

EXAMINATION TECHNIQUES AND CRITERIA FOR QUALIFICATION

ITEMS 21- 58 of FAA Form 8500-8

The Examiner must personally conduct the physical examination. This section provides guidance for completion of Items 21-58 of the Application for Airman Medical Certificate or Airman Medical and Student Pilot Certificate, FAA Form 8500-8.

The Examiner must carefully read the applicant's history page of FAA Form 8500-8 (Items 1-20) *before* conducting the physical examination and completing the Report of Medical Examination. This alerts the Examiner to possible pathological findings.

The Examiner must note in **Item 60**, page 153 of the FAA Form 8500-8 any condition found in the course of the examination. The Examiner must list the facts, such as dates, frequency, and severity of occurrence.

When a question arises, the Federal Air Surgeon encourages Examiners first to check this Guide for Aviation Medical Examiners and other FAA informational documents. If the question remains unresolved, the Examiner should seek advice from a RFS or the Manager of the AMCD.

ITEMS 21- 22. HEIGHT AND WEIGHT

21. Height (inches)	22. Weight (pounds)
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ITEM 21. Height

Record the applicant's height in inches. Although there are no medical standards for height, exceptionally short individuals may not be able to effectively reach all flight controls and must fly specially modified aircraft. If required, the FAA will place operational limitations on the pilot certificate.

ITEM 22. Weight

Record the applicant's weight in pounds.

**ITEMS 23-24. STATEMENT OF DEMONSTRATED ABILITY (SODA);
SODA SERIAL NUMBER**

23. Statement of Demonstrated Ability (SODA)		
<input type="checkbox"/> Yes	<input type="checkbox"/> No	Defect Noted:

ITEM 23. Has a SODA ever been issued?

Ask the applicant if a SODA has ever been issued. If the answer is "yes," ask the applicant to show you the document. Then check the "yes" block and record the nature and degree of the defect.

SODA's are valid for an indefinite period or until an adverse change occurs that results in a level of defect worse than that stated on the face of the document.

The FAA issues SODA's for certain static defects, but not for disqualifying condition or conditions that may be progressive. The extent of the functional loss that has been cleared by the FAA is stated on the face of the SODA. If the Examiner finds the condition has become worse, a medical certificate should not be issued even if the applicant is otherwise qualified. The Examiner should also defer issuance if it is unclear whether the applicant's present status represents an adverse change.

The Examiner must take special care not to issue a medical certificate of a higher class than that specified on the face of the SODA even if the applicant appears to be otherwise medically qualified. The Examiner may note in **Item 60**, page 153 the applicant's desire for a higher class.

ITEM 24. SODA Serial Number

24. SODA Serial Number

Enter the assigned serial number in the space provided.

ITEMS 25-30. EAR, NOSE AND THROAT (ENT)

CHECK EACH ITEM IN APPROPRIATE COLUMN	Normal	Abnormal
25. Head, face, neck, and scalp		
26. Nose		
27. Sinuses		
28. Mouth and Throat		
29. Ears, general (internal and external canals: Hearing under Item 49)		
30. Ear Drums (Perforation)		

I. Code of Federal Regulations

All Classes: 14 CFR 67.105(b)(c), 67.205(b)(c), and 67.305(b)(c)

(b) No disease or condition of the middle or internal ear, nose, oral cavity, pharynx, or larynx that -

(1) Interferes with, or is aggravated by, flying or may reasonably be expected to do so; or

(2) Interferes with, or may reasonably be expected to interfere with, clear and effective speech communication.

(c) No disease or condition manifested by, or that may reasonably be expected to be manifested by, vertigo or a disturbance of equilibrium.

II. Examination Techniques

1. The **head and neck** should be examined to determine the presence of any significant defects such as:

- a. Bony defects of the skull
- b. Gross deformities
- c. Fistulas
- d. Evidence of recent blows or trauma to the head
- e. Limited motion of the head and neck
- f. Surgical scars

2. The **external ear** is seldom a major problem in the medical certification of applicants. Otitis externa or a furuncle may call for temporary disqualification. Obstruction of the

canal by impacted cerumen or cellular debris may indicate a need for referral to an ENT specialist for examination.

The tympanic membranes should be examined for scars or perforations. Discharge or granulation tissue may be the only observable indication of perforation. Middle ear disease may be revealed by retraction, fluid levels, or discoloration. The normal tympanic membrane is movable and pearly gray in color. Mobility should be demonstrated by watching the drum through the otoscope during a valsalva maneuver.

3. Pathology of the ***middle ear*** may be demonstrated by changes in the appearance and mobility of the tympanic membrane. The applicant may only complain of stuffiness of the ears and/or loss of hearing. An upper respiratory infection greatly increases the risk of aerotitis media with pain, deafness, tinnitus, and vertigo due to lessened aeration of the middle ear from eustachian tube dysfunction. When the applicant is taking medication for an ENT condition, it is important that the Examiner become fully aware of the underlying pathology, present status, and the length of time the medication has been used. If the condition is not a threat to aviation safety, the treatment consists solely of antibiotics, and the antibiotics have been taken over a sufficient period to rule out the likelihood of adverse side effects, the Examiner may make the certification decision.

The same approach should be taken when considering the significance of prior surgery such as myringotomy, mastoidectomy, or tympanoplasty. Simple perforation without associated symptoms or pathology is not disqualifying. When in doubt, the Examiner should not hesitate to defer issuance and refer the matter to the AMCD. The services of consultant ENT specialists are available to the FAA to help in determining the safety implications of complicated conditions.

4. **Unilateral Deafness.** An applicant with unilateral congenital or acquired deafness should not be denied medical certification if able to pass any of the tests of hearing acuity.

5. **Bilateral Deafness.** It is possible for a totally deaf person to qualify for a private pilot certificate. When such an applicant initially applies for medical certification, if otherwise qualified, the AMCD may issue a combination medical/student pilot certificate with the limitation "Valid for Student Pilot Purposes Only." This will allow the student to practice with an instructor before undergoing a pilot check ride for the private pilot's license. When the applicant is ready to take the check ride, he/she must contact AMCD or the RFS for authorization to take a medical flight test (MFT). Upon successful completion of the MFT, the applicant will be issued a SODA, and an operational restriction will be placed on his/her pilot's license that restricts the pilot from flying into airspace requiring radio communication.

6. **Hearing Aids.** Under some circumstances, the use of hearing aids may be acceptable. If the applicant is unable to pass any of the above tests without the use of hearing aids, he or she may be tested using hearing aids.

7. The **nose** should be examined for the presence of polyps, blood, or signs of infection, allergy, or substance abuse. The Examiner should determine if there is a history of epistaxis with exposure to high altitudes and if there is any indication of loss of sense of smell (anosmia). Polyps may cause airway obstruction or sinus blockage. Infection or allergy may be cause for obtaining additional history. Anosmia is at least noteworthy in that the airman should be made fully aware of the significance of the handicap in flying (inability to receive early warning of gas spills, oil leaks, or smoke). Further evaluation may be warranted.

8. Evidence of **sinus** disease must be carefully evaluated by a specialist because of the risk of sudden and severe incapacitation from barotrauma.

9. The **mouth and throat** should be examined to determine the presence of active disease that is progressive or may interfere with voice communications. Gross abnormalities that could interfere with the use of personal equipment such as oxygen equipment should be identified.

10. The **larynx** should be visualized if the applicant's voice is rough or husky. Acute laryngitis is temporarily disqualifying. Chronic laryngitis requires further diagnostic workup. Any applicant seeking certification for the first time with a functioning tracheostomy, following laryngectomy, or who uses an artificial voice-producing device should be denied or deferred and carefully assessed.

III. Aerospace Medical Disposition

The following is a table that lists the most common conditions of aeromedical significance, and course of action that should be taken by the examiner as defined by the protocol and disposition in the table. Medical certificates must not be issued to an applicant with medical conditions that require deferral, or for any condition not listed in the table that may result in sudden or subtle incapacitation without consulting the AMCD or the RFS. Medical documentation must be submitted for any condition in order to support an issuance of an airman medical certificate.

ITEM 25. HEAD, FACE, NECK, AND SCALP

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Head, Face, Neck, and Scalp			
Active fistula of neck, either congenital or acquired, including tracheostomy	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Loss of bony substance involving the two tables of the cranial vault	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Deformities of the face or head that would interfere with the proper fitting and wearing of an oxygen mask	1 st & 2nd	Submit all pertinent medical information and current status report	Requires FAA Decision
	3rd	Submit all pertinent medical information	If deformity does not interfere with administration of supplemental O ² - Issue

ITEM 26. NOSE

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Nose			
Evidence of severe allergic rhinitis ¹	All	Submit all pertinent medical information and current status report	Requires FAA Decision

¹ Hay fever controlled solely by desensitization without requiring antihistamines or other medications is not disqualifying. Applicants with seasonal allergies requiring antihistamines may be certified by the Examiner with the stipulation that they not exercise privileges of airman certification within 24 hours of experiencing symptoms requiring treatment or within 24 hours after taking an antihistamines. The Examiner should document this in **Item 60**, page 153. However, non-sedating antihistamines loratadine or fexofenadine may be used while flying, after adequate individual experience has determined that the medication is well tolerated without significant side effects.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Nose			
Obstruction of sinus ostia, including polyps, that would be likely to result in complete obstruction	All	Submit all pertinent medical information and current status report	Requires FAA Decision

ITEM 27. SINUSES

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Sinuses - Acute or Chronic			
Sinusitis, intermittent use of topical or non-sedating medication	All	Document medication, dose and absence of side effects	Responds to treatment without any side effects - Issue
Severe-requiring continuous use of medication or effected by barometric changes	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Sinus Tumor			
Benign - Cysts/Polyps	All	If no physiologic effects, submit documentation	Asymptomatic, no observable growth over a 12-month period, no potential for sinus block - Issue
Malignant	All	Submit all pertinent medical information and current status report	Requires FAA Decision

ITEM 28. MOUTH AND THROAT

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Mouth and Throat			
Any malformation or condition, including stuttering, that would impair voice communication	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Palate: Extensive adhesion of the soft palate to the pharynx	All	Submit all pertinent medical information and current status report	Requires FAA Decision

ITEM 29. EARS, GENERAL

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Inner Ear			
Acoustic Neuroma	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Acute or chronic disease without disturbance of equilibrium and successful miringotomy, if applicable	All	Submit all pertinent medical information	If no physiologic effects - Issue
Acute or chronic disease that may disturb equilibrium	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Motion Sickness	All	Submit all pertinent medical information and current status report	If occurred during flight training and resolved - Issue If condition requires medication - Requires FAA Decision

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Mastoids			
Mastoid fistula	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Mastoiditis, acute or chronic	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Middle Ear			
Impaired Aeration	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Otitis Media	All	Submit all pertinent medical information and current status report	If acute and resolved – Issue If active or chronic - Requires FAA Decision
Outer Ear			
Impacted Cerumen	All	Submit all pertinent medical information and current status report	If asymptomatic and hearing is unaffected - Issue Otherwise - Requires FAA Decision
Otitis Externa that may progress to impaired hearing or become incapacitating	All	Submit all pertinent medical information and current status report	Requires FAA Decision

ITEM 30. EAR DRUMS

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Ear Drums			
Perforation that has associated pathology	All	Establish etiology, treatment, and submit all pertinent medical information	Requires FAA Decision
Perforation which has resolved without any other clinical symptoms	All	Submit all pertinent medical information	If no physiologic effects - Issue

Otologic Surgery. A history of otologic surgery is not necessarily disqualifying for medical certification. The FAA evaluates each case on an individual basis following review of the otologist's report of surgery. The type of prosthesis used, the person's adaptability and progress following surgery, and the extent of hearing acuity attained are all major factors to be considered. Examiners should defer issuance to an applicant presenting a history of otologic surgery for the first time, sending the completed report of medical examination, with all available supplementary information, to the AMCD.

Some conditions may have several possible causes or exhibit multiple symptomatology. Episodic disorders of dizziness or disequilibrium require careful evaluation and consideration by the FAA. Transient processes, such as those associated with acute labyrinthitis or benign positional vertigo may not disqualify an applicant when fully recovered. (Also see **Item 46**, page 103 for a discussion of syncope and vertigo).

ITEMS 31-34. EYE

CHECK EACH ITEM IN APPROPRIATE COLUMN	Normal	Abnormal
31. Eyes, general (vision under Items 50 to 54)		
32. Ophthalmoscopic		
33. Pupils (Equity and reaction)		
34. Ocular motility (Associated parallel movement nystagmus)		

I. Code of Federal Regulations

All Classes: 14 CFR 67.103(e), 67.203(e), and 67.303(d)

(e) No acute or chronic pathological condition of either the eye or adnexa that interferes with the proper function of the eye, that may reasonably be expected to progress to that degree, or that may reasonably be expected to be aggravated by flying.

II. Examination Techniques

For guidance regarding the conduction of visual acuity, field of vision, heterophoria, and color vision tests, please **Items 50-54**, beginning on page 133.

The examination of the eyes should be directed toward the discovery of diseases or defects that may cause a failure in visual function while flying or discomfort sufficient to interfere with safely performing airman duties.

The Examiner should personally explore the applicant's history by asking questions concerning any changes in vision, unusual visual experiences (halos, scintillations, etc.), sensitivity to light, injuries, surgery, or current use of medication. Does the applicant report inordinate difficulties with eye fatigue or strain? Is there a history of serious eye disease such as glaucoma or other disease commonly associated with secondary eye changes, such as diabetes? (Also see **Item 53**, page 142; and **Item 54**, page 144).

1. It is recommended that the Examiner consider the following signs during the course of the eye examination:

- a. *Color* — redness or suffusion of allergy, drug use, glaucoma, infection, trauma, jaundice, ciliary flush of Iritis, and the green or brown Kayser-Fleischer Ring of Wilson's disease.
- b. *Swelling* — abscess, allergy, cyst, exophthalmos, myxedema, or tumor.
- c. *Other* — clarity, discharge, dryness, ptosis, protosis, spasm (tic), tropion, or ulcer.

2. Ophthalmoscopic examination. It is suggested that a routine be established for ophthalmoscopic examinations to aid in the conduct of a comprehensive eye assessment. Routine use of a mydriatic is not recommended.

- a. *Cornea* — observe for abrasions, calcium deposits, contact lenses, dystrophy, keratoconus, pterygium, scars, or ulceration. Contact lenses should be removed several hours before examination of the eye. (See **Item 50**, page 133).
- b. *Pupils and Iris* — check for the presence of synechiae and uveitis. Size, shape, and reaction to light should be evaluated during the ophthalmoscopic examination. Observe for coloboma, reaction to light, or disparity in size.
- c. *Aqueous* — hyphema or iridocyclitis.
- d. *Lens* — observe for aphakia, discoloration, dislocation, cataract, or an implanted lens.

- e. *Vitreous* — note discoloration, hyaloid artery, floaters, or strands.
 - f. *Optic nerve* — observe for atrophy, hemorrhage, cupping, or papilledema.
 - g. *Retina and choroid* — examine for evidence of coloboma, choroiditis, detachment of the retina, diabetic retinopathy, retinitis, retinitis pigmentosa, retinal tumor, macular or other degeneration, toxoplasmosis, etc.
3. Ocular Motility. Motility may be assessed by having the applicant follow a point light source with both eyes, the Examiner moving the light into right and left upper and lower quadrants while observing the individual and the conjugate motions of each eye. The Examiner then brings the light to center front and advances it toward the nose observing for convergence. End point nystagmus is a physiologic nystagmus and is not considered to be significant. It need not be reported. (See **Item 50**, page 133 for further consideration of nystagmus).
4. Monocular Vision. An applicant will be considered monocular when there is only one eye or when the best corrected distant visual acuity in the poorer eye is no better than 20/200. An individual with one eye, or effective visual acuity equivalent to monocular, may be considered for medical certification, any class, through the special issuance section of part 67 (14 CFR 67.401).

In amblyopia ex anopsia, the visual acuity loss is simply recorded in Item 50 of FAA Form 8500-8, and visual standards are applied as usual. If the standards are not met, a Report of Eye Evaluation, FAA Form 8500-7, should be submitted for consideration.

Although it has been repeatedly demonstrated that binocular vision is not a prerequisite for flying, some aspects of depth perception, either by stereopsis or by monocular cues, are necessary. It takes time for the monocular airman to develop the techniques to interpret the monocular cues that substitute for stereopsis; such as, the interposition of objects, convergence, geometrical perspective, distribution of light and shade, size of known objects, aerial perspective, and motion parallax.

