



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON DC

DEC 20 2002

MEMORANDUM FOR SEE DISTRIBUTION

FROM: HQ USAF/SG
110 Luke Avenue, Room 400
Bolling AFB, DC 20032-7050

SUBJECT: Revised Pre-Operative Refraction Limits for Non-Pilots Under the USAF Aviation and Special Duty Photorefractive Keratectomy (PRK) Waiver and Surveillance Program (HQ USAF/SG Policy Letter #00-005, 2 Aug 00)

This directive amends the attached SG Policy Letter #00-005, which specifically outlines pre-PRK clinical criteria applied to Aviation and Special Duty Personnel. The Air Force Chief of Staff recently approved the expansion of the qualifying pre-PRK refractive error limits for all NON-PILOT aircrew and special duty personnel from -5.5 diopters to -8.0 diopters of myopia. You will emphasize that high myopia is more commonly associated with disqualifying retinal pathology, such as lattice degeneration, which must be a particular focus in the pre-operative screening of such candidates.

Aviators and special duty operators will comply with all other provisions of the USAF Aviation and Special Duty PRK Waiver and Surveillance Program unless subsequently amended by official directive.

The POCs for this matter are Col L. Dan Eldredge and Lt Col Dave Rhodes, AFMOA/SGZA, 110 Luke Avenue, Room 405, Bolling AFB, DC 20032-7050, DSN 297-4200, e-mail: louis.eldredge@pentagon.af.mil or david.rhodes@pentagon.af.mil.

A handwritten signature in black ink, appearing to read "G. Peach Taylor, Jr.", written in a cursive style.

GEORGE PEACH TAYLOR, JR.
Lieutenant General, USAF, MC, CFS
Surgeon General

Attachment:
HQ USAF/SG Policy Memo #00-005, 2 Aug 00

cc:
HQ USEUCOM/ECMD
USCENTCOM/CCSG

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FROM: HQ USAF/SG
110 Luke Avenue, Room 400
Bolling AFB, DC 20332-7050

SUBJECT: The USAF Aviation and Special Duty Photorefractive Keratectomy (PRK) Waiver and Surveillance Program (SG Policy # 00-005)

By direction of the Air Force Chief of Staff, this memorandum establishes policy for PRK in Air Force Aviation and Special Duty Personnel. It applies to all Active and Reserve Component personnel and applicants to all aviation and special duty programs. This program is separate from the DoD Refractive Surgery for the Warfighter Program. Modifications to this policy will be made as needed. Laser-In-Situ-Keratomileusis (LASIK) is not allowed in aviation and special duty personnel.

PRK is a FDA-approved, elective procedure. There is no requirement for any member to obtain PRK. For Undergraduate Pilot Training (UPT) applicants who have already had PRK and received waiver, neither the PRK nor the waiver guarantees or implies acceptance into UPT.

For current aviation and special duty personnel, there is a small risk of not meeting relevant vision standards after PRK. This could result in permanent disqualification from flying/special duty. The estimated risk is under one percent. The vision complication/poor quality rate increases as the degree of nearsightedness and astigmatism increases. Therefore, disqualification rates may be higher for individuals with more nearsightedness and/or astigmatism. Corrective lenses may still be required in order to meet vision standards after PRK. Contact lens fitting and wear may be difficult after PRK.

There will be an average of approximately 6-8 weeks duties not to include flying (DNIF) following PRK. Individuals with greater amounts of nearsightedness and/or astigmatism may be DNIF 2-4 months. There will be approximately 4 months no mobility following PRK. Once steroid eye drops are discontinued, the no mobility restriction will be lifted.

Waiver criteria and required follow-up are at Attachment 1. Failure to comply with required follow-up and submission of required documentation at any time will result in automatic grounding until requirements are satisfied.

Squadron commander permission for PRK is required. Active duty pilots must obtain PRK at Wilford Hall Medical Center (WHMC). Non-pilot aviation and special duty personnel may obtain PRK at WHMC or any operational DoD Refractive Surgery for the Warfighter Center. For treatment at WHMC or a Refractive Surgery for the Warfighter Center, the TDY will be unit-funded.

Reserve Component aviation/special duty personnel who meet the PRK waiver criteria and desire PRK but are not eligible to receive elective surgery in military medical treatment facilities must obtain

PRK at one's own expense. They must comply with all screening and permission procedures before obtaining PRK, as well as all required follow-up procedures and evaluations after PRK.

