and Other Special Duty

- All service members on flight status, or who are considering applying for flight status, must contact their flight surgeon or prospective training program to determine eligibility for refractive surgery.

- All service members in a special duty status (Special Forces, Divers, HALO, etc.) or considering applying for special duty status must contact their medical officer or prospective training program to determine eligibility for refractive surgery.
Refractive Error (Ametropia)

- Emetropia (normal vision)
- Myopia (near sighted)
- Hyperopia (far sighted)
- Astigmatism (distortion)
- Presbyopia
Myopia (Nearsighted)
Hyperopia (Farsighted)
Astigmatism
Presbyopia

- Aging change of the eye that happens to EVERYONE!
- Eye unable to focus up close for reading
- Reading glasses or bifocals starting in early-mid 40s
- Refractive surgery WILL NOT correct presbyopia
- Discuss option for monovision with RSC staff
Treatment Options

- Glasses
- Contact Lenses, Orthokeratology
- Incisional surgery: RK (Radial Keratotomy), AK (Astigmatic Keratometry), LRI (Limbal Relaxing Incisions)
- ICR (Intracorneal Rings)
- Phakic IOL/ICL (Implantable Collamer Lens)
- Refractive Lens Exchange (RLE, cataract surgery)
- Excimer Laser Surgery (best for most people)
  - Surface ablation -- PRK (PhotoRefractive Keratectomy)
  - LASIK (Laser In-situ Keratomileusis)
Radial Keratotomy (RK)
Intracorneal Rings
Implantable Collamer Lens (ICL)
Photorefractive Keratectomy (PRK)

The epithelium is removed using a small instrument or a laser. This exposes lower layers of the cornea.

A laser reshapess the cornea using short, rapid pulses of ultraviolet (UV) light. The laser is guided by a computer.

A “bandage” contact lens is placed on the eye. The lens helps protect the eye while it heals.
Laser In-Situ Keratomileusis (LASIK)
Advantages:
- Decreased dependence on corrective lenses
- Improved ability to function in operational environment (NVGs, gas mask, etc.)

Disadvantages:
- Irreversible
- Vision may change over time
- Some side-effects may be permanent
- Risk for surgical and post-operative complications
Realistic Expectations!

- Surgery is irreversible
- There are risks with any surgery
- Approximately 20% of candidates will not qualify for surgery
- Additional surgery may be needed in the future
- Not everyone will be 20/20 without glasses
- Surgery does not provide “perfect” vision
- You may not be happy, even with 20/20 vision!
- You may be happy, even without 20/20 vision!
- You will have eye pain for several days after PRK, from mild to severe.
- Your vision will be very blurry for several days after PRK.
- Your eyes will be sensitive to light for 1-2 weeks after surgery.
- You will have bandage contact lenses for 4 or more days after surgery.
- You will have glare and halos at night for weeks to months after surgery (some symptoms may be permanent).
- Your eyes will be dry for weeks to months after surgery (some symptoms may be permanent).
- Your vision will fluctuate daily for days to weeks.
- It will take weeks to months to achieve best vision.
- 5 days of convalescence leave, including the day of surgery.
PRK Complications/Side-Effects

- Glare/halos at night
- Dry eye symptoms
- Decreased contrast sensitivity (low-light vision)
- Over or under correction
- Regression or change in vision over time
- Elevated eye pressure/ glaucoma related to medication
- Infection
- Scarring/ haze: your surgeon may recommend mitomycin-C
- Recurrent corneal erosions
- Corneal ectasia
- Loss of best corrected vision
LASIK: Expectations

- Your vision will be very blurry for at least 1 day after surgery
- Your eyes will be sore and sensitive to light for at least 1 day
- You will have glare and halos at night for weeks to months after surgery
- Your eyes will be very red for days to weeks after surgery (due to suction ring)
- Most vision improvement will occur in the first week, but it may be several weeks until you achieve best vision
- 3 days of convalescence leave, including day of surgery
LASIK: Complications/ Side-Effects