In addition, it takes time for the monocular airman to compensate for his or her decrease in effective visual field. A monocular airman's effective visual field is reduced by as much as 30% by monocularity. This is especially important because of speed smear; i.e., the effect of speed diminishes the effective visual field such that normal visual field is decreased from 180 degrees to as narrow as 42 degrees or less as speed increases. A monocular airman's reduced effective visual field would be reduced even further than 42 degrees by speed smear.

For the above reasons, a waiting period of 6 months is recommended to permit an adequate adjustment period for learning techniques to interpret monocular cues and accommodation to the reduction in the effective visual field.

Applicants who have had monovision secondary to refractive surgery may be certificated, providing they have corrective vision available that would provide binocular vision in accordance with the vision standards, while exercising the privileges of the certificate. The certificate issued must have the appropriate vision limitations statement.

5. Contact Lenses. The use of a contact lens in one eye for distant visual acuity (monovision) and another in the other eye for near or intermediate visual acuity is not acceptable for aviation duties. Experience has indicated no significant risk to aviation safety in the use of contact lenses for distant vision correction. As a consequence, no special evaluation is routinely required before the use of contact lenses is authorized, and no SODA is required or issued to a contact lens wearer who meets the standards and has no complications.

Designer contact lenses that introduce color (tinted lenses), restrict the field of vision, or significantly diminish transmitted light, are not acceptable.

Bifocal contact lenses or contact lenses that correct for near and/or intermediate vision only are **not** considered acceptable for aviation duties.

6. Intraocular Devices. Binocular airman using multifocal or accommodating ophthalmic devices may be issued an airman medical certificate in accordance with the Protocol for Binocular Multifocal and Accommodating Devices.

7. Orthokeratology is acceptable for medical certification purposes, provided the airman can demonstrate corrected visual acuity in accordance with medical standards defined in 14 CFR part 67. When corrective contact lenses are required to meet vision standards, the medical certificate must have the appropriate limitation annotated. Advise airmen that they must follow the prescribed or proper use of orthokeratology lenses to ensure compliance with 14 CFR 61.53. Airmen should consider possible rotation, changes, or extensions of their work schedules when deciding on orthokeratology retainer lens use.

8. Glaucoma. The Examiner should deny or defer issuance of a medical certificate to an applicant if there is a loss of visual fields, a significant change in visual acuity, a diagnosis of or treatment for glaucoma, or newly diagnosed intraocular hypertension.

The FAA may grant an Authorization under the special issuance section of Part 67 (14 CFR 67.401) on an individual basis. The Examiner can facilitate FAA review by obtaining a report of Ophthalmological Evaluation for Glaucoma (FAA Form 8500-14) from a treating or evaluating eye specialist (optometrist or ophthalmologist), also see AME assisted protocol. Because secondary glaucoma is caused by known pathology such as; uveitis or trauma, eligibility must largely depend upon that pathology. Secondary glaucoma is often unilateral, and if the cause or disease process is no longer active and the other eye remains normal certification is likely.

Applicants with primary or secondary narrow angle glaucoma are usually denied because of the risk of an attack of angle closure, because of incapacitating symptoms of severe pain, nausea, transitory loss of accommodative power, blurred vision, halos, epiphora, or iridoparesis. Central venous occlusion can occur with catastrophic loss of vision. However, when surgery such as iridectomy or iridencleisis has been performed satisfactorily more than 3 months before the application, the likelihood of difficulties is considerably more remote, and applicants in that situation may be favorably considered by the FAA.

An applicant with unilateral or bilateral open angle glaucoma may be certified by the FAA (with follow-up required) when a current ophthalmological report substantiates that pressures are under adequate control, there is little or no visual field loss or other complications, and the person tolerates small to moderate doses of allowable medications. Individuals who have had filter surgery for their glaucoma, or combined glaucoma/cataract surgery, can be considered when stable and without complications. A few applicants have been certified following their demonstration of adequate control with oral medication. Neither miotics nor mydriatics are necessarily medically disqualifying.

However, miotics such as pilocarpine cause pupillary constriction and could conceivably interfere with night vision. Although the FAA no longer routinely prohibits pilots who use such medications from flying at night, it may be worthwhile for the Examiner to discuss this aspect of the use of miotics with applicants. If considerable disturbance in night vision is documented, the FAA may limit the medical certificate: NOT VALID FOR NIGHT FLYING

9. Sunglasses. Sunglasses are not acceptable as the only means of correction to meet visual standards, but may be used for backup purposes if they provide the necessary correction. Airmen should be encouraged to use sunglasses in bright daylight but must be cautioned that, under conditions of low illumination, they may compromise vision. Mention should be made that sunglasses do not protect the eyes from the effects of ultra violet radiation without special glass or coatings and that photosensitive lenses are unsuitable for aviation purposes because they respond to changes in light intensity too slowly. The so-called "blue blockers" may not be suitable since they block the blue light used in many current panel displays. Polarized sunglasses are unacceptable if the windscreen is also polarized.

10. Refractive Procedures. The FAA accepts the following Food and Drug Administration approved refractive procedures for visual acuity correction:

- Radial Keratotomy (RK)
- Epikeratophakia
- Laser-Assisted In Situ Keratomileusis (LASIK)
- Photorefractive Keratectomy (PRK)
- Conductive Keratoplasty (CK)

Please be advised that these procedures have potential adverse effects that could be incompatible with flying duties, including: corneal scarring or opacities; worsening or variability of vision; and night-glare.

The FAA expects that airmen will not resume airman duties until their treating health care professional determines that their post-operative vision has stabilized, there are no significant adverse effects or complications (such as halos, rings, haze, impaired night vision and glare), the appropriate vision standards are met, and reviewed by an Examiner or AMCD. When this determination is made, the airman should have the treating health care professional document this in the health care record, a copy of which should be forwarded to the AMCD before resumption of airman duties. If the health care professional's determination is favorable, the applicant may resume airman duties, after consultation and review by an Examiner, unless informed otherwise by the FAA.

An applicant treated with a refractive procedure may be issued a medical certificate by the Examiner if the applicant meets the visual acuity standards and the Report of Eye Evaluation (FAA Form 8700-7) indicates that healing is complete; visual acuity remains stable; and the applicant does not suffer sequela such as; glare intolerance, halos, rings, impaired night vision, or any other complications. There should be no other pathology of the affected eye(s).

If the procedure was done 2 years ago or longer, the FAA may accept the Examiner's eye evaluation and an airman statement regarding the absence of adverse sequela.

If the procedure was performed within the last 2 years, the airman must provide a report to the AMCD from the treating health care professional to document the date of procedure, any adverse effects or complications, and when the airman returned to flying duties. If the report is favorable and the airman meets the appropriate vision standards, the applicant may resume airman duties, unless informed otherwise by the FAA.

A. Conductive Keratoplasty (CK): CK is used for correction of farsightedness. As this procedure is not considered permanent and there is expected regression of visual acuity in time, the FAA may grant an Authorization for special issuance of a medical certificate under 14 CFR 67.401 to an applicant who has had CK.

The FAA evaluates CK procedures on an individual basis following a waiting period of 6 months. The waiting period is required to permit adequate adjustment period for fluctuating visual acuity. The Examiner can facilitate FAA review by obtaining all pre- and post-operative medical records, a Report of Eye Evaluation (FAA Form 8700-7) from a treating or evaluating eye specialist with comment regarding any adverse effects or complications related to the procedure.

III. Aerospace Medical Disposition

Applicants with many visual conditions may be found qualified for FAA certification following the receipt and review of specialty evaluations and pertinent medical records. Examples include retinal detachment with surgical correction, open angle glaucoma under adequate control with medication, and narrow angle glaucoma following surgical correction.

The Examiner may not issue a certificate under such circumstances for the initial application, except in the case of applicants following cataract surgery. The Examiner may issue a certificate after cataract surgery for applicants who have undergone cataract surgery with or without lens(es) implant. If pertinent medical records and a current ophthalmologic evaluation (using FAA Form 8500-7 or FAA Form 8500-14) indicate that the applicant meets the standards, the FAA may delegate authority to the Examiner to issue subsequent certificates.

The following is a table that lists the most common conditions of aeromedical significance, and course of action that should be taken by the examiner as defined by the protocol and disposition in the table. Medical certificates must not be issued to an applicant with medical conditions that require deferral, or for any condition not listed in the table that may result in sudden or subtle incapacitation without consulting the AMCD or the RFS. Medical documentation must be submitted for any condition in order to support an issuance of an airman medical certificate.

ITEM 31. EYES, GENERAL

DISEASE/CONDITION	CLASS	EVALUTION DATA	DISPOSITION
Eyes, General			
Amblyopia ² Initial certification	All	Provide completed FAA Form 8500-7 Note: applicant should be at best corrected visual acuity before evaluation	If applicant does not correct to standards, add the following limitation to the medical certificate: "Valid for Student Pilot Purposes Only" and request a medical flight test

² In amblyopia ex anopsia, the visual acuity of one eye is decreased without presence of organic eye disease, usually because of strabismus or anisometropia in childhood.

DISEASE/CONDITION	CLASS	EVALUTION DATA	DISPOSITION
Eyes, General			
Acquired conditions or congenital ³	All	Provide completed FAA Form 8500-7 Note: applicant should be at best corrected visual acuity before evaluation	Requires FAA Decision
Acute or chronic pathological condition of either eye or adnexa that interferes with the proper function of an eye	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Any ophthalmic pathology reflecting a serious systemic disease (e.g., diabetic and hypertensive retinopathy)	All	Submit all pertinent medical information and current status report. (If applicable, see Diabetes and Hypertensive Protocols)	Requires FAA Decision
Diplopia	All	If applicant provides written evidence that the FAA has previously considered and determined that this condition is not adverse to flight safety. A MFT may be requested.	Contact RFS for approval to Issue Otherwise - Requires FAA Decision
Pterygium	All	Document findings in Item 60	If less than 50% of the cornea and not effecting central vision - Issue Otherwise - Requires FAA Decision

³ Whether acute or chronic, of either eye or adnexa, that may interfere with visual functions, may progress to that degree, or may be aggravated by flying (tumors and ptosis obscuring the pupil, acute inflammatory disease of the eyes and lids, cataracts, or orthokeratology).

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Eyes - Procedures			
Aphakia/Lens Implants	All	Submit all pertinent medical information and current status report (See additional disease dependent requirements)	If visual acuity meets standards - Issue Otherwise - Requires FAA Decision
Conductive Keratoplasty - Farsidedness	All	See Protocol for Conductive Keratoplasty	See Protocol for Conductive Keratoplasty
Intraocular Devices	All	See Protocol for Binocular Multifocal and Accommodating Devices	See Protocol for Binocular Multifocal and Accommodating Devices
Refractive Procedures other than CK	All	Provide completed FAA Form 8500-7, type and date of procedure, statement as to any adverse effects or complications (halo, glare, haze, rings, etc.)	If visual acuity meets standards, is stable, and no complications exist - Issue Otherwise - Requires FAA Decision

ITEM 32. OPHTHALMOSCOPIC

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Ophthalmoscopic			
Chorioretinitis; Coloboma; Corneal Ulcer or Dystrophy; Optic Atrophy or Neuritis; Retinal Degeneration or Detachment; Retinitis Pigmentosa; Papilledema; or Uveitis	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Glaucoma (treated or untreated)	All	Submit all pertinent medical information and current status report	Initial Special Issuance - Requires FAA Decision Followup Special Issuance's - See AASI Protocol
Macular Degeneration; Macular Detachment	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Tumors	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Vascular Occlusion; Retinopathy	All	Submit all pertinent medical information and current status report	Requires FAA Decision

ITEM 33. PUPILS

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Pupils			
Disparity in size or reaction to light (afferent pupillary defect) requires clarification and/or further evaluation	All	Submit all pertinent medical information and current status report	Requires FAA Decision

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Pupils			
Nonreaction to light in either eye acute or chronic	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Nystagmus ⁴	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Synechia, anterior or posterior	All	Submit all pertinent medical information and current status report	Requires FAA Decision

ITEM 34. OCULAR MOTILITY

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Ocular Motility			
Absence of conjugate alignment in any quadrant	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Inability to converge on a near object	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Paralysis with loss of ocular motion in any direction	All	Submit all pertinent medical information and current status report	Requires FAA Decision

⁴Nystagmus of recent onset is cause to deny or defer certificate issuance. Any recent neurological or other evaluations available to the Examiner should be submitted to the AMCD. If nystagmus has been present for a number of years and has not recently worsened, it is usually necessary to consider only the impact that the nystagmus has upon visual acuity. The Examiner should be aware of how nystagmus may be aggravated by the forces of acceleration commonly encountered in aviation and by poor illumination.

ITEM 35. LUNGS AND CHEST

CHECK EACH ITEM IN APPROPRIATE COLUMN	Normal	Abnormal
35. Lungs and chest (Not including breasts examination)		

I. Code of Federal Regulations

All Classes: 14 CFR 67.113(b)(c), 67.213(b)(c), and 67.313(b)(c)

(b) No other organic, functional, or structural disease, defect, or limitation that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the condition involved, finds -

(1) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or

(2) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges;

(c) No medication or other treatment that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the medication or other treatment involved, finds -

(1) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or

(2) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges.

II. Examination Techniques

Breast examination: The breast examination is performed only at the applicant's option or if indicated by specific history or physical findings. If a breast examination is performed, the results are to be recorded in Item 60 of FAA Form 8500-8. The applicant should be advised of any abnormality that is detected, then deferred for further evaluation.

III. Aerospace Medical Dispositions

The following is a table that lists the most common conditions of aeromedical significance, and course of action that should be taken by the examiner as defined by the protocol and disposition in the table. Medical certificates must not be issued to an applicant with medical conditions that require deferral, or for any condition not listed in

the table that may result in sudden or subtle incapacitation without consulting the AMCD or the RFS. Medical documentation must be submitted for any condition in order to support an issuance of an airman medical certificate.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Allergies			
Allergies, severe	All	Submit all pertinent medical information and current status report, include duration of symptoms, name and dosage of drugs and side effects	Requires FAA Decision
Hay fever controlled solely by desensitization without antihistamines or other medications ^{5 6 7}	All	Submit all pertinent medical information and current status report, include duration of symptoms, name and dosage of drugs and side effects	<p style="text-align: center;">If responds to treatment and without side effects - Issue</p> <p style="text-align: center;">Otherwise - Requires FAA Decision</p>

⁵ Applicants with seasonal allergies requiring antihistamines may be certified by the Examiner with the stipulation that they not exercise privileges of airman certification within 24 hours of experiencing symptoms requiring treatment or within 24 hours after taking an antihistamine. The Examiner should document this in **Item 60** page 153.

⁶ Individuals who have hay fever that requires only occasional seasonal therapy may be certified by the Examiner with the stipulation that they not fly during the time when symptoms occur and treatment is required.