Responsibilities of the member, squadron commander, local flight surgeon, local eye-care provider, MAJCOMs, pilot-accession sources, WHMC, the Aeromedical Consultation Service (ACS) and AFMOA/SGOA are at Attachment 2. Operational restrictions following PRK are at Attachment 3.

The numbers per year of trained pilots and student pilots with PRK waivers is restricted. For trained pilots the number allowed per year is 200, apportioned by rated years of service (RYOS). The numbers allowed per 5-year RYOS increment are at Attachment 4. For student pilots the number allowed per year is 100. To achieve this number each pilot accession source, including the Guard and Reserve, is limited to no more than 10 percent of their selectees with PRK waivers. For all other aviation and special duty personnel the number allowed per year is not restricted, but commanders should consider mission impact.

The USAF Aviation and Special Duty PRK Registry is hereby established to gather and analyze data on all aviation and special duty PRK waivers. This registry will be maintained by the ACS at Brooks AFB. The purposes of this registry are to:

- a. Collect and analyze data to identify and measure occurrence of relevant adverse PRK outcomes in the aviation and special duty population. (surveillance)
- b. Identify any and all adverse effects of PRK, determine the causes and take action to prevent or minimize these PRK-related adverse outcomes in the aviation and special duty environment.
- c. Assess the success of PRK in the aviation and special duty environment.

My point of contact for this policy is Col Arleen Saenger, Chief, Physical Standards, AFMOA/SGOA, 110 Luke Avenue, Room 405, Bolling AFB, DC 20332-7050, DSN 297-4200, commercial (202) 767-4200 or e-mail: arleen.saenger@usafsg.bolling.af.mil.



PAUL K. CARLTON, JR.
Lieutenant General, USAF, MC, CFS
Surgeon General

Attachments:

1. USAF Aviation & Special Duty PRK Waiver Program
2. Responsibilities
3. Pilot Operational Restrictions Following PRK Waiver
4. Apportionment of Pilot PRK Slots by RYOS

cc:

AFROTC/CC
AFRS/CC
HQ USEUCOM/ECMD
USCENTCOM/CCSG

Attachment 1:
USAF Aviation and Special Duty Photorefractive Keratectomy (PRK) Waiver Program

I. CURRENT AVIATION AND SPECIAL DUTY PERSONNEL (AD and ARC)

A. Clinical Criteria:

1. Age 21 or older
2. Cycloplegic refraction (cyclopentolate):
 - 2.1. Myopia -1.00 to - 5.50 diopters
 - 2.2. Astigmatism 0.75 to 3.00 diopters
 - 2.3. Must not have hyperopia AND astigmatism (cannot be treated with current technology outside of protocols in certain centers).
 - 2.4. Demonstrated refractive stability (no more than 0.50 diopter shift in sphere or cylinder in the 12 months prior to the baseline referral exam)
 - 2.5. Contact lens wearers: must remove contact lenses at least 4 weeks prior to baseline referral exam
 - 2.5.1. Central keratometry performed on 2 exams separated by at least one week must show less than 0.50 diopter change and refractive stability
 - 2.5.2. The mires by keratometry should be regular
3. No history or evidence of:
 - 3.1. Active ophthalmic disease, neovascularization of the cornea within 1mm of intended ablation zone, or lens opacity, severe dry eyes or excessive pupil enlargement
 - 3.2. Glaucoma or a predisposing disorder to developing glaucoma (e.g., pigment dispersion syndrome) or an intraocular pressure greater than 22 mm Hg
 - 3.3. Evidence of keratoconus, corneal irregularity, or abnormal videokeratography in either eye.
 - 3.4. Concurrent topical or systemic medications which may impair healing, including corticosteroids, antimetabolites, isotretinoin (Accutane®), amiodarone hydrochloride (Cordarone®) and/or sumatriptin (Imitrex®)
 - 3.5. Medical conditions which, in the judgment of the treating ophthalmologist may impair healing, including but not limited to: collagen vascular disease, autoimmune disease, immunodeficiency disease, ocular herpes zoster or simplex, endocrine disorders including but not limited to thyroid disorders and diabetes
4. If corneal topography (CT) is available locally, this will be done and a copy of the actual topography should be included in the referral package. If not available locally, the CT will be done at WHMC prior to PRK, realizing that there may be a rare individual disqualified after arriving at WHMC for final pre-operative evaluation and treatment