- Glare and halos at night
- Dry eye symptoms
- Decreased contrast sensitivity (low light vision)
- Over or under correction
- Regression or change in vision over time
- Infection
- Corneal ectasia
- Loss of best corrected vision

Flap Complications:
- Problems with flap creation
- Wrinkling of the flap
- Inflammation under the flap: Diffuse Lamellar Keratitis (DLK)
- Epithelial ingrowth
- Flap displacement after surgery
PRK vs. LASIK

- For most people, either surgery is equally effective
- For some people, one surgery is preferred
- For some occupations, one surgery is preferred or excluded
- Discuss your options during your pre-operative visit
## PRK vs. LASIK

<table>
<thead>
<tr>
<th>PRK</th>
<th>LASIK</th>
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<tbody>
<tr>
<td>Quicker procedure</td>
<td>Longer procedure</td>
</tr>
<tr>
<td>More discomfort</td>
<td>Less discomfort</td>
</tr>
<tr>
<td>Longer recovery</td>
<td>Shorter recovery</td>
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<tr>
<td>Risk of scarring</td>
<td>Risk of flap complications</td>
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<tr>
<td>Risk of erosions</td>
<td>Risk of flap dislocation</td>
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Process Overview

- Complete Refractive Surgery Packet & CO Authorization (from TAMC website)

- Attend a Refractive Surgery Briefing (Oahu patients); bring your completed packet, including signed Commander’s Authorization letter, and an eye exam or prescription at least 1 year old

- Comprehensive Refractive Evaluation at TAMC by Laser Clinic Optometrist. We determine:
  - Can you have surgery?
  - Should you have surgery?

- Review by Ophthalmologist (Eye Surgeon) – Final Determination!

- Surgery

- Post-op follow-up visits
  - LASIK: 1 day, 1 week, 1 month, 3 months, 6 months
  - PRK: 4 days, 3 weeks, 3 months, 6 months

- Enjoy your new vision!
Contact Lenses

- Contact lenses change the shape of your eyes. This will affect our measurements of your eyes and your operative results.

- Soft lenses: out for at least 2 weeks prior to pre-op evaluation

- Hard/RGP, or Toric lenses: out for at least 4 weeks prior to your evaluation
Appointments are Important!

- Anticipate traffic and limited parking
- Please arrive in the Refractive Surgery Clinic 15 minutes prior to all scheduled appointments.
- Your follow-up appointments are critical for your successful recovery
- Please don’t schedule surgery if you can’t (or won’t!) follow-up
- Commanding Officers will be notified of no-shows
Military Duty: Although rare, refractive surgery complications may impair your ability to perform your military duties.

Surgery is usually performed on both eyes on the same day.

Your pre-op evaluation will be performed by a laser clinic optometrist. If the optometrist considers you to be a good candidate for surgery, you will be given a tentative surgery date. Your surgeon (ophthalmologist) will review your record and make a final determination. The surgeon has the final say over whether or not you are an appropriate candidate for surgery!

You will meet your surgeon on the day of surgery. If you wish, you may schedule a visit with your surgeon prior to surgery (may delay surgery date).

Please read the ENTIRE consent form!
Even More Details

- Refractive Surgery Center is located on Oceanside 2C.
- Your pre-op evaluation may take several hours.
- You may need to return for additional testing.
- If your glasses prescription is not stable, your surgery will be postponed (must have at least 1 year of stability!)
- You will have a dilated eye exam. Your eyes may stay dilated for 24 or more hours.
- Please bring reading material.
- Please do not bring children to your appointments.
- If you have any questions, call the RSC at 808-433-3089
Internet Resources

- www.eyesurgeryeducation.com
- www.aao.org/isrs/patients/ref-procedures.cfm
- Search: Tripler Refractive Surgery
- Beware internet sites with bias for or against refractive surgery
Questions?

Big Scary Laser
Do not look into beam with remaining eye