⁷ Nonsedating antihistamines including loratadine, or fexofenadine may be used while flying, after adequate individual experience has determined that the medication is well tolerated without significant side effects.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Asthma			
Frequent severe asthmatic symptoms	All	Submit all pertinent medical information and current status report, include PFT's, duration of symptoms, name and dosage of drugs and side effects	<p>Initial Special Issuance - Requires FAA Decision</p> <p>Followup Special Issuance's - See AASI Protocol</p>
Mild or seasonal asthmatic symptoms ⁸	All	Submit all pertinent medical information and current status report, include duration of symptoms, name and dosage of drugs, and side effects	If symptoms are infrequent, mild, have not required hospitalization or steroid medication, and no symptoms in flight – Issue

⁸ If the applicant otherwise meets the medical standards and currently requires no treatment, the Examiner may Issue. However, a history of frequent severe attacks is disqualifying. Certificate issuance may be possible in other cases. If additional information is obtained, it must be submitted to the FAA.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Chronic Obstructive Pulmonary Disease (COPD)			
Chronic bronchitis, emphysema, or COPD ⁹	All	Submit all pertinent medical information and current status report. Include an FVC/FEV1	Initial Special Issuance - Requires FAA Decision Followup Special Issuance's - See AASI Protocol
Disease of the Lungs, Pleura, or Mediastinum			
Abscesses Active Mycotic disease Active Tuberculosis	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Fistula, Bronchopleural, to include Thoracostomy	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Lobectomy	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Pulmonary Embolism	All	See Thromboembolic Disease Protocol	See Thromboembolic Disease Protocol
Pulmonary Fibrosis	All	Submit all pertinent medical information, current status report, PFT's with diffusion capacity	If >75% predicted and no impairment - Issue Otherwise - Requires FAA Decision

⁹ Certification may be granted, by the FAA, when the condition is mild without significant impairment of pulmonary functions. If the applicant has frequent exacerbations or any degree of exertional dyspnea, certification should be deferred.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Pleura and Pleural Cavity			
Acute fibrinous pleurisy; Empyema; Pleurisy with effusion; or Pneumonectomy	All	Submit all pertinent medical information and current status report, and PFT's	Requires FAA Decision
Malignant tumors or cysts of the lung, pleura or mediastinum	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Other diseases or defects of the lungs or chest wall that require use of medication or that could adversely affect flying or endanger the applicant's well-being if permitted to fly	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Pneumothorax - Traumatic	All	Submit all pertinent medical information and current status report	If 3 months after resolution - Issue
Sarcoid, if more than minimal involvement or if symptomatic	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Spontaneous pneumothorax ¹⁰	All	Submit all pertinent medical information and current status report	Requires FAA Decision

¹⁰ A history of a single episode of spontaneous pneumothorax is considered disqualifying for airman medical certification until there is x-ray evidence of resolution and until it can be determined that no condition that would be likely to cause recurrence is present (i.e., residual blebs). On the other hand, an individual who has sustained a repeat pneumothorax normally is not eligible for certification until surgical interventions are carried out to correct the underlying problem. A person who has such a history is usually able to resume airman duties 3 months after the surgery. No special limitations on flying at altitude are applied.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Pulmonary			
Bronchiectasis	All	Submit all pertinent medical information and current status report	If moderate to severe - Requires FAA Decision report
Sleep Apnea			
Obstructive Sleep Apnea	All	Submit all pertinent medical information and current status report. Include sleep study with a polysomnogram, use of medications and titration study results	Initial Special Issuance - Requires FAA Decision Followup Special Issuance's - See AASI Protocol
Periodic Limb Movement, etc.	All	Submit all pertinent medical information and current status report. Include sleep study with a polysomnogram, use of medications and titration study results, along with a statement regarding Restless Leg Syndrome	Requires FAA Decision

ITEM 36. HEART

CHECK EACH ITEM IN APPROPRIATE COLUMN	Normal	Abnormal
36. Heart (Precordial activity, rhythm, sounds, and murmurs)		

I. Code of Federal Regulations:

First-Class: 14 CFR 67.111(a)(b)(c)

Cardiovascular standards for first-class airman medical certificate are:

(a) No established medical history or clinical diagnosis of any of the following:

(1) Myocardial infarction

(2) Angina pectoris

(3) Coronary heart disease that has required treatment or, if untreated, that has been symptomatic or clinically significant

(4) Cardiac valve replacement

(5) Permanent cardiac pacemaker implantation; or

(6) Heart replacement

(b) A person applying for first-class airman medical certification must demonstrate an absence of myocardial infarction and other clinically significant abnormality on electrocardiographic examination:

(1) At the first application after reaching the 35th birthday; and

(2) On an annual basis after reaching the 40th birthday

(c) An electrocardiogram will satisfy a requirement of paragraph (b) of this section if it is dated no earlier than 60 days before the date of the application it is to accompany and was performed and transmitted according to acceptable standards and techniques.

**Second- and Third-Class: 14 CFR 67.211(a)(b)(c)(d)(e)(f) and
67.311(a)(b)(c)(d)(e)(f)**

Cardiovascular standards for a second- and third-class airman medical certificate are no established medical history or clinical diagnosis of any of the following:

- (a) Myocardial infarction
- (b) Angina pectoris
- (c) Coronary heart disease that has required treatment or, if untreated, that has been symptomatic or clinically significant
- (d) Cardiac valve replacement
- (e) Permanent cardiac pacemaker implantation; or
- (f) Heart replacement

II. Examination Techniques

A. General Physical Examination.

1. A brief description of any comment-worthy personal characteristics as well as height, weight, representative blood pressure readings in both arms, funduscopic examination, condition of peripheral arteries, carotid artery auscultation, heart size, heart rate, heart rhythm, description of murmurs (location, intensity, timing, and opinion as to significance), and other findings of consequence must be provided.
2. The Examiner should keep in mind some of the special cardiopulmonary demands of flight, such as changes in heart rates at takeoff and landing. High G-forces of aerobatics or agricultural flying may stress both systems considerably. Degenerative changes are often insidious and may produce subtle performance decrements that may require special investigative techniques.
 - a. Inspection. Observe and report any thoracic deformity (e.g., pectus excavatum), signs of surgery or other trauma, and clues to ventricular hypertrophy. Check the hematopoietic and vascular system by observing for pallor, edema, varicosities, stasis ulcers, and venous distention. Check the nail beds for capillary pulsation and color.
 - b. Palpation. Check for thrills and the vascular system for arteriosclerotic changes, shunts, or AV anastomoses. The pulses should be examined to determine their character, to note if they are diminished or absent, and to observe for synchronicity. The medical standards do not specify pulse rates that, per se, are disqualifying for medical certification. These tests are used,

however, to determine the status and responsiveness of the cardiovascular system. Abnormal pulse rates may be reason to conduct additional cardiovascular system evaluations.

(1). Bradycardia of less than 50 beats per minute, any episode of tachycardia during the course of the examination, and any other irregularities of pulse other than an occasional ectopic beat or sinus arrhythmia must be noted and reported. If there is bradycardia, tachycardia, or arrhythmia further evaluation may be warranted and deferral may be indicated.

(2). A cardiac evaluation may be needed to determine the applicant's qualifications. Temporary stresses or fever may, at times, result in abnormal results from these tests. If the Examiner believes this to be the case, the applicant should be given a few days to recover and then be retested. If this is not possible, the Examiner should defer issuance, pending further evaluation.

c. Percussion. Determine heart size, diaphragmatic elevation/excursion, abnormal densities in the pulmonary fields, and mediastinal shift.

d. Auscultation. Check for resonance, asthmatic wheezing, ronchi, rales, cavernous breathing of emphysema, pulmonary or pericardial friction rubs, quality of the heart sounds, murmurs, heart rate, and rhythm. If a murmur is discovered during the course of conducting a routine FAA examination, report its character, loudness, timing, transmission, and change with respiration. It should be noted whether it is functional or organic and if a special examination is needed. If the latter is indicated, the Examiner should defer issuance of the medical certificate and transmit the completed FAA Form 8500-8 to the FAA for further consideration. Listen to the neck for bruits.

It is recommended that the Examiner conduct the auscultation of the heart with the applicant both in a sitting and in a recumbent position.

Aside from murmur, irregular rhythm, and enlargement, the Examiner should be careful to observe for specific signs that are pathognomonic for specific disease entities or for serious generalized heart disease. Examples of such evidence are: (1) the opening snap at the apex or fourth left intercostal space signifying mitral stenosis; (2) gallop rhythm indicating serious impairment of cardiac function; and (3) the middiastolic rumble of mitral stenosis.

B. When General Examinations Reveal Heart Problems.

These specifications have been developed by the FAA to determine an applicant's eligibility for airman medical certification. Standardization of examination methods and reporting is essential to provide sufficient basis for making determinations and the prompt processing of applications.

1. This cardiovascular evaluation, therefore, must be reported in sufficient detail to permit a clear and objective evaluation of the cardiovascular disorder(s) with emphasis on the degree of functional recovery and prognosis. It should be forwarded to the FAA immediately upon completion. Inadequate evaluation, reporting, or failure to promptly submit the report to the FAA may delay the certification decision.

a. Medical History. Particular reference should be given to cardiovascular abnormalities-cerebral, visceral, and/or peripheral. A statement must be included as to whether medications are currently or have been recently used, and if so, the type, purpose, dosage, duration of use, and other pertinent details must be provided. A specific history of any anticoagulant drug therapy is required. In addition, any history of hypertension must be fully developed and if thiazide diuretics are being taken, values for serum potassium should be reported, as well as any important or unusual dietary programs.

b. Family, Personal, and Social History. A statement of the ages and health status of parents and siblings is required; if deceased, cause and age at death should be included. Also, any indication of whether any near blood relative has had a "heart attack," hypertension, diabetes, or known disorder of lipid metabolism must be provided. Smoking, drinking, and recreational habits of the applicant are pertinent as well as whether a program of physical fitness is being maintained. Comments on the level of physical activities, functional limitations, occupational, and avocational pursuits are essential.

c. Records of Previous Medical Care. If not previously furnished to the FAA, a copy of pertinent hospital records as well as out-patient treatment records with clinical data, x-ray, laboratory observations, and originals or copies of all electrocardiographic (ECG) tracings should be provided. Detailed reports of surgical procedures as well as cerebral and coronary arteriography and other major diagnostic studies are of prime importance.

d. Surgery. The presence of an aneurysm or obstruction of a major vessel of the body is disqualifying for medical certification of any class. Following successful surgical intervention and correction, the applicant may ask for FAA consideration. The FAA recommends that the applicant recover for at least 3 months for ATCS's and 6 months for airmen.

A history of coronary artery bypass surgery is disqualifying for certification. Such surgery does not negate a past history of coronary heart disease. The presence of permanent cardiac pacemakers and artificial heart valves is also disqualifying for certification.

The FAA will consider an Authorization for a Special Issuance of a Medical Certificate (Authorization) for most cardiac conditions. Applicants seeking further FAA consideration should be prepared to submit all past records and a report of a complete current cardiovascular evaluation in accordance with FAA specifications.

C. Medication.

1. Medications acceptable to the FAA for treatment of hypertension in applicants include all Food and Drug Administration approved diuretics, alpha-adrenergic blocking agents, beta-adrenergic blocking agents, calcium channel blocking agents, angiotension converting enzyme (ACE inhibitors) agents, and direct vasodilators. Centrally acting agents (such as, reserpine, guanethidine, guanadrel, guanabenz, and methyldopa) are usually **not** acceptable to the FAA. Dosage levels should be the minimum necessary to obtain optimal clinical control and should not be modified to influence the certification decision.

2. The Examiner may submit for the Federal Air Surgeon's review requests for Authorization under the special issuance section of part 67 (14 CFR 67.401) in cases in which these or other usually unacceptable medications are used. Specialty evaluations are required in such cases and must provide information on why the specific drug is required. The Examiner's own recommendation should be included. The Examiner must defer issuance of a medical certificate to any applicant whose hypertension is being treated with unacceptable medications. The use of nitrates for the treatment for coronary artery disease or to modify hemodynamics is unacceptable.

The use of flecainide is unacceptable when there is evidence of left ventricular dysfunction or recent myocardial infarction.

III. Aerospace Medical Disposition

The following is a table that lists the most common conditions of aeromedical significance, and course of action that should be taken by the examiner as defined by the protocol and disposition in the table. Medical certificates must not be issued to an applicant with medical conditions that require deferral, or for any condition not listed in the table that may result in sudden or subtle incapacitation without consulting the AMCD or the RFS. Medical documentation must be submitted for any condition in order to support an issuance of an airman medical certificate.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Arrhythmias			
Bradycardia (<50 bpm)	All	Document history and findings, CVE Protocol, and submit any tests deemed appropriate	If no evidence of structural, functional or coronary heart disease - Issue Otherwise - Requires FAA Decision
Bundle Branch Block (Left and Right)	All	See CVE and GXT Protocols See GXT Additional BBB Requirements	If no evidence of structural, functional or coronary heart disease - Issue Otherwise - Requires FAA Decision
History of Implanted Pacemakers	All	See Implanted Pacemaker Protocol	Requires FAA Decision
PAC (2 or more on ECG)	All	Requires evaluation, e.g., check for MVP, caffeine, pulmonary disease, thyroid, etc.	If no evidence of structural, functional or coronary heart disease - Issue Otherwise - Requires FAA Decision
PVC's (2 or more on standard ECG)	All	Max GXT – to include a baseline ECG	If no evidence of structural, functional or coronary heart disease and PVC's resolve with exercise - Issue Otherwise - Requires FAA Decision

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Arrhythmias			
1 st Degree AV Block	All	Document history and findings, CVE Protocol, and submit any tests deemed appropriate	If no evidence of structural, functional or coronary heart disease - Issue Otherwise - Requires FAA Decision
2 nd Degree AV Block Mobitz I	All	Document history and findings, CVE Protocol, and submit any tests deemed appropriate	If no evidence of structural, functional or coronary heart disease - Issue Otherwise - Requires FAA Decision
2 nd Degree AV Block Mobitz II	All	CVE Protocol in accordance w/ Hypertensive Evaluation Specifications and 24-hour Holter	Requires FAA Decision
3 rd Degree AV Block	All	CVE Protocol in accordance w/ Hypertensive Evaluation Specifications and 24-hour Holter	Requires FAA Decision
Preexcitation	All	CVE Protocol, GXT, and 24-hour Holter	Requires FAA Decision
Radio Frequency Ablation	All	3-month wait, then 24-hour Holter	If Holter negative for arrhythmia and no recurrence – Issue Otherwise - Requires FAA Decision

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Arrhythmias			
Supraventricular Tachycardia	All	CHD Protocol with ECHO and 24-hour Holter	<p>Initial Special Issuance - Requires FAA Decision</p> <p>Followup Special Issuance's - See AASI Protocol</p>
Syncope *	All	CHD Protocol with ECHO and 24-hour Holter; bilat-carotid Ultrasound	Requires FAA Decision
Atrial Fibrillation			
Atrial Fibrillation: Chronic Paroxysmal/Lone	All	CHD Protocol with ECHO and 24-hour Holter	<p>Initial Special Issuance - Requires FAA Decision</p> <p>Followup Special Issuance's - See AASI Protocol</p>
Resolved History of Atrial Fibrillation >5 years ago	All	Document previous workup for CAD and structural heart disease	<p>If no ischemia, history of emboli, or structural or functional heart disease - Issue</p> <p>Otherwise - Requires FAA Decision</p>

NOTE: Syncope, not satisfactorily explained or recurrent, requires deferral (even though the syncope episode may be medically explained, an aeromedical certification decision may still be precluded). Syncope may involve cardiovascular, neurological, and psychiatric factors.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Coronary Heart Disease			
Coronary Heart Disease: Angina Pectoris Atherectomy; Bracytherapy; Coronary Bypass Grafting; Myocardial Infarction; PTCA; Rotoblation; and Stent Insertion	1 st & 2 nd	See CHD Protocol	Requires FAA Decision
	3 rd		Initial Special Issuance - Requires FAA Decision Followup Special Issuance's - See AASI Protocol
Hypertension			
Hypertension requiring medication		See Hypertension Protocol	If controlled and no complications - Issue Otherwise - Requires FAA Decision
Valvular Disease			
All Other Valvular Disease	All	CHD Protocol with ECHO	Requires FAA Decision
Aortic and Mitral Insufficiency	All	CHD Protocol with ECHO	Initial Special Issuance - Requires FAA Decision Followup Special Issuance's - See AASI Protocol
Single Valve Replacement (Tissue, Mechanical or Valvuloplasty)	1 st & 2 nd	See Valve Replacement	Requires FAA Decision
	3 rd		Initial Special Issuance - Requires FAA Decision Followup Special Issuance's - See AASI Protocol

Valvular Disease			
Multiple Valve Replacement	All	Document history and findings, CVE Protocol, and submit any tests deemed appropriate	Requires FAA Decision

Other Cardiac Conditions

The following conditions must be deferred:

1. Heart Transplant – at the present time, due to the unpredictability of segmental coronary artery disease, certification is not being granted.
2. Cardiac decompensation.
3. Congenital heart disease accompanied by cardiac enlargement, ECG abnormality, or evidence of inadequate oxygenation.
4. Hypertrophy or dilatation of the heart as evidenced by clinical examination and supported by diagnostic studies.
5. Pericarditis, endocarditis, or myocarditis.
6. When cardiac enlargement or other evidence of cardiovascular abnormality is found, the decision is deferred to AMCD or RFS. If the applicant wishes further consideration, a consultation will be required "preferably" from the applicant's treating physician. It must include a narrative report of evaluation and be accompanied by an ECG with report and appropriate laboratory test results which may include, as appropriate, 24-hour Holter monitoring, thyroid function studies, ECHO, and an assessment of coronary artery status. The report and accompanying materials should be forwarded to the AMCD or RFS.
7. Anti-tachycardia devices or implantable defibrillators.
8. With the possible exceptions of aspirin and dipyridamole taken for their effect on blood platelets, the use of anticoagulants or other drugs for treatment or prophylaxis of fibrillation may preclude medical certification.
9. A history of cardioversion or drug treatment, *per se*, does not rule out certification. A current, complete cardiovascular evaluation will be required. A 3-month observation period must elapse after the procedure before consideration for certification.
10. Any other cardiac disorder not otherwise covered in this section.