B. PRK Referral and Treatment Process:

1. Squadron commander permission
2. Local screening by flight surgeon and Ophthalmologist or Optometrist to verify member meets clinical criteria. If available, obtain corneal topography and include copy of actual CT in referral package

3. Referral package sent to Aeromedical Consultation Service (ACS) for final clearance and permission to proceed (joint responsibility with ACS and treating Ophthalmologists at WHMC). The address is: USAFSAM/FECO, 2507 Kennedy Circle, Brooks AFB, TX 78235-5117. For pilots, apportionment by rated years of service (RYOS) will be done at ACS
4. Member schedules appointment for PRK at WHMC. For ARC personnel not eligible to receive elective surgery at Air Force medical treatment facility, the member must obtain the PRK and follow-up at own expense from civilian ophthalmologist
5. TDY to Brooks AFB and WHMC for final preoperative evaluation, PRK and post-operative follow-up
 - 5.1. Anticipate 2 week TDY to San Antonio (Brooks AFB and WHMC) for final pre-op evaluation, treatment and initial post-op follow-up
 - 5.2. Follow-up exams are mandatory at the 1, 2, 3, 4, 6, 12, and 24 months
 - 5.3. Aviation-specific vision testing will be accomplished at ACS during initial pretreatment and the mandatory 12-month and 24-month ACS follow-up
 - 5.4. The 1, 2, 3, 4 and 6-month mandatory follow-up may be done locally if the local eye care professional has had an approved Refractive Surgery for the Warfighter training course for eye care professionals. The local flight surgeon should confirm accomplishment of this training

C. Waiver Process:

1. Clinical eligibility for waiver after PRK
 - 1.1. Individual must meet the applicable USAF vision standards on 2 different examinations separated by at least 2 weeks. These exams may be in addition to the required follow-up exams in paragraph B.5.2. If corrective lenses are required to meet the applicable standard; then they must be prescribed and worn; contact lens wearers must have spectacles as back-up. If night vision goggles (NVG) are required for the duty position then applicable NVG vision standards must be met
 - 1.2. No subjective complaints pertaining to glare, haze, halos, diplopia, or night vision difficulty
 - 1.3. Members may be waived for aviation/special duty while using steroid eye medication. Monthly optometry follow-up with IOT checks are required while on steroid eye drops. Members are restricted from mobility while on steroid eye drops
 - 1.4. Air Traffic Control personnel must meet FAA vision standards
2. Return to Status
 - 2.1. After evaluation by local flight surgeon and PRK eye care professional (optometrist or ophthalmologist) determines that waiver criteria are met, local designated waiver authority may return the member to status pending formal review and certification by MAJCOM
 - 2.2. MAJCOM is the PRK waiver certification authority
 - 2.3. Initial term of waiver validity will not exceed one year (12 calendar months); first waiver renewal will be for one year; subsequent renewals may be for 2 or 3 years at MAJCOM discretion. PRK waivers will not be indefinite. As long as applicable vision standards are met, the member may remain on status pending formal review and certification of waiver renewals.

- 2.4. A copy of the aeromedical summary with required documentation must be forwarded to the Air Force Aviation and Special Duty PRK Registry at the ACS
3. Required follow-up evaluations and location:
 - 3.1. Individuals will have follow-up evaluations at 1, 2, 3, 4, 6, 12 and 24 months post-op
 - 3.1.1. The 12-month and 24-month post-op evaluations will be accomplished at the ACS
 - 3.1.2. The 1, 2, 3, 4 and 6 month follow-ups may be done locally if the local eye care professional has had an approved Refractive Surgery for the Warfighter training course for eye care professionals. If the local eye care provider has not attended the FDA course then these follow-ups must be done at the ACS or WHMC.
 - 3.1.3. Results of the local evaluations at 1, 2, 3, 4, and 6 months will be forwarded to the ACS PRK Registry
 - 3.2. Post-op evaluations will include, at a minimum:
 - 3.2.1. Complete eye exam including SLE, DFE, IOP, UCVA, BCVA, manifest refraction, cyclopentolate refraction, low contrast Bailey-Lovie visual acuity, Rabin Small Letter Contrast Test
 - 3.2.1.1. The one month exam should ideally include corneal topography
 - 3.2.2. Questionnaire: date of surgery, date of return to status, any visual complaints, for pilots the status of their operative restrictions (Atch 3)
 - 3.2.3. Documentation of the post-op evaluations will be forwarded to the Air Force Aviation and Special Duty PRK Registry
4. Failure to comply with follow-up evaluations and questionnaires, and submission of documentation will result in automatic DNIF until requirements are satisfied