11. For all classes, certification decisions will be based on the applicant's medical history and current clinical findings. Certification is unlikely unless the information is highly favorable to the applicant. Evidence of extensive multi-vessel disease, impaired cardiac functioning, precarious coronary circulation, etc., will preclude certification. Before an applicant undergoes coronary angiography, it is recommended that all records and the report of a current cardiovascular evaluation, including a maximal electrocardiographic exercise stress test, be submitted to the FAA for preliminary review. Based upon this information, it may be possible to advise an applicant of the likelihood of favorable consideration.

12. A history of low blood pressure requires elaboration. If the Examiner is in doubt, it is usually better to defer issuance rather than to deny certification for such a history.

ITEM 37. VASCULAR SYSTEM

CHECK EACH ITEM IN APPROPRIATE COLUMN	Normal	Abnormal
37. Vascular System		

I. Code of Federal Regulations

All Classes: 14 CFR 67.113(b)(c), 67.213(b)(c), and 67.313(b)(c)

(b) No other organic, functional, or structural disease, defect, or limitation that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the condition involved, finds -

(1) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or

(2) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges;

(c) No medication or other treatment that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the medication or other treatment involved, finds -

(1) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or

(2) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges.

II. Examination Techniques

1. Inspection. Observe and report any thoracic deformity (e.g., pectus excavatum), signs of surgery or other trauma, and clues to ventricular hypertrophy. Check the hematopoietic and vascular system by observing for pallor, edema, varicosities, stasis ulcers, venous distention, nail beds for capillary pulsation, and color.
2. Palpation. Check for thrills and the vascular system for arteriosclerotic changes, shunts or AV anastomoses. The pulses should be examined to determine their character, to note if they are diminished or absent, and to observe for synchronicity.
3. Percussion. N/A.
4. Auscultation. Check for bruits and thrills.

III. Aerospace Medical Disposition

The following is a table that lists the most common conditions of aeromedical significance, and course of action that should be taken by the examiner as defined by the protocol and disposition in the table. Medical certificates must not be issued to an applicant with medical conditions that require deferral, or for any condition not listed in the table that may result in sudden or subtle incapacitation without consulting the AMCD or the RFS. Medical documentation must be submitted for any condition in order to support an issuance of an airman medical certificate.

DISEASE/CONDITIONS	CLASS	EVALUATION DATA	DISPOSITION
Vascular Conditions			
Aneurysm (Abdominal or Thoracic)	All	Submit all available medical documentation	Requires FAA Decision
Aneurysm (Status Post Repair)	All	Submit all documentation in accordance with CVE Protocol, and include a GXT	Requires FAA Decision
Arteriosclerotic Vascular disease with evidence of circulatory obstruction	All	Submit all documentation in accordance with CVE Protocol, and include a GXT, and CAD ultra sound if applicable	Requires FAA Decision
Buerger's Disease	All	Document history and findings	If no impairment and no symptoms in flight - Issue Otherwise - Requires FAA Decision

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Vascular Conditions			
Peripheral Edema	All	The underlying medical condition must not be disqualifying	If findings can be explained by normal physiologic response or secondary to medication(s) - Issue Otherwise - Requires FAA Decision
Raynaud's Disease	All	Document history and findings	If no impairment - Issue Otherwise - Requires FAA Decision
Phlebothrombosis or Thrombophlebitis	1 st & 2nd	See Thrombophlebitis Protocol	Requires FAA Decision
	3rd	Document history and findings See Thrombophlebitis Protocol	A single episode resolved, not currently treated with anticoagulants, and a negative evaluation - Issue If history of multiple episodes - Requires FAA Decision

ITEM 38. ABDOMEN AND VISCERA

CHECK EACH ITEM IN APPROPRIATE COLUMN	Normal	Abnormal
38. Abdomen and viscera (including hernia)		

I. Code of Federal Regulations

All Classes: 14 CFR 67.113(b)(c), 67.213(b)(c), and 67.313(b)(c)

(b) No other organic, functional, or structural disease, defect, or limitation that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the medication or other treatment involved, finds-

(1) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or

(2) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges.

(c) No medication or other treatment that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the medication or other treatment involved, finds -

(1) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or

(2) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges.

II. Examination Techniques

1. Observation: The Examiner should note any unusual shape or contour, skin color, moisture, temperature, and presence of scars. Hernias, hemorrhoids, and fissure should be noted and recorded.

A history of acute gastrointestinal disorders is usually not disqualifying once recovery is achieved, e.g., acute appendicitis.

Many chronic gastrointestinal diseases may preclude issuance of a medical certificate (e.g., cirrhosis, chronic hepatitis, malignancy, ulcerative colitis). Colostomy following surgery for cancer may be allowed by the FAA with special followup reports.

The Examiner should not issue a medical certificate if the applicant has a recent history of bleeding ulcers or hemorrhagic colitis. Otherwise, ulcers must not have been active within the past 3 months.

In the case of a history of bowel obstruction, a report on the cause and present status of the condition must be obtained from the treating physician.

2. Palpation: The Examiner should check for and note enlargement of organs, unexplained masses, tenderness, guarding, and rigidity.

III. Aerospace Medical Disposition

The following is a table that lists the most common conditions of aeromedical significance, and course of action that should be taken by the examiner as defined by the protocol and disposition in the table. Medical certificates must not be issued to an applicant with medical conditions that require deferral, or for any condition not listed in the table that may result in sudden or subtle incapacitation without consulting the AMCD or the RFS. Medical documentation must be submitted for any condition in order to support an issuance of an airman medical certificate.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Abdomen and Viscera and Anus Conditions			
Cholelithiasis	All	Document history and findings	If asymptomatic - Issue Otherwise - Requires FAA Decision
Cirrhosis (Alcoholic)	All	See Substance Abuse/Dependence Disposition in Item 47, page 119	Requires FAA Decision
Cirrhosis (Non-Alcoholic)	All	Submit all pertinent medical records, current status report, to include history of encephalopathy; PT/PTT; albumin; liver enzymes; bilirubin; CBC; and other testing deemed necessary	Requires FAA Decision

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Abdomen and Viscera and Anus Conditions			
Hepatitis	All	Submit all pertinent medical records, current status report to include any other testing deemed necessary	If disease is resolved without sequela - Issue Otherwise - Requires FAA Decision
Hepatitis C	All	Submit all pertinent medical information and current status report, include duration of symptoms, name and dosage of drugs and side effects	Initial Special Issuance - Requires FAA Decision Followup Special Issuance's - See AASI Protocol
Inguinal, Ventral or Hiatal Hernia	All	Document history and findings	If symptomatic; likely to cause any degree of obstruction - Requires FAA Decision Otherwise - Issue
Liver Transplant	All	Submit all pertinent medical information and current status report, include duration of symptoms, name and dosage of drugs and side effects	Requires FAA Decision
Splenomegaly	All	Provide hematologic workup	Requires FAA Decision

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Malignancies			
Breast Cancer	All	Submit all pertinent medical records, operative/ pathology reports, current oncological status report, including tumor markers, and any other testing deemed necessary report, include duration of symptoms, name and dosage of drugs and side effects	<p>Initial Special Issuance - Requires FAA Decision</p> <p>Followup Special Issuance's - See AASI Protocol</p>
Colitis (Ulcerative, Regional Enteritis or Crohn's disease)	All	Submit all pertinent medical information and current status report, include duration of symptoms, name and dosage of drugs and side effects	<p>Initial Special Issuance - Requires FAA Decision</p> <p>Followup Special Issuance's - See AASI Protocol</p>
Colon/Rectal Cancer	All	Submit all pertinent medical records, operative/ pathology reports, current oncological status report; and current CEA and CBC	<p>Initial Special Issuance - Requires FAA Decision</p> <p>Followup Special Issuance's - See AASI Protocol</p>
Other Malignancies	All	Submit all pertinent medical records, operative/ pathology reports, current oncological status report, including tumor markers, and any other testing deemed necessary	Requires FAA Decision
Peptic Ulcer	All	See Peptic Ulcer Protocol	Requires FAA Decision

An applicant with an ileostomy or colostomy may also receive FAA consideration. A report is necessary to confirm that the applicant has fully recovered from the surgery and is completely asymptomatic.

In the case of a history of bowel obstruction, a report on the cause and present status of the condition must be obtained from the treating physician.

ITEM 39. ANUS

CHECK EACH ITEM IN APPROPRIATE COLUMN	Normal	Abnormal
39 Anus (Not including digital examination)		

I. Code of Federal Regulations

All Classes: 14 CFR 67.113(a), 67.213(b)(c), and 67.313(b)(c)

(b) No other organic, functional, or structural disease, defect, or limitation that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the medication or other treatment involved, finds -

(1) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or

(2) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges.

(c) No medication or other treatment that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the medication or other treatment involved, finds -

(1) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or

(2) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges.

II. Examination Techniques

1. Digital Rectal Examination: This examination is performed only at the applicant's option unless indicated by specific history or physical findings. When performed, the following should be noted and recorded in Item 59 of FAA Form 8500-8.

2. If the digital rectal examination is not performed, the response to Item 39 may be based on direct observation or history.

ITEM 40. SKIN

CHECK EACH ITEM IN APPROPRIATE COLUMN	NORMAL	ABNORMAL
40. Skin		

I. Code of Federal Regulations

All Classes: 14 CFR 67.113(b)(c), 67.213(b)(c), and 67.313(b)(c)

(b) No other organic, functional, or structural disease, defect, or limitation that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the condition involved, finds -

(1) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or

(2) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges.

(c) No medication or other treatment that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the medication or other treatment involved, finds -

(1) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or

(2) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges.

II. Examination Techniques

A careful examination of the skin may reveal underlying systemic disorders of clinical importance. For example, thyroid disease may produce changes in the skin and fingernails. Cushing's disease may produce abdominal striae, and abnormal pigmentation of the skin occurs with Addison's disease.

Needle marks that suggest drug abuse should be noted and body marks and scars should be described and correlated with known history. Further history should be obtained as needed to explain findings.

III. Aerospace Medical Disposition

The following is a table that lists the most common conditions of aeromedical significance, and course of action that should be taken by the examiner as defined by the protocol and disposition in the table. Medical certificates must not be issued to an applicant with medical conditions that require deferral, or for any condition not listed in the table that may result in sudden or subtle incapacitation without consulting the AMCD or the RFS. Medical documentation must be submitted for any condition in order to support an issuance of an airman medical certificate.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Cutaneous			
Dermatomyositis; Deep Mycotic Infections; Eruptive Xanthomas; Hansen's Disease; Lupus Erythematosus; Raynaud's Phenomenon; Sarcoid; or Scleroderma	All	Submit all pertinent medical information and current status report	Requires FAA Decision
Kaposi's Sarcoma	All	Submit all pertinent medical information and current status report. See HIV Protocol	Requires FAA Decision

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Malignant Melanoma			
Melanoma Level >.75 mm with/ without any metastasis	All	Submit all pertinent medical records, operative/ pathology reports, and current oncological status report, and current MRI of the brain	Initial Special Issuance - Requires FAA Decision Followup Special Issuance's - See AASI Protocol
Melanoma of Unknown Primary Origin	All	Submit all pertinent medical records, operative/ pathology reports, and current oncological status report, current MRI of the brain; PET scan if no primary	Requires FAA Decision
Urticarial Eruptions			
Angioneurotic Edema	All	Submit all pertinent medical records and a current status report to include treatment	Requires FAA Decision
Chronic Urticaria	All	Submit all records and a current status report to include treatment	Requires FAA Decision

ITEM 41. G-U SYSTEM

CHECK EACH ITEM IN APPROPRIATE COLUMN	NORMAL	ABNORMAL
41. G-U system (Not including pelvic examination)		

NOTE: The pelvic examination is performed only at the applicant's option or if indicated by specific history or physical findings. If a pelvic examination is performed, the results are to be recorded in Item 60 of FAA Form 8500-8.

I. Code of Federal Regulations

All Classes: 14 CFR 67.113(b)(c), 67.213(b)(c), and 67.313(b)(c)

(b) No other organic, functional, or structural disease, defect, or limitation that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the condition involved, finds -

(1) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or

(2) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges.

(c) No medication or other treatment that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the medication or other treatment involved, finds -

(1) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or

(2) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges.

II. Examination Techniques

The Examiner should observe for discharge, inflammation, skin lesions, scars, strictures, tumors, and secondary sexual characteristics. Palpation for masses and areas of tenderness should be performed. The pelvic examination is performed only at the applicant's option or if indicated by specific history or physical findings. If a pelvic examination is performed, the results are to be recorded in Item 60 of FAA Form 8500-8. Disorders such as sterility and menstrual irregularity are not usually of importance in qualification for medical certification.

Specialty evaluations may be indicated by history or by physical findings on the routine examination. A personal history of urinary symptoms is important; such as:

1. Pain or burning upon urination
2. Dribbling or Incontinence
3. Polyuria, frequency, or nocturia
4. Hematuria, pyuria, or glycosuria

Special procedures for evaluation of the G-U system should best be left to the discretion of an urologist, nephrologist, or gynecologist.

III. Aerospace Medical Disposition

(See **Item 48**, page 123, for details concerning diabetes and **Item 57**, page 148, for other information related to the examination of urine).

The following is a table that lists the most common conditions of aeromedical significance, and course of action that should be taken by the examiner as defined by the protocol and disposition in the table. Medical certificates must not be issued to an applicant with medical conditions that require deferral, or for any condition not listed in the table that may result in sudden or subtle incapacitation without consulting the AMCD or the RFS. Medical documentation must be submitted for any condition in order to support an issuance of an airman medical certificate.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
General Disorders			
Congenital lesions of the kidney	All	Submit all pertinent medical information and status report	If the applicant has an ectopic, horseshoe kidney, unilateral agenesis, hypoplastic, or dysplastic and is asymptomatic – Issue Otherwise – Requires FAA Decision

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
General Disorders			
Cystostomy and Neurogenic bladder	All	Requires evaluation, report must include etiology, clinical manifestation and treatment plan	Requires FAA Decision
Renal Dialysis	All	Submit a current status report, all pertinent medical reports to include etiology, clinical manifestation, BUN, Ca, PO ⁴ , Creatinine, electrolytes, and treatment plan	Requires FAA Decision
Renal Transplant	All	See Renal Transplant Protocol	Requires FAA Decision
Inflammatory Conditions			
Acute (Nephritis)	All	Submit all pertinent medical information and status report	If > 3 mos. ago, resolved, no sequela, or indication of reoccurrence - Issue Otherwise - Requires FAA Decision
Chronic (Nephritis)	All	Submit all pertinent medical information and status report	Requires FAA Decision
Nephrosis	All	Submit all pertinent medical information and status report	Requires FAA Decision

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Neoplastic Disorders			
Bladder	All	Submit all pertinent medical records, operative/ pathology reports, current oncological status report, including tumor markers, and any other testing deemed necessary report, include duration of symptoms, name and dosage of drugs and side effects	<p>Initial Special Issuance - Requires FAA Decision</p> <p>Followup Special Issuance's - See AASI Protocol</p>
Other Neoplastic Disorders	All	Submit a current status report, all pertinent medical reports to include staging, metastatic work up, and operative report if applicable	Requires FAA Decision
Prostatic Cancer	All	Submit a current status report, all pertinent medical reports to include staging, PSA, metastatic workup, and operative report, if applicable, and treatment	<p>Initial Special Issuance - Requires FAA Decision</p> <p>Followup Special Issuance's - See AASI Protocol</p>

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Neoplastic Disorders			
Renal Carcinoma	All	Submit all pertinent medical records, operative/ pathology reports, current oncological status report, including tumor markers, and any other testing deemed necessary report, include duration of symptoms, name and dosage of drugs and side effects	<p>Initial Special Issuance - Requires FAA Decision</p> <p>Followup Special Issuance's - See AASI Protocol</p>
Testicular Carcinoma	All	Submit all pertinent medical records, operative/ pathology reports, current oncological status report, and any other testing deemed necessary report, include duration of symptoms, name and dosage of drugs and side effects	<p>Initial Special Issuance - Requires FAA Decision</p> <p>Followup Special Issuance's - See AASI Protocol</p>
Nephritis			
Polycystic Kidney Disease	All	Submit all pertinent medical information and status report	<p>If renal function is normal and no hypertension - Issue</p> <p>Otherwise - Requires FAA Decision</p>
Pyelitis or Pyelonephritis	All	Submit all pertinent medical information and status report	<p>If asymptomatic - Issue</p> <p>Otherwise - Requires FAA Decision</p>

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Nephritis			
Pyonephrosis	All	Submit all pertinent medical information and status report	Requires FAA Decision
Urinary System			
Hydronephrosis with impaired renal function	All	Submit all pertinent medical information and status report	Requires FAA Decision
Nephrectomy (non-neoplastic)	All	Submit all pertinent medical information and status report	If the remaining kidney function and anatomy is normal, without other systemic disease, hypertension, uremia, infection of the remaining kidney - Issue Otherwise - Requires FAA Decision
Nephrocalcinosis	All	Submit all pertinent medical information and status report	If calculus is not in collecting system or renal pelvis - Issue Otherwise - Requires FAA Decision
Calculus ¹¹ Renal - Single episode	All	Submit current metabolic evaluation and status report	If there is no residual calculi and the metabolic workup is negative - Issue Otherwise - Requires FAA Decision

¹¹ Complete studies to determine the possible etiology and prognosis are essential to favorable FAA consideration. Determining factors include site and location of the stones, complications such as compromise in renal function, repeated bouts of kidney infection, and need for therapy. Any underlying disease will be considered. The likelihood of sudden incapacitating symptoms is of primary concern. Report of imaging studies (KUB, IVP, or spiral CT) must be submitted in order to conclude that there are no residual or retained calculi.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Urinary System			
Renal – Multiple episodes or Retained Stones	All	Submit current metabolic evaluation and status report	Initial Special Issuance - Requires FAA Decision Followup Special Issuance's - See AASI Protocol
Ureteral or Vesical	All	Single episode and no retained calculi, submit current metabolic evaluation and status report (Ureteral stent is acceptable if functioning without sequela)	If metabolic workup is negative and there is no sequela or retained calculi - Issue Otherwise - Requires FAA Decision

A history of recent or significant hematuria requires further evaluation.

GENITAL/REPRODUCTIVE SYSTEM

Pregnancy under normal circumstances is not disqualifying. It is recommended that the applicant's obstetrician be made aware of all aviation activities so that the obstetrician can properly advise the applicant. The Examiner may wish to counsel applicants concerning piloting aircraft during the third trimester. The proper use of lap belt and shoulder harness warrants discussion.

Use of Oral or Repository Contraceptives or Hormonal Replacement Therapy are not disqualifying for medical certification. If the applicant is experiencing no adverse symptoms or reactions to cyclic hormones and is otherwise qualified, the Examiner may issue the desired certificate.

Gender dysphoria and gender reassignment are not disqualifying, however, a complete review of the medical history and records is indicated to determine that there is no medical, psychiatric, or psychological condition that is considered disqualifying. Medical disqualification is considered appropriate during the time of hormonal manipulation until such time where there is a stabilization of the dose administered and the physiologic response. Defer and submit a current status report and all pertinent medical reports to AMCD or RFS.

ITEMS 42-43. MUSCULOSKELETAL

CHECK EACH ITEM IN APPROPRIATE COLUMN	NORMAL	ABNORMAL
42. Upper and lower extremities (Strength and range of motion)		
43. Spine, other musculoskeletal		

I. Code of Federal Regulations

All Classes: 14 CFR 67.113 (b)(c), 67.213 (b)(c), and 67.313 (b)(c)

(b) No other organic, functional, or structural disease, defect, or limitation that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the condition involved finds -

- (1) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or
- (2) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges.

(c) No medication or other treatment that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the medication or other treatment involved, finds -

- (1) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or
- (2) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges.

II. Examination Techniques

Standard examination procedures should be used to make a gross evaluation of the integrity of the applicant's musculoskeletal system. The Examiner should note:

- 1. Pain - neuralgia, myalgia, paresthesia, and related circulatory and neurological findings
- 2. Weakness - local or generalized; degree and amount of functional loss
- 3. Paralysis - atrophy, contractures, and related dysfunctions
- 4. Motion coordination, tremors, loss or restriction of joint motions, and performance degradation

5. Deformity - extent and cause
6. Amputation - level, stump healing, and phantom pain
7. Prostheses - comfort and ability to use effectively

III. Aerospace Medical Disposition

The following is a table that lists the most common conditions of aeromedical significance, and course of action that should be taken by the examiner as defined by the protocol and disposition in the table. Medical certificates must not be issued to an applicant with medical conditions that require deferral, or for any condition not listed in the table that may result in sudden or subtle incapacitation without consulting the AMCD or the RFS. Medical documentation must be submitted for any condition in order to support an issuance of an airman medical certificate.

ITEM 42. UPPER AND LOWER EXTREMITIES

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Upper and Lower Extremities			
Amputations	All	Submit a current status report to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical reports	<p>If applicant has a SODA issued on the basis of the amputation - Issue</p> <p>Otherwise - Requires FAA Decision After review of all medical data, the FAA may authorize a special medical flight test</p>
Atrophy of any muscles that is progressive, Deformities, either congenital or acquired, or Limitation of motion of a major joint, that are sufficient to interfere with the performance of airman duties	All	Submit a current status report to include functional status (degree of impairment as measured by strength, range of motion, pain), medication with side effects, and all pertinent medical reports	Requires FAA Decision

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Upper and Lower Extremities			
Neuralgia or Neuropathy, chronic or acute, particularly sciatica, if sufficient to interfere with function or is likely to become incapacitating	All	Submit a current status report to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical reports	Requires FAA Decision
Osteomyelitis, acute or chronic, with or without draining fistula(e)	All	Submit a current status report to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical reports	Requires FAA Decision
Tremors, if sufficient to interfere with the performance of airman duties ¹²	All	Submit a current status report to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical reports	Requires FAA Decision

¹² Essential tremor is not disqualifying unless it is disabling.

For all the above conditions: If the applicant is otherwise qualified, the FAA may issue a limited certificate. This certificate will permit the applicant to proceed with flight training until ready for a MFT. At that time, at the applicant's request, the FAA (usually the AMCD) will authorize the student pilot to take a MFT in conjunction with the regular flight test. The MFT and regular private pilot flight test are conducted by an FAA inspector. This affords the student an opportunity to demonstrate the ability to control the aircraft despite the handicap. The FAA inspector prepares a written report and indicates whether there is a safety problem. A medical certificate and SODA, without the student limitation, may be provided to the inspector for issuance to the applicant, or the inspector may be required to send the report to the FAA medical officer who authorized the test.

When prostheses are used or additional control devices are installed in an aircraft to assist the amputee, those found qualified by special certification procedures will have their certificates limited to require that the devices (and, if necessary, even the specific aircraft) must always be used when exercising the privileges of the airman certificate.

Item 43. SPINE, OTHER MUSCULOSKELETAL

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Arthritis			
Osteoarthritis ¹³	All	Submit a current status report to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical reports	If mild and controlled with small doses of nonprescription agents - Issue If symptomatic or requires medication - Requires FAA Decision

¹³ Arthritis (if it is symptomatic or requires medication, other than small doses of nonprescription anti-inflammatory agents), is disqualifying unless the applicant holds a letter from the FAA specifically authorizing the Examiner to issue the certificate when the applicant is found otherwise qualified. Although the use of many medications on a continuing basis ordinarily contraindicates the performance of pilot duties, under certain circumstances, certification is possible for an applicant who is taking aspirin, ibuprofen, naproxen, similar nonsteroidal anti-inflammatory drugs (NSAID), or COX-2 inhibitors. If the applicant presents evidence documenting that the underlying condition for which the medicine is being taken is not in itself disabling and the applicant has been on therapy (NSAID) long enough to have established that the medication is well tolerated and has not produced adverse side effects, the Examiner may issue a certificate.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Arthritis			
Rheumatoid Arthritis and Variants	All	Submit a current status report to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical reports	<p>Initial Special Issuance - Requires FAA Decision</p> <p>Followup Special Issuance's - See AASI Protocol</p>
Collagen Disease			
Acute Polymyositis; Dermatomyositis; Lupus Erythematosus; or Periarteritis Nodosa	All	Submit a current status report to include functional status, frequency and severity of episodes, organ systems effected, medications with side effects and all pertinent medical reports	Requires FAA Decision

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Spine, other musculoskeletal			
Active disease of bones and joints	All	Submit a current status report to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical reports	Requires FAA Decision
Ankylosis, curvature, or other marked deformity of the spinal column sufficient to interfere with the performance of airman duties	All	Submit a current status report to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical reports	Requires FAA Decision

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Spine, other musculoskeletal			
Intervertebral Disc Surgery	All	See Footnote ¹⁴	See Footnote ¹⁴
Musculoskeletal effects of: Cerebral Palsy, Muscular Dystrophy Myasthenia Gravis, or Myopathies	All	Submit a current status report to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical reports	Requires FAA Decision
Other disturbances of musculoskeletal function, acquired or congenital, sufficient to interfere with the performance of airman duties or likely to progress to that degree	All	Submit a current status report to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical reports	Requires FAA Decision

¹⁴A history of intervertebral disc surgery is not disqualifying. If the applicant is asymptomatic, has completely recovered from surgery, is taking no medication, and has suffered no neurological deficit, the Examiner should confirm these facts in a brief statement in Item 60. The Examiner may then issue any class of medical certificate, providing that the individual meets all the medical standards for that class.

The paraplegic whose paralysis is not the result of a progressive disease process is considered in much the same manner as an amputee. The Examiner should defer issuance and may advise the applicant to request further FAA consideration. The applicant may be authorized to take a MFT along with the private pilot certificate flight test. If successful, the limitation VALID FOR STUDENT PILOT PURPOSES ONLY is removed from the medical certificate, but operational limitations may be added. A statement of demonstrated ability is issued.

Other neuromuscular conditions are covered in more detail in **Item 46**, page 103.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Spine, other musculoskeletal			
Symptomatic herniation of intervertebral disc	All	Submit a current status report to include functional status (degree of impairment as measured by strength, range of motion, pain), medications with side effects and all pertinent medical reports	Requires FAA Decision

ITEM 44. IDENTIFYING BODY MARKS, SCARS, TATTOOS

CHECK EACH ITEM IN APPROPRIATE COLUMN	NORMAL	ABNORMAL
44. Identifying body marks, scars, tattoos (Size and location)		

I. Code of Federal Regulations

All Classes: 14 CFR 67.113(b), 67.213(b), and 67.313(b)

(b) No other organic, functional, or structural disease, defect, or limitation that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the condition finds-

- (1) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or
- (2) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges

II. Examination Techniques

A careful examination for surgical and other scars should be made, and those that are significant (the result of surgery or that could be useful as identifying marks) should be described. Tattoos should be recorded because they may be useful for identification.

III. Aerospace Medical Disposition

The Examiner should question the applicant about any surgical scars that have not been previously addressed, and document the findings in Item 60 of FAA Form 8500-8. Medical certificates must not be issued to applicants with medical conditions that require deferral without consulting the AMCD or RFS. Medical documentation must be submitted for any condition in order to support an issuance of a medical certificate.

Disqualifying Condition: Scar tissue that involves the loss of function, which may interfere with the safe performance of airman duties.

ITEM 45. LYMPHATICS

CHECK EACH ITEM IN APPROPRIATE COLUMN	NORMAL	ABNORMAL
45. Lymphatics		

I. Code of Federal Regulations

All Classes: 14 CFR 67.113(b)(c), 67.213(b)(c), and 67.313(b)(c)

(b) No other organic, functional, or structural disease, defect, or limitation that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the condition involved, finds -

(1) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or

(2) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges.

(c) No medication or other treatment that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the medication or other treatment involved, finds -

(1) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or

(2) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges.

II. Examination Techniques

A careful examination of the lymphatic system may reveal underlying systemic disorders of clinical importance. Further history should be obtained as needed to explain findings.

III. Aerospace Medical Disposition

The following is a table that lists the most common conditions of aeromedical significance, and course of action that should be taken by the examiner as defined by the protocol and disposition in the table. Medical certificates must not be issued to an applicant with medical conditions that require deferral, or for any condition not listed in the table that may result in sudden or subtle incapacitation without consulting the AMCD or the RFS. Medical documentation must be submitted for any condition in order to support an issuance of an airman medical certificate.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Hodgkin's Disease – Lymphoma			
Hodgkin's Disease - Lymphoma	All	Submit a current status report and all pertinent medical reports. Include past and present treatment(s).	Initial Special Issuance - Requires FAA Decision Followup Special Issuance's - See AASI Protocol
Leukemia, Acute and Chronic			
Leukemia, Acute and Chronic – All Types	All	Submit a current status report and all pertinent medical reports	Requires FAA Decision
Chronic Lymphocytic Leukemia	All	Submit a current status report and all pertinent medical reports	Initial Special Issuance - Requires FAA Decision Followup Special Issuance's - See AASI Protocol

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Lymphatics			
Adenopathy secondary to Systemic Disease or Metastasis	All	Submit a current status report and all pertinent medical reports	Requires FAA Decision
Lymphedema	All	Submit a current status report and all pertinent medical reports. Note if there are any motion restrictions of the involved extremity	Requires FAA Decision
Lymphosarcoma	All	Submit a current status report and all pertinent medical reports. Include past and present treatment(s).	Requires FAA Decision

ITEM 46. NEUROLOGIC

CHECK EACH ITEM IN APPROPRIATE COLUMN	NORMAL	ABNORMAL
46. NEUROLOGIC		

I. Code of Federal Regulations

All Classes: 14 CFR 67.109 (a)(b), 67.209 (a)(b), and 67.309 (a)(b)

(a) No established medical history or clinical diagnosis of any of the following:

- (1) Epilepsy
- (2) A disturbance of consciousness without satisfactory medical explanation of the cause; or
- (3) A transient loss of control of nervous system function(s) without satisfactory medical explanation of the cause;

(b) No other seizure disorder, disturbance of consciousness, or neurologic condition that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the condition involved, finds-

(1) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or

(2) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges.

II. Examination Techniques

A neurologic evaluation should consist of a thorough review of the applicant's history prior to the neurological examination. The Examiner should specifically inquire concerning a history of weakness or paralysis, disturbance of sensation, loss of coordination, or loss of bowel or bladder control. Certain laboratory studies, such as scans and imaging procedures of the head or spine, electroencephalograms, or spinal paracentesis may suggest significant medical history. The Examiner should note conditions identified in Item 60 on the application with facts, such as dates, frequency, and severity of occurrence.

A history of simple headaches without sequela is not disqualifying. Some require only temporary disqualification during periods when the headaches are likely to occur or require treatment. Other types of headaches may preclude certification by the Examiner and require special evaluation and consideration (e.g., migraine and cluster headaches).

One or two episodes of dizziness or even fainting may not be disqualifying. For example, dizziness upon suddenly arising when ill is not a true dysfunction. Likewise, the orthostatic faint associated with moderate anemia is no threat to aviation safety as long as the individual is temporarily disqualified until the anemia is corrected.

An unexplained disturbance of consciousness is disqualifying under the medical standards. Because a disturbance of consciousness may be expected to be totally incapacitating, individuals with such histories pose a high risk to safety and must be denied or deferred by the Examiner. If the cause of the disturbance is explained and a loss of consciousness is not likely to recur, then medical certification may be possible.

The basic neurological examination consists of an examination of the 12 cranial nerves, motor strength, superficial reflexes, deep tendon reflexes, sensation, coordination, mental status, and includes the Babinski reflex and Romberg sign. The Examiner should be aware of any asymmetry in responses because this may be evidence of mild or early abnormalities. The Examiner should evaluate the visual field by direct confrontation or, preferably, by one of the perimetry procedures, especially if there is a suggestion of neurological deficiency.

III. Aerospace Medical Disposition

A history or the presence of any neurological condition or disease that potentially may incapacitate an individual should be regarded as initially disqualifying. Issuance of a medical certificate to an applicant in such cases should be denied or defer, pending further evaluation. A convalescence period following illness or injury may be advisable to permit adequate stabilization of an individual's condition and to reduce the risk of an adverse event. Applications from individuals with potentially disqualifying conditions should be forwarded to the AMCD. Processing such applications can be expedited by including hospital records, consultation reports, and appropriate laboratory and imaging studies, if available. Symptoms or disturbances that are secondary to the underlying condition and that may be acutely incapacitating include pain, weakness, vertigo or in coordination, seizures or a disturbance of consciousness, visual disturbance, or mental confusion. Chronic conditions may be incompatible with safety in aircraft operation because of long-term unpredictability, severe neurologic deficit, or psychological impairment.