II. APPLICANTS FOR AVIATION AND SPECIAL DUTY WHO HAVE HAD PRK

(Note: this section applies to applicants from all sources including AD, USAFA, ROTC, OTS, Reserve/Guard units, all enlisted sources. These individuals must have had PRK prior to applying for waiver)

A. Clinical Waiver Criteria:

1. Pre-PRK cycloplegic refraction (cyclopentolate):
 - 1.1. Myopia -1.00 to - 5.50 diopters
 - 1.2. Astigmatism 0.75 to 3.00 diopters
 - 1.3. Anisometropia no greater than 3.50 diopters
 - 1.4. Must not have hyperopia AND astigmatism (cannot be treated with current technology outside of protocols in certain centers)
 - 1.5. Demonstrated refractive stability post-op (no more than 0.50 diopter shift in sphere or cylinder in 2 post-op cyclopentolate refractions at least 6 months apart)
2. The other ocular history disqualifications in paragraph I.A.3. above apply
3. All other applicable accession and flying/special duty training standards apply (note: this requires a period of 12 months post-PRK for accession). Applicable visual acuity standards, uncorrected and corrected, must be met
4. No subjective complaints pertaining to glare, haze, halos, diplopia, or night vision difficulty
5. Joint Specialized Undergraduate Pilot Training (JSUPT) applicants (who have had PRK):

- 5.1. JSUPT applicants may apply for Flying Class I PRK waiver as soon as 3 months post-PRK; in this case post-op refractive stability exams will be at least 3 months apart (note this is an exception to the 12 month post-PRK requirement in paragraph 3 above)
- 5.2. If waived and selected for JSUPT:
 - 5.2.1. The candidate will undergo initial ACS PRK evaluation in conjunction with Medical Flight Screening (MFS) prior to reporting to their JSUPT base
 - 5.2.2. The student pilot with PRK waiver must be at least 12 months post-PRK and have completed initial ACS PRK evaluation at MFS before beginning the flying portion of JSUPT
 - 5.2.3. The student pilot must have repeat ACS PRK evaluation upon completion of UPT and before reporting to Formal Training Unit (FTU).
 - 5.2.4. These two evaluations (at MFS and upon UPT graduation but before FTU) will fulfill the mandatory 12 & 24-month ACS PRK evaluation requirements even though they will not actually be done at the 12 & 24-month point for many of these student pilots. This difference is allowed to avoid undesirable interruptions in the UPT training pipeline.

B. Waiver Process:

1. HQ AETC/SGPS is waiver and certification authority for these initial PRK waivers for all aviation and special duty applicants; owning MAJCOM is waiver certification authority for renewals. Terms of validity in Section 1, para 2.3 apply.
2. Aeromedical summary accompanying the initial flying exam must include documentation that all clinical criteria are met
3. A copy of the aeromedical summary with required documentation must be forwarded to the Air Force Aviation and Special Duty PRK Registry at the ACS
4. All those who are selected for Aviation/Special Duty must comply with required follow-up evaluations
 - 4.1. All must undergo initial ACS evaluation prior to reporting for aviation/special duty training
 - 4.2. All must undergo required follow-up evaluations remaining at time of their initial ACS evaluation
 - 4.3. All follow-up evaluation documentation must be forwarded to the USAF Aviation and Special Duty PRK Registry at the ACS

Attachment 2:
Responsibilities

A. Member:

1. Obtain squadron commander's permission
2. Comply with all required referral and follow-up evaluations
3. Comply with all operational restrictions following PRK
4. Acknowledge that failure to comply will result in automatic "grounding"
5. Read the booklet "Facts you need to know about photorefractive keratectomy (PRK) surgery." This booklet was written by VISX (a PRK laser manufacturer) and is required by the FDA to be given to patients and will be provided