The following is a table that lists the most common conditions of aeromedical significance, and course of action that should be taken by the examiner as defined by the protocol and disposition in the table. Medical certificates must not be issued to an applicant with medical conditions that require deferral, or for any condition not listed in the table that may result in sudden or subtle incapacitation without consulting the AMCD or the RFS. Medical documentation must be submitted for any condition in order to support an issuance of an airman medical certificate.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Cerebrovascular Disease (including the brain stem) ¹⁵			
Cerebral Thrombosis; Intracerebral or Subarachnoid Hemorrhage Transient Ischemic Attack (TIA);	All	Submit all pertinent medical records, current neurologic report, to include CHD Protocol, Brain MRI, Bilat carotid ultra sound, name and dosage of medication(s) and side effects	Requires FAA Decision

¹⁵ Complete neurological evaluations supplemented with appropriate laboratory and imaging studies are required of applicants with the above conditions. Cerebral arteriography may be necessary for review in cases of subarachnoid hemorrhage.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Cerebrovascular Disease			
Intracranial Aneurysm or Arteriovenous Malformation	All	Submit all pertinent medical records, current neurologic report, name and dosage of medication(s) and side effects	Requires FAA Decision
Intracranial Tumor ¹⁶	All	Submit all pertinent medical records, current neurologic report, name and dosage of medication(s) and side effects	Requires FAA Decision
Pseudotumor Cerebri (benign intracranial hypertension)	All	Submit all pertinent medical records, current neurologic report, name and dosage of medication(s) and side effects	Requires FAA Decision

¹⁶ A variety of intracranial tumors, both malignant and benign, are capable of causing incapacitation directly by neurologic deficit or indirectly through recurrent symptomatology. Potential neurologic deficits include weakness, loss of sensation, ataxia, visual deficit, or mental impairment. Recurrent symptomatology may interfere with flight performance through mechanisms such as seizure, headaches, vertigo, visual disturbances, or confusion. A history or diagnosis of an intracranial tumor necessitates a complete neurological evaluation with appropriate laboratory and imaging studies before a determination of eligibility for medical certification can be established. An applicant with a history of benign supratentorial tumors may be considered favorably for medical certification by the FAA and returned to flying status after a minimum satisfactory convalescence of 1 year.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Demyelinating Disease¹⁷			
Acute Optic Neuritis; Allergic Encephalomyelitis; Landry-Guillain-Barre Syndrome; Myasthenia Gravis; or Multiple Sclerosis	All	Submit all pertinent medical records, current neurologic report, to comment on involvement and persisting deficit, period of stability without symptoms, name and dosage of medication(s) and side effects	Requires FAA Decision

¹⁷Factors used in determining eligibility will include the medical history, neurological involvement and persisting deficit, period of stability without symptoms, type and dosage of medications used, and general health. A neurological and/or general medical consultation will be necessary in most instances.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Extrapyramidal, Hereditary, and Degenerative Diseases of the Nervous System¹⁸			
Dystonia Musculorum Deformans; Huntington's Disease; Parkinson's Disease; Wilson's Disease; or Gilles de la Tourette Syndrome; Alzheimer's Disease; Dementia (unspecified); or Slow viral diseases i.e., Creutzfeldt-Jakob's Disease	All	Obtain medical records and current neurological status, complete neurological evaluation with appropriate laboratory and imaging studies, as indicated May consider Neuropsychological testing	Requires FAA Decision

¹⁸ Extrapyramidal, Hereditary, and Degenerative Diseases of the Nervous System: Considerable variability exists in the severity of involvement, rate of progression, and treatment of the above conditions. A complete neurological evaluation with appropriate laboratory and imaging studies, including information regarding the specific neurological condition, will be necessary for determination of eligibility for medical certification.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Headaches¹⁹			
Atypical Facial Pain	All	Submit all pertinent medical records, current neurologic report, to include name and dosage of medication(s) and side effects	Requires FAA Decision
Chronic Tension or Cluster Headaches	All	Submit all pertinent medical records, current neurologic report, to include characteristics, frequency, severity, associated with neurologic phenomena, name and dosage of medication(s) and side effects	Requires FAA Decision

¹⁹ Pain, in some conditions, may be acutely incapacitating. Chronic recurring headaches or pain syndromes often require medication for relief or prophylaxis, and, in most instances, the use of such medications are disqualifying because they may interfere with a pilot's alertness and functioning. The Examiner may issue a medical certificate to an applicant with a long-standing history of headaches if mild, seldom requiring more than simple analgesics, occur infrequently, are not incapacitating, and are not associated with neurological stigmata.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Headaches¹⁹			
Migraines	All	Submit all pertinent medical records, current neurologic report, to include characteristics, frequency, severity, associated with neurologic phenomena, and name and dosage of medication(s) and side effects	<p>Initial Special Issuance - Requires FAA Decision</p> <p>Followup Special Issuance's - See AASI Protocol</p>
Post-traumatic Headache	All	Submit all pertinent medical records, current neurologic report, name and dosage of medication(s) and side effects	Requires FAA Decision

¹⁹ Pain, in some conditions, may be acutely incapacitating. Chronic recurring headaches or pain syndromes often require medication for relief or prophylaxis, and, in most instances, the use of such medications are disqualifying because they may interfere with a pilot's alertness and functioning. The Examiner may issue a medical certificate to an applicant with a long-standing history of headaches if mild, seldom requiring more than simple analgesics, occur infrequently, are not incapacitating, and are not associated with neurological stigmata.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Hydrocephalus and Shunts			
Hydrocephalus, secondary to a known injury or disease process; or normal pressure	All	Submit all pertinent medical records, current neurologic report, to include name and dosage of medication(s) and side effects	Requires FAA Decision
Infections of the Nervous System			
Brain Abscess; Encephalitis; Meningitis; and Neurosyphilis	All	Complete neurological evaluation with appropriate laboratory and imaging studies	Requires FAA Decision

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Neurologic Conditions			
A disturbance of consciousness without satisfactory medical explanation of the cause	All	Submit all pertinent medical records, current neurologic report, to include name and dosage of medication(s) and side effects	Requires FAA Decision
Epilepsy ²⁰	All	Submit all pertinent medical records, current status report, to include name and dosage of medication(s) and side effects	Requires FAA Decision
Febrile Seizure ²¹ (Single episode)	All	Submit all pertinent medical records and a current status report	If occurred prior to age 5, without recurrence and off medications for 3 years - Issue Otherwise – Requires FAA Decision
Transient loss of nervous system function(s) without satisfactory medical explanation of the cause; e.g., transient global amnesia	All	Submit all pertinent medical records, current status report, to include name and dosage of medication(s) and side effects	Requires FAA Decision

²⁰ Unexplained syncope, single seizure. An applicant who has a history of epilepsy, a disturbance of consciousness without satisfactory medical explanation of the cause, or a transient loss of control of nervous system function(s) without satisfactory medical explanation of the cause must be denied or deferred by the Examiner.

²¹ Infrequently, the FAA has granted an Authorization under the special issuance section of part 67 (14 CFR 67.401) when a seizure disorder was present in childhood but the individual has been seizure-free for a number of years. Factors that would be considered in determining eligibility in such cases would be age at onset, nature and frequency of seizures, precipitating causes, and duration of stability without medication. Followup evaluations are usually necessary to confirm continued stability of an individual's condition if an Authorization is granted under the special issuance section of part 67 (14 CFR 67.401).

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Other Conditions			
Neurofibromatosis with Central Nervous System Involvement	All	Submit all pertinent medical information and current status medical report	Requires FAA Decision
Trigeminal Neuralgia	All	Submit all pertinent medical records, current neurologic report, name and dosage of medication(s) and side effects	Requires FAA Decision
Presence of any neurological condition or disease that potentially may incapacitate an individual			
Head Trauma associated with: Epidural or Subdural Hematoma; Focal Neurologic Deficit; Depressed Skull Fracture; or Unconsciousness or disorientation of more than 1 hour following injury	All	Submit all pertinent medical records, current status report, to include pre-hospital and emergency department records, operative reports, neurosurgical evaluation, name and dosage of medication(s) and side effects	Requires FAA Decision

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Spasticity, Weakness, or Paralysis of the Extremities			
Conditions that are stable and non-progressive may be considered for medical certification	All	Submit all pertinent medical records, current neurologic report, to include etiology, degree of involvement, period of stability, appropriate laboratory and imaging studies	Requires FAA Decision
Vertigo or Disequilibrium²²			
Alternobaric Vertigo; Hyperventilation Syndrome; Meniere's Disease and Acute Peripheral Vestibulopathy; Nonfunctioning Labyrinths; or Orthostatic Hypotension	All	Submit all pertinent medical records, current neurologic report, name and dosage of medication(s) and side effects	Requires FAA Decision

²² Numerous conditions may affect equilibrium, resulting in acute incapacitation or varying degrees of chronic recurring spatial disorientation. Prophylactic use of medications also may cause recurring spatial disorientation and affect pilot performance. In most instances, further neurological evaluation will be required to determine eligibility for medical certification.

ITEM 47. PSYCHIATRIC

CHECK EACH ITEM IN APPROPRIATE COLUMN	NORMAL	ABNORMAL
47. Psychiatric (Appearance, behavior, mood, communication, and memory)		

I. Code of Federal Regulations

All Classes: 14 CFR 67.107(a)(b)(c), 67.207(a)(b)(c), and 67.307(a)(b)(c)

(a) No established medical history or clinical diagnosis of any of the following:

(1) A personality disorder that is severe enough to have repeatedly manifested itself by overt acts.

(2) A psychosis. As used in this section, "psychosis" refers to a mental disorder in which:

(i) The individual has manifested delusions, hallucinations, grossly bizarre or disorganized behavior, or other commonly accepted symptoms of this condition; or

(ii) The individual may reasonably be expected to manifest delusions, hallucinations, grossly bizarre or disorganized behavior, or other commonly accepted symptoms of this condition.

(3) A bipolar disorder.

(4) Substance dependence, except where there is established clinical evidence, satisfactory to the Federal Air Surgeon, of recovery, including sustained total abstinence from the substance(s) for not less than the preceding 2 years. As used in this section -

(i) "Substance" includes: alcohol; other sedatives and hypnotics; anxiolytics; opioids; central nervous system stimulants such as cocaine, amphetamines, and similarly acting sympathomimetics; hallucinogens; phencyclidine or similarly acting arylcyclohexylamines; cannabis; inhalants; and other psychoactive drugs and chemicals; and

(ii) "Substance dependence" means a condition in which a person is dependent on a substance, other than tobacco or ordinary xanthine-containing (e.g., caffeine) beverages, as evidenced by-

- (A) Increased tolerance
- (B) Manifestation of withdrawal symptoms;
- (C) Impaired control of use; or
- (D) Continued use despite damage to physical health or impairment of social, personal, or occupational functioning.

(b) No substance abuse within the preceding 2 years defined as:

- (1) Use of a substance in a situation in which that use was physically hazardous, if there has been at any other time an instance of the use of a substance also in a situation in which that use was physically hazardous;
- (2) A verified positive drug test result acquired under an anti-drug program or internal program of the U.S. Department of Transportation or any other Administration within the U.S. Department of Transportation; or
- (3) Misuse of a substance that the Federal Air Surgeon, based on case history and appropriate, qualified medical judgment relating to the substance involved, finds-

- (i) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or

- (ii) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges.

(c) No other personality disorder, neurosis, or other mental condition that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the condition involved, finds-

- (1) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or

- (2) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges.

(Also see Items 18.m., 18.n., and 18.p., page 32).

II. Examination Techniques

The FAA does not expect the Examiner to perform a formal psychiatric examination. However, the Examiner should form a general impression of the emotional stability and mental state of the applicant. There is a need for discretion in the Examiner/applicant relationship consonant with the FAA's aviation safety mission and the concerns of all applicants regarding disclosure to a public agency of sensitive information that may not be pertinent to aviation safety. Examiners must be sensitive to this need while, at the same time, collect what is necessary for a certification decision. When a question arises, the Federal Air Surgeon encourages Examiners first to check this *Guide for Aviation Medical Examiners* and other FAA informational documents. If the question remains unresolved, the Examiner should seek advice from a RFS or the Manager of the AMCD.

Review of the applicant's history as provided on the application form may alert the Examiner to gather further important factual information. Information about the applicant may be found in items related to age, pilot time, and class of certificate for which applied. Information about the present occupation and employer also may be helpful. If any psychotropic drugs are or have been used, followup questions are appropriate. Previous medical denials or aircraft accidents may be related to psychiatric problems.

Psychiatric information can be derived from the individual items in medical history (**Item 18**; page 32). Any affirmative answers to Item 18.m., "Mental disorders of any sort; depression, anxiety, etc.," or Item 18.p., "Suicide attempt," are significant. Any disclosure of current or previous alcohol or drug problems requires further clarification. A record of traffic violations may reflect certain personality problems or indicate an alcohol problem. Affirmative answers related to rejection by military service or a military medical discharge require elaboration. Reporting symptoms such as headaches or dizziness, or even heart or stomach trouble, may reflect a history of anxiety rather than a primary medical problem in these areas. Sometimes, the information applicants give about their previous diagnoses is incorrect, either because the applicant is unsure of the correct information or because the applicant chooses to minimize past difficulties. If there was a hospital admission for any emotionally related problem, it will be necessary to obtain the entire record.

Valuable information can be derived from the casual conversation that occurs during the physical examination. Some of this conversation will reveal information about the family, the job, and special interests. Even some personal troubles may be revealed at this time. The Examiner's questions should not be stilted or follow a regular pattern; instead, they should be a natural extension of the Examiner's curiosity about the person being examined. Information about the motivation for medical certification and interest in flying may be revealing. A formal Mental Status Examination is unnecessary. For example, it is not necessary to ask about time, place, or person to discover whether the

applicant is oriented. Information about the flow of associations, mood, and memory, is generally available from the usual interactions during the examination. Indication of cognitive problems may become apparent during the examination. Such problems with concentration, attention, or confusion during the examination or slower, vague responses should be noted and may be cause for deferral.

The Examiner should make observations about the following specific elements and should note on the form any gross or notable deviations from normal:

1. Appearance (abnormal if dirty, disheveled, odoriferous, or unkempt);
2. Behavior (abnormal if uncooperative, bizarre, or inexplicable);
3. Mood (abnormal if excessively angry, sad, euphoric, or labile);
4. Communication (abnormal if incomprehensible, does not answer questions directly);
5. Memory (abnormal if unable to recall recent events); and
6. Cognition (abnormal if unable to engage in abstract thought, or if delusional or hallucinating).

Significant observations during this part of the medical examination should be recorded in Item 60, of the application form. The Examiner, upon identifying any significant problems, should defer issuance of the medical certificate and report findings to the FAA. This could be accomplished by contacting a RFS or the Manager of the AMCD.

III. Aerospace Medical Disposition

A. General Considerations. It must be pointed out that considerations for safety, which in the "mental" area are related to a compromise of judgment and emotional control or to diminished mental capacity with loss of behavioral control, are not the same as concerns for emotional health in everyday life. Some problems may have only a slight impact on an individual's overall capacities and the quality of life but may nevertheless have a great impact on safety. Conversely, many emotional problems that are of therapeutic and clinical concern have no impact on safety.

B. Denials. The FAA has concluded that certain psychiatric conditions are such that their presence or a past history of their presence is sufficient to suggest a significant potential threat to safety. It is, therefore, incumbent upon the Examiner to be aware of any indications of these conditions currently, or in the past, and to deny or defer issuance of the medical certificate to an applicant who has a history of these conditions. An applicant who has a current diagnosis or history of these conditions (listed below) may request the FAA to grant an Authorization under the special issuance section of

part 67 (14 CFR 67.401) and, based upon individual considerations, the FAA may grant such an issuance.

NOTE: The use of a psychotropic drug is disqualifying for aeromedical certification purposes. This includes all sedatives, tranquilizers, antipsychotic drugs, antidepressant drugs (including SSRI's), analeptics, anxiolytics, and hallucinogens. The Examiner should defer issuance and forward the medical records to the AMCD.

The following is a table that lists the most common conditions of aeromedical significance, and course of action that should be taken by the examiner as defined by the protocol and disposition in the table. Medical certificates must not be issued to an applicant with medical conditions that require deferral, or for any condition not listed in the table that may result in sudden or subtle incapacitation without consulting the AMCD or the RFS. Medical documentation must be submitted for any condition in order to support an issuance of an airman medical certificate.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSTION
Psychiatric Conditions			
Adjustment Disorders	All	Submit all pertinent medical information and clinical status report	If stable, resolved, no associated disturbance of thought, no recurrent episodes, and psychotropic medication(s) used for less than 6 months and discontinued for at least 3 months - Issue Otherwise - Requires FAA Decision
Attention Deficit Disorder	All	Submit all pertinent medical information and clinical status report to include documenting the period of use, name and dosage of any medication(s) and side-effects	Requires FAA Decision

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSTION
Psychiatric Conditions			
Bipolar Disorder	All	See III. B-3 below	Requires FAA Decision
Bereavement; Dysthmic; or Minor Depression	All	Submit all pertinent medical information and clinical status report	If stable, resolved, no associated disturbance of thought, no recurrent episodes, and; a). psychotropic medication(s) used for less than 6 months and discontinued for at least 3 months – Issue b). No use of psychotropic medication(s) - Issue Otherwise - Requires FAA Decision
Personality Disorders	All	See III. B-1 below	Requires FAA Decision
Psychosis	All	See III. B-2 below	Requires FAA Decision
Psychotropic medications for Smoking Cessation	All	Document period of use, name and dosage of medication(s) and side-effects	If medication(s) discontinued for at least 30 days and w/o side-effects - Issue Otherwise – Requires FAA Decision
Substance Abuse	All	See III. B-6 below	Requires FAA Decision
Substance Dependence	All	See III. B-5 below	Requires FAA Decision
Suicide Attempt	All	Submit all pertinent medical information required	Requires FAA Decision

1. The category of personality disorders severe enough to have repeatedly manifested itself by overt acts refers to diagnosed personality disorders that involve what is called "acting out" behavior. These personality problems relate to poor social judgment, impulsivity, and disregard or antagonism toward authority, especially rules and regulations. A history of long-standing behavioral problems,

whether major (criminal) or relatively minor (truancy, military misbehavior, petty criminal and civil indiscretions, and social instability), usually occurs with these disorders. Driving infractions and previous failures to follow aviation regulations are critical examples of these acts.

Certain personality disorders and other mental disorders that include conditions of limited duration and/or widely varying severity may be disqualifying. Under this category, the FAA is especially concerned with significant depressive episodes requiring treatment, even outpatient therapy. If these episodes have been severe enough to cause some disruption of vocational or educational activity, or if they have required medication or involved suicidal ideation, the application should be deferred or denied issuance.

Some personality disorders and situational dysphorias may be considered disqualifying for a limited time. These include such conditions as gross immaturity and some personality disorders not involving or manifested by overt acts.

2. The category of psychosis includes schizophrenia and some bipolar and major depression, as well as some other rarer conditions. In addition, some conditions such as schizotypal and borderline personality disorders that include psychotic symptoms at some time in their course may also be disqualifying.
3. A bipolar disorder may not reach the level of psychosis but can be so disruptive of judgment and functioning (especially mania) so as to interfere with aviation safety. All applicants with such a diagnosis must be denied or deferred. However, a number of these applicants, so diagnosed, may be favorably considered for an Authorization when the symptoms do not constitute a threat to safe aviation operations.
4. Although they may be rare in occurrence, severe anxiety problems, especially anxiety and phobias associated with some aspect of flying, are considered significant. Organic mental disorders that cause a cognitive defect, even if the applicant is not psychotic, are considered disqualifying whether they are due to trauma, toxic exposure, or arteriosclerotic or other degenerative changes.

(See **Item 18.m.**, page 32).

5. Substance dependence refers to the use of substances of dependence, which include alcohol and other drugs (i.e., PCP, sedatives and hypnotics, anxiolytics, marijuana, cocaine, opioids, amphetamines, hallucinogens, and other psychoactive drugs or chemicals). Substance dependence is defined and specified as a disqualifying medical condition. It is disqualifying unless there is clinical evidence, satisfactory to the Federal Air Surgeon, of recovery, including sustained total abstinence from the substance for not less than the preceding 2 years.

Substance dependence is evidenced by one or more of the following: increased tolerance, manifestation of withdrawal symptoms, impaired control of use, or continued use despite damage to physical health or impairment of social, personal, or occupational functioning. Substance dependence is accompanied by various deleterious effects on physical health as well as personal or social functioning. There are many other indicators of substance dependence in the history and physical examination. Treatment for substance dependence-related problems, arrests, including charges of driving under the influence of drugs or alcohol, and vocational or marital disruption related to drugs or alcohol consumption are important indicators. Alcohol on the breath at the time of a routine physical examination should arouse a high index of suspicion. Consumption of drugs or alcohol sufficient to cause liver damage is an indication of the presence of alcoholism.

6. Substance abuse includes the use of the above substances under any one of the following conditions:

- a. Use of a substance in the last 2 years in which the use was physically hazardous (e.g., DUI or DWI) if there has been at any other time an instance of the use of a substance also in a situation in which the use was physically hazardous;
- b. If a person has received a verified positive drug test result under an anti-drug program of the Department of Transportation or one of its administrations; or
- c. The Federal Air Surgeon finds that an applicant's misuse of a substance makes him or her unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held, or that may reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the applicant unable to perform those duties or exercise those privileges.

Substance dependence and substance abuse are specified as disqualifying medical conditions.

ITEM 48. GENERAL SYSTEMIC

CHECK EACH ITEM IN APPROPRIATE COLUMN	NORMAL	ABNORMAL
48. General Systemic		

I. Code of Federal Regulations

All Classes: 14 CFR 67.113(a)(b)(c), 67.213(a)(b)(c), and 67.313(a)(b)(c)

(a) No established medical history or clinical diagnosis of diabetes mellitus that requires insulin or any other hypoglycemic drug for control.

(b) No other organic, functional, or structural disease, defect, or limitation that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the condition involved, finds -

(1) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or

(2) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges.

(c) No medication or other treatment that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the medication or other treatment involved, finds -

(1) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or

(2) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges.

II. Examination Techniques

A protocol for examinations applicable to Item 48 is not provided because the necessary history-taking, observation, and other examination techniques used in examining other systems have already revealed much of what can be known about the status of the applicant's endocrine and other systems. For example, the examination of the skin alone can reveal important signs of thyroid dysfunction, Addison's disease, Cushing's disease, and several other endocrine disorders. The eye may reflect a thyroid disorder (exophthalmos) or diabetes (retinopathy).

When the Examiner reaches Item 48 in the course of the examination of an applicant, it is recommended that the Examiner take a moment to review and determine if key

procedures have been performed in conjunction with examinations made under other items, and to determine the relevance of any positive or abnormal findings.

III. Aerospace Medical Disposition

The following is a table that lists the most common conditions of aeromedical significance, and course of action that should be taken by the examiner as defined by the protocol and disposition in the table. Medical certificates must not be issued to an applicant with medical conditions that require deferral, or for any condition not listed in the table that may result in sudden or subtle incapacitation without consulting the AMCD or the RFS. Medical documentation must be submitted for any condition in order to support an issuance of an airman medical certificate.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Blood and Blood-Forming Tissue Disease			
Anemia	All	Submit a current status report and all pertinent medical reports. Include a CBC, and any other tests deemed necessary	Requires FAA Decision
Hemophilia	All	Submit a current status report and all pertinent medical reports. Include frequency, severity and location of bleeding sites	Requires FAA Decision
Other disease of the blood or blood-forming tissues that could adversely affect performance of airman duties	All	Submit a current status report and all pertinent medical reports	Requires FAA Decision
Polycythemia	All	Submit a current status report and all pertinent medical reports; include CBC	Requires FAA Decision

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Diabetes			
Diabetes Insipidus	All	Submit all pertinent medical records; current status to include names and dosage of medication(s) and side effects	Requires FAA Decision
Diabetes Mellitus Diet Controlled	All	See Diabetes Mellitus Controlled by Diet and Exercise Protocol	If no glycosuria and normal Hgba1c - Issue
Diabetes Mellitus I & II requiring Insulin	1 st & 2nd	Not currently granting Special Issuance	Requires FAA Decision
	3rd	See Diabetes Mellitus I & II Protocol	Requires FAA Decision
Diabetes Mellitus II requiring non-insulin hypoglycemic medication	All	See Diabetes Mellitus II Protocol	<p>Initial Special Issuance - Requires FAA Decision</p> <p>Followup Special Issuance's - See AASI Protocol</p>
Endocrine Disorders			
Acromegaly	All	Submit all pertinent medical records; current status to include names and dosage of medication(s) and side effects	Requires FAA Decision
Addison's Disease	All	Submit all pertinent medical records; current status to include names and dosage of medication(s) and side effects	Requires FAA Decision

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Endocrine Disorders			
Cushing's Disease or Syndrome	All	Submit all pertinent medical records; current status to include names and dosage of medication(s) and side effects	Requires FAA Decision
Hypoglycemia, whether functional or a result of pancreatic tumor	All	Submit all pertinent medical records; current status to include names and dosage of medication(s) and side effects	Requires FAA Decision
Hyperparathyroidism	All	Submit all pertinent medical records; current status to include names and dosage of medication(s) and side effects, and current serum calcium and phosphorus levels	If status post-surgery, disease controlled, stable and no sequela - Issue Otherwise - Requires FAA Decision
Hypoparathyroidism	All	Submit all pertinent medical records; current status to include names and dosage of medication(s) and side effects and current serum calcium and phosphorus levels	Requires FAA Decision

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Endocrine Disorders			
Hyperthyroidism ²³	All	Submit all pertinent medical records; current status to include names and dosage of medication(s) and side effects and current TFTs	If euthyroid and stable – Issue Otherwise, - Requires FAA Decision
Hypothyroidism ²³	All	Submit all pertinent medical records; current status to include names and dosage of medication(s) and side effects and current TFTs	If euthyroid and stable – Issue Otherwise, - Requires FAA Decision
Proteinuria & Glycosuria	All	Submit all pertinent medical records; current status to include names and dosage of medication(s) and side effects	Trace or 1+ protein and glucose intolerance ruled out - Issue Otherwise - Requires FAA Decision
Human Immunodeficiency Virus (HIV)			
Acquired Immunodeficiency Syndrome (AIDS)	All	See HIV Protocol	Requires FAA Decision
Human Immunodeficiency Virus (HIV)	All	See HIV Protocol	Requires FAA Decision

²³ If the applicant was previously deferred for either hyperthyroidism or hypothyroidism and was granted an Authorization for Special Issuance of a Medical Certificate, see AASI for Hyperthyroidism and/or AASI for Hypothyroidism.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Leukemia, Acute and Chronic			
Leukemia, Acute and Chronic	All	Submit a current status report and all pertinent medical reports	Initial Special Issuance - Requires FAA Decision Followup Special Issuance's - See AASI Protocol

ITEM 49. HEARING

49. Hearing	Record Audiometric Speech Discrimination Score Below
Conversational Voice Test at 6 Feet <input type="checkbox"/> Pass <input type="checkbox"/> Fail	

I. Code of Federal Regulations

All Classes: 14 CFR 67.105(a)(b)(c), 67.205(a)(b)(c), and 67.305(a)(b)(c)

(a) The person shall demonstrate acceptable hearing by at least one of the following tests:

(1) Demonstrate an ability to hear an average conversational voice in a quiet room, using both ears, at a distance of 6 feet from the examiner, with the back turned to the examiner.

(2) Demonstrate an acceptable understanding of speech as determined by audiometric speech discrimination testing to a score of at least 70 percent obtained in one ear or in a sound field environment.

(3) Provide acceptable results of pure tone audiometric testing of unaided hearing acuity according to the following table of worst acceptable thresholds, using the calibration standards of the American National Standards Institute, 1969 (11 West 42nd Street, New York, NY 10036):

Frequency (Hz)	500 Hz	1000 Hz	2000 Hz	3000 Hz
Better ear (Db)	35	30	30	40
Poorer ear (Db)	35	50	50	60

(b) No disease or condition of the middle or internal ear, nose, oral cavity, pharynx, or larynx that-

(1) Interferes with, or is aggravated by, flying or may reasonably be expected to do so; or

(2) Interferes with, or may reasonably be expected to interfere with, clear and effective speech communication.

(c) No disease or condition manifested by, or that may reasonably be expected to be manifested by, vertigo or a disturbance of equilibrium.

II. Examination Equipment and Techniques

A. Order of Examinations

1. The applicant must demonstrate an ability to hear an average conversational voice in a quiet room, using both ears, at a distance of 6 feet from the Examiner, with the back turned to the Examiner.

2. If an applicant fails the conversational voice test, the Examiner may administer pure tone audiometric testing of unaided hearing acuity according to the following table of worst acceptable thresholds, using the calibration standards of the American National Standards Institute, 1969:

Frequency (Hz)	500 Hz	1000 Hz	2000 Hz	3000 Hz
Better ear (Db)	35	30	30	40
Poorer ear (Db)	35	50	50	60

If the applicant fails an audiometric test and the conversational voice test had not been administered, the conversational voice test should be performed to determine if the standard applicable to that test can be met.

3. If an applicant is unable to pass either the conversational voice test or the pure tone audiometric test, then an audiometric speech discrimination test should be administered. A passing score is at least 70 percent obtained in one ear at an intensity of no greater than 65 Db.

B. Discussion

1. **Conversational voice test.** For all classes of certification, the applicant must demonstrate hearing of an average conversational voice in a quiet room, using both ears, at 6 feet, with the back turned to the Examiner. The Examiner should not use only sibilants (S-sounding test materials). If the applicant is able to repeat correctly the test numbers or words, "pass" should be noted and recorded on FAA Form 8500-8, Item 49. If the applicant is unable to hear a normal conversational voice then "fail" should be marked and one of the following tests may be administered.

2. **Standard.** For all classes of certification, the applicant may be examined by pure tone audiometry as an alternative to conversational voice testing or upon failing the conversational voice test. If the applicant fails the pure tone audiometric test and has not been tested by conversational voice, that test may be administered. The requirements expressed as audiometric standards according to a table of acceptable thresholds (American National Standards Institute [ANSI], 1969, calibration) are as follows:

EAR(All classes of medical certification)				
Frequency (Hz)	500 Hz	1000 Hz	2000 Hz	3000 Hz
Better ear (Db)	35	30	30	40
Poorer ear (Db)	35	50	50	60

3. Audiometric Speech Discrimination. Upon failing both conversational voice and pure tone audiometric test, an audiometric speech discrimination test should be administered (usually by an otologist or audiologist). The applicant must score at least 70 percent at an intensity no greater than 65 Db in either ear.

C. Equipment

1. Approval. The FAA does not approve or designate specific audiometric equipment for use in medical certification. Equipment used for FAA testing must accurately and reliably cover the required frequencies and have adequate threshold step features. Because every audiometer manufactured in the United States for screening and diagnostic purposes is built to meet appropriate standards, most audiometers should be acceptable *if they are maintained in proper calibration* and are used in an adequately quiet place.

2. Calibration. It is critical that any audiometer be periodically calibrated to ensure its continued accuracy. Annual calibration is recommended. Also recommended is the further safeguard of obtaining an occasional audiogram on a "known" subject or staff member between calibrations, especially at any time that a test result unexpectedly varies significantly from the hearing levels clinically expected. This testing provides an approximate "at threshold" calibration. The Examiner should ensure that the audiometer is calibrated to ANSI standards or if calibrated to the older ASA/USASI standards, the appropriate correction is applied (see paragraph 3 below).

3. ASA/ANSI. Older audiometers were often calibrated to meet the standards specified by the USA Standards Institute (USASI), formerly the American Standards Association (ASA). These standards were based upon a U.S. Public Health Service survey. Newer audiometers are calibrated so that the zero hearing threshold level is now based on laboratory measurements rather than on the survey. In 1969, the American National Standards Institute (ANSI) incorporated these new measurements. Audiometers built to this standard have instruments or dials that read in ANSI values. For these reasons, *it is very important that every audiogram submitted (for values reported in Item 49 on FAA Form 8500-8) include a note indicating whether it is ASA or ANSI.* Only then can the FAA standards be appropriately applied. ASA or USASI values can be converted to ANSI by adding corrections as follows:

Frequency (Hz)	500 Hz	1,000 Hz	2,000 Hz	3,000 Hz
Decibels Added*	14	10	8.5	8.5

*The decibels added figure is the amount added to ASA or USASI at each specific frequency to convert to ANSI or older equivalent ISO values.