B. Squadron Commander:

1. Grant permission for PRK
2. Certify that the member meets the requirements of the DoD Warfighter PRK program
3. Unit fund all required TDYs for treatment and follow-up
4. Comply with operational restrictions following PRK

C. Squadron Flight Surgeon:

1. Squadron educational briefings on corneal refractive surgery and policy
2. Initial clinical screening and referral (with local eye care professional)
3. Submit all required waiver and follow-up evaluation documentation
4. For the local follow-up option at 1, 2, 3, 4 and 6 months, confirm that attending local eye-care professional is FDA-certified for PRK care

D. Local Ophthalmologist/Optometrist:

1. Initial screening and referral (with local flight surgeon)
2. All local follow-up eye care professional post-op PRK evaluations
3. Determine if clinical waiver criteria are satisfied
4. Obtain the approved Refractive Surgery for the Warfighter training course for eye care professionals
5. Perform or obtain Corneal Topography

E. Local Designated Waiver Authority:

1. Confirm that all required waiver criteria are met
2. Interim return to status pending formal waiver review and certification
3. Ensure all required follow-up evaluations are accomplished and the required documentation is forwarded to the Air Force Aviation and Special Duty PRK Registry
4. Accomplish "grounding action" on all who do not comply with required follow-up

F. MAJCOM:

1. AETC: certification and waiver authority for all flying training and special duty applicants
2. MAJCOMs: certification and waiver authority for owned assets

3. Ensure all required documentation (initial waiver and follow-up evaluations) is forwarded to the Air Force Aviation and Special Duty PRK Registry
4. Ensure their local waiver authorities comply with all aspects of this program
6. Ensure their local eye care providers obtain the approved Refractive Surgery for the Warfighter training course for eye care professionals
7. Ensure waiver action is entered into waiver tracking database (Aircrew Waiver File or Aeromedical Information Management and Waiver Tracking System once it is on line)

G. Pilot Accession Sources: Ensure that no more than 10 percent of their JSUPT selectees have PRK waivers

H. WHMC and ACS are jointly responsible for the implementation of the USAF Aviation and Special Duty PRK Program. At a minimum this will include the following:

1. Develop referral forms; review and clinical quality control of referral documentation
2. Apportionment of pilot PRK slots by rated years of service (RYOS)
3. Notification to individual of permission to proceed
4. Final pre-op clinical evaluation
5. Informed consent document
6. Treatment and follow-up
7. Aeromedical vision testing pre-op and post-op
8. Finalize clinical inclusion and exclusion criteria with AFMOA/SGOA
9. Finalize local referral screening requirements with AFMOA/SGOA
10. Educate aviation and special duty personnel in corneal refractive surgery
11. Assist local eye care providers in obtaining the FDA-required PRK course for eye care providers
12. Establish and maintain the USAF Aviation and Special Duty PRK Registry to include all required forms and databases
13. Provide quarterly reports on status of PRK in USAF Aviation and Special Duty personnel to AFMOA/SGOA
 - 13.1. These reports will include at a minimum:
 - 13.1.1. Numbers of PRK waivers (by quarter and total) with PRK by crew position, for pilots by RYOS of service, for student pilots by pilot accession source
 - 13.1.2. Days DNIF (range, mean, and median)
 - 13.1.3. Statistics on pre-op and post-op visual acuity and all other vision tests
 - 13.1.4. Any significant vision complaints/trends

AFMOA/SGOA:

1. PRK waiver policy and updates as needed
2. Provide quarterly updates on status of PRK in USAF Aviation and Special Duty personnel and the Aviation PRK Study to HQ USAF/SG and HQ USAF/CC

Attachment 3:
Pilot Operational Restrictions Following PRK Waiver

1. First day and night sortie* following PRK with Instructor Pilot
2. First night refueling* following PRK with Instructor Pilot
3. First night formation flight* following PRK with Instructor Pilot
4. Documentation of satisfactory performance for all of the above to be provided by squadron commander to the local designated aeromedical waiver authority for inclusion in the members medical records and forwarding of copy to the Air Force PRK Registry

* These events may be accomplished during the same sortie if practical

Attachment 4:
Apportionment of Pilot PRK Slots by Rated Years of Service

Rated Years of Service	PRK Slots (Maximum per year)
5 or less	45
6-10	55
11-15	50
16-20	35
21-25	10
26 or more	5