III. Aerospace Medical Disposition

1. Special Issuance of Medical Certificates. Applicants who do not meet the auditory standards may be found eligible for a SODA. An applicant seeking a SODA must make the request in writing to the Aerospace Medicine Certification Division, AAM-300. A determination of qualifications will be made on the basis of a special medical examination by an ENT consultant, a MFT, or operational experience.

2. Bilateral Deafness. If otherwise qualified, the AMCD may issue a combination medical/student pilot certificate with the limitation VALID FOR STUDENT PILOT PURPOSES ONLY as well as the limitation NOT VALID FOR CONTROL ZONES OR

AREAS WHERE RADIO COMMUNICATION IS REQUIRED. This will enable the applicant to proceed with training to the point of a private pilot checkride. See **Items 25-30**, page 39.

When the student pilot's instructor confirms the student's eligibility for a private pilot checkride, the applicant should submit a written request to the AMCD, for an authorization for a MFT. This test will be given by an FAA inspector in conjunction with the checkride. If the applicant successfully completes the test, the FAA will issue a third-class medical certificate and SODA. Pilot activities will be restricted to areas in which radio communication is not required.

3. Hearing Aids. If the applicant meets the standard with the use of hearing aids, the certificate may be issued with the following restriction:

VALID ONLY WITH USE OF HEARING AMPLIFICATION

Some pilots who normally wear hearing aids to assist in communicating while on the ground report that they elect not to wear them while flying. They prefer to use the volume amplification of the radio headphone. Some use the headphone on one ear for radio communication and the hearing aid in the other for cockpit communications.

ITEMS 50- 54. OPHTHALMOLOGIC DISORDER

ITEM 50. DISTANT VISION

50. Distant Vision		
Right	20/	Corrected to 20/
Left	20/	Corrected to 20/
Both	20/	Corrected to 20/

I. Code of Federal Regulations

First- and Second-Classes: 14 CFR 67.103(a) and 67.203(a)

(a) Distant visual acuity of 20/20 or better in each eye separately, with or without corrective lenses. If corrective lenses (spectacles or contact lenses) are necessary for 20/20 vision, the person may be eligible only on the condition that corrective lenses are worn while exercising the privileges of an airman certificate

Third-Class: 14 CFR 67.303(a)

(a) Distant visual acuity of 20/40 or better in each eye separately, with or without corrective lenses. If corrective lenses (spectacles or contact lenses) are necessary for 20/40 vision, the person may be eligible only on the condition that corrective lenses are worn while exercising the privileges of an airman certificate.

II. Examination Equipment and Techniques

1. Each eye will be tested separately, and both eyes together.
2. Snellen 20-foot eye chart may be used as follows:
 - a. The Snellen chart should be illuminated by a 100-watt incandescent lamp placed 4 feet in front of and slightly above the chart.
 - b. The chart or screen should be placed 20 feet from the applicant's eyes and the 20/20 line should be placed 5 feet 4 inches above the floor.
 - c. A metal, opaque plastic, or cardboard occluder should be used to cover the eye not being examined.
 - d. The examining room should be darkened with the exception of the illuminated chart or screen.

e. If the applicant wears corrective lenses, the uncorrected acuity should be determined first, then corrected acuity. If the applicant wears contact lenses, see the recommendations in Items 31-34, Eye, **Section II, #5**, (See page 49).

f. Common errors:

1. Failure to shield the applicant's eyes from extraneous light.
2. Permitting the applicant to view the chart with both eyes.
3. Failure to observe the applicant's face to detect squinting.
4. Incorrect sizing of projected chart letters for a 20-foot distance.
5. Failure to focus the projector sharply.
6. Failure to obtain the corrected acuity when the applicant wears glasses.
7. Failure to note and to require the removal of contact lenses.

3. Directions furnished by the manufacturer or distributor should be followed when using substitute devices for the above testing.

Acceptable Substitutes for Distant Vision Testing: Projector with screen; Keystone Orthoscope; Bausch & Lomb Orthorator; AOC Site-Screener; Titmus Vision Tester; Keystone Telebinocular; OPTEC 2000 Vision Tester.

III. Aerospace Medical Disposition

A. When corrective lenses are required to meet the standards, an appropriate limitation will be placed on the medical certificate. For example, when lenses are needed for distant vision only:

HOLDER SHALL WEAR CORRECTIVE LENSES

For multiple vision defects involving distant and/or intermediate and/or near vision when one set of monofocal lenses corrects for all, the limitation is:

HOLDER SHALL WEAR CORRECTIVE LENSES

For combined defective distant and near visual acuity where multifocal lenses are required, the appropriate limitation is:

HOLDER SHALL WEAR LENSES THAT CORRECT FOR DISTANT VISION
AND POSSESS GLASSES THAT CORRECT FOR NEAR VISION

For multiple vision defects involving distant, near, and intermediate visual acuity when more than one set of lenses is required to correct for all vision defects, the appropriate limitation is:

HOLDER SHALL WEAR LENSES THAT CORRECT FOR DISTANT VISION
AND POSSESS GLASSES THAT CORRECT FOR NEAR AND INTERMEDIATE
VISION

B. An applicant who fails to meet vision standards and has no SODA that covers the extent of the visual acuity defect found on examination may obtain further FAA consideration for grant of an Authorization under the special issuance section of part 67 (14 CFR 67.401) for medical certification by submitting a report of an eye evaluation. The Examiner can help to expedite the review procedure by forwarding a copy of FAA Form 8500-7, Report of Eye Evaluation, that has been completed by an eye specialist (optometrist or ophthalmologist)²⁴.

C. Applicants who do not meet the visual standards should be referred to a specialist for evaluation. Applicants with visual acuity or ocular muscle balance problems may be referred to an eye specialist of the applicant's choice. The FAA Form 8500-7, Report of Eye Evaluation, should be provided to the specialist by the Examiner.

Any applicant eligible for a medical certificate through special issuance under these guidelines shall pass a MFT, which may be arranged through the appropriate agency medical authority. While waiting to complete a MFT, an applicant who is otherwise qualified for certification may be issued a medical certificate, which must contain the limitation “Valid for Student Pilot Privileges Only.”

²⁴ In obtaining special eye evaluations in respect to the airman medical certification program or the air traffic controller health program, reports from an eye specialist are acceptable when the condition being evaluated relates to a determination of visual acuity, refractive error, or mechanical function of the eye. The FAA Form 8500-7, Report of Eye Evaluation, is a form that is designed for use by either optometrists or ophthalmologists.

D. Amblyopia. In amblyopia ex anopsia, the visual acuity of one eye is decreased without presence of organic eye disease, usually because of strabismus or anisometropia in childhood. In amblyopia ex anopsia, the visual acuity loss is simply recorded in Item 50 of FAA form 8500-8, and visual standards are applied as usual. If the standards are not met, a report of eye evaluation, FAA Form 8500-7, should be submitted for consideration.

ITEM 51.a. NEAR VISION

51.a. Near Vision		
Right	20/	Corrected to 20/
Left	20/	Corrected to 20/
Both	20/	Corrected to 20/

ITEM 51.b. INTERMEDIATE VISION

51.b. Intermediate Vision – 32 Inches		
Right	20/	Corrected to 20/
Left	20/	Corrected to 20/
Both	20/	Corrected to 20/

I. Code of Federal Regulations

First- and Second-Classes: 14 CFR 67.103(b) and 67.203(b)

(b) Near vision of 20/40 or better, Snellen equivalent, at 16 inches in each eye separately, with or without corrective lenses. If age 50 or older, near vision of 20/40 or better, Snellen equivalent, at both 16 inches and 32 inches in each eye separately, with or without corrective lenses.

Third-Class: 14 CFR 67.303(b)

(b) Near vision of 20/40 or better, Snellen equivalent, at 16 inches in each eye separately, with or without corrective lenses.

II. Equipment and Examination Techniques

NEAR AT 16 INCHES	INTERMEDIATE AT 32 INCHES
Near Vision Acuity Test Chart Dated April 1993 FAA Form 8500-1	Near Vision Acuity Test Chart Dated April 1993 FAA Form 8500-1
Acceptable substitutes: AOC Site-Screener Bausch & Lomb Orthorator Keystone Orthoscope Keystone Telebinocular OPTEC 2000 Vision Tester Titmus Vision Tester	Acceptable substitutes: OPEC 2000 Vision Tester Titmus Vision Tester Titmus II Vision Tester (Model Nos. TII and TIIS) Titmus 2 Vision Tester (Model Nos. T2A and T2S) Others as approved

1. Near visual acuity and intermediate visual acuity, if the latter is required, are determined for each eye separately and for both eyes together. Test values are recorded both with and without corrective glasses/lenses when either are worn or required to meet the standards. If the applicant is unable to meet the intermediate acuity standard unaided, he or she then is tested using each of the corrective lenses or glasses otherwise needed by that person to meet distant and/or near visual acuity standards. If the aided acuity meets the standard using any of the lenses or glasses, the findings are recorded, and the certificate appropriately limited. If an applicant has no lenses that bring intermediate and/or near visual acuity to the required standards, or better, in each eye, no certificate may be issued, and the applicant is referred to an eye specialist for appropriate visual evaluation and correction.

2. FAA Form 8500-1, Near Vision Acuity Test Chart, dated April 1993, should be used as follows:

a. The examination is conducted in a well-lighted room with the source of light behind the applicant.

b. The applicant holds the chart 16 inches (near) and 32 inches (intermediate) from the eyes in a position that will provide uniform illumination.

To ensure that the chart is held at exactly 16 inches or 32 inches from the eyes, a string of that length may be attached to the chart.

c. Each eye is tested separately, with the other eye covered. Both eyes are then tested together.

d. The smallest type correctly read with each eye separately and both eyes together is recorded in linear value. In performing the test using FAA Form 8500-1, the level of visual acuity will be recorded as the line of smallest type the applicant reads accurately. The applicant should be allowed no more than two misread letters on any line.

e. Common errors:

1. Inadequate illumination of the test chart.
2. Failure to hold the chart the specified distance from the eye.
3. Failure to ensure that the untested eye is covered.
4. Failure to determine uncorrected and corrected acuity when the applicant wears glasses.

f. Practical Test. At the bottom of FAA Form 8500-1 is a section for Aeronautical Chart Reading. Letter types and charts are reproduced from aeronautical charts in their actual size.

This may be used when a borderline condition exists at the certifiable limits of an applicant's vision. If successfully completed, a favorable certification action may be taken.

3. Acceptable substitute instruments may be used, following the directions accompanying the instruments.

III. Aerospace Medical Disposition

When correcting glasses are required to meet the near and intermediate vision standards, an appropriate limitation will be placed on the medical certificate. Contact lenses that correct only for near or intermediate visual acuity are not considered acceptable for aviation duties.

If the applicant meets the uncorrected near or intermediate vision standard of 20/40, but already uses spectacles that correct the vision better than 20/40, it is recommended that the Examiner enter the limitation for near or intermediate vision corrective glasses on the certificate.

For all classes, the appropriate wording for the near vision limitation is:

HOLDER SHALL POSSESS GLASSES THAT
CORRECT FOR NEAR VISION

Possession only is required, because it may be hazardous to have distant vision obscured by the continuous wearing of reading glasses.

For first- and second-class, the appropriate wording for combined near and intermediate vision limitation is:

HOLDER SHALL POSSESS GLASSES THAT CORRECT
FOR NEAR AND INTERMEDIATE VISION

For multiple defective distant, near, and intermediate visual acuity when unifocal glasses or contact lenses are used and correct all, the appropriate limitation is:

HOLDER SHALL WEAR CORRECTIVE LENSES

For multiple vision defects involving distance and/or near and/or intermediate visual acuity when more than one set of lenses is required to correct for all vision defects, the appropriate limitation is:

HOLDER SHALL WEAR LENSES THAT CORRECT FOR DISTANT VISION
AND POSSESS GLASSES THAT CORRECT FOR
NEAR AND INTERMEDIATE VISION

ITEM 52. COLOR VISION

52. Color Vision	
<input type="checkbox"/>	Pass
<input type="checkbox"/>	Fail

I. Code of Federal Regulations

First- and Second-Classes: 14 CFR 67.103(c) and 67.203(c)

(c) Color vision: Ability to perceive those colors necessary for the safe performance of airman duties.

Third-Class: 14 CFR 67.303(c)

(c) Color vision: Ability to perceive those colors necessary for the safe performance of airman duties.

II. Examination Equipment and Techniques

EQUIPMENT	TEST	EDITION	PLATES
Pseudoisochromatic plates	Test book should be held 30" from applicant Plates should be illuminated by at least 20' candles, preferably by a Macbeth Easel Lamp or a Verilux True Color Light (F15T8VLX) Only three seconds are allowed for the applicant to interpret and respond to a given plate		
American Optical Company [AOC]		1965	1-15
AOC-HRR		2 nd	1-11
Dvorine		2 nd	1-15
Ishihara		14 Plate	1-11
		24 Plate	1-15
		38 Plate	1-21
Richmond, 15-plates		1983	1-15

Acceptable Substitutes: The procedures for the Farnsworth Lantern or OPTEC 900 Color Vision Test; Keystone Orthoscope; Keystone Telebinocular; LKC Technologies, Inc., APT-5 Color Vision Tester; OPTEC 2000 Vision Tester (Model Nos. 2000PM, 2000PAME, and 2000PI); Titmus Vision Tester; Titmus II Vision Tester (Model Nos. TII and TIIS); and the Titmus 2 Vision Tester (Model Nos. T2A and T2S) accompany the instructions.

III. Aerospace Medical Disposition

An applicant does not meet the color vision standard if testing reveals:

A. All Classes

1. Seven or more errors on plates 1-15 of the AOC (1965 edition) pseudoisochromatic plates.
2. AOC-HRR (second edition): Any error in test plates 7-11. Because the first 4 plates in the test book are for demonstration only, test plate 7 is actually the eleventh plate in the book. (See instruction booklet.)
3. Seven or more errors on plates 1-15 of Dvorine pseudoisochromatic plates (second edition, 15 plates.)
4. Six or more errors on plates 1-11 of the concise 14-plate edition of the Ishihara pseudoisochromatic plates. Seven or more errors on plates 1-15 of the 24-plate edition of Ishihara pseudoisochromatic plates. Nine or more errors on plates 1-21 of the 38-plate edition of Ishihara pseudoisochromatic plates.
5. Seven or more errors on plates 1-15 of the Richmond (1983 edition) pseudoisochromatic plates.
6. Farnsworth Lantern test: An average of more than one error per series of nine color pairs in series 2 and 3. (See instruction booklet.)
7. Any errors in the six plates of the Titmus Vision Tester, the Titmus II Vision Tester, the Titmus 2 Vision Tester, the OPTEC 2000 Vision Tester, the OPTEC 900 Vision Tester the Keystone Orthoscope, or Keystone Telebinocular.
8. LKC Technologies, Inc., APT-5 Color Vision Tester. The letter must be correctly identified in at least two of the three presentations of each test condition. (See APT-5 screening chart for FAA-related testing in instruction booklet.)

B. Certificate Limitation.

If an applicant fails to meet the color vision standard as interpreted above but is otherwise qualified, the Examiner may issue a medical certificate bearing the limitation:

NOT VALID FOR NIGHT FLYING OR BY COLOR SIGNAL CONTROL

C. Special Issuance of Medical Certificates.

An applicant who holds a medical certificate bearing a color vision limitation may request a signal light test. This request should be in writing and should be directed to the AMCD or RFS. If the applicant passes the signal light test, the FAA will issue a medical certificate without the color vision limitation and provide the applicant with a "letter of evidence." The signal light test may be given at any time during flight training.

D. "Color Vision Correcting" Lens (e.g. X-Chrom). Such lens are unacceptable to the FAA as a means for correcting a pilot's color vision deficiencies.

E. Yarn Test. Yarn tests are not acceptable methods of testing for the FAA medical certificate.

ITEM 53. FIELD OF VISION

53. Field of Vision	
<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal

I. Code of Federal Regulations

First- and Second-Classes: 14 CFR 67.103(d) and 67.203(d)

(d) Field of Vision: Normal

Third-Class: 14 CFR 67.303(d)

(d) Field of Vision: No acute or chronic pathological condition of either eye or adnexa that interferes with the proper function of an eye, that may reasonably be expected to progress to that degree, or that may reasonably be expected to be aggravated by flying.

II. Examination Equipment and Techniques

1. Fifty-inch square black matte surface wall target with center white fixation point; 2 millimeter white test object on black-handled holder:
 - a. The applicant should be seated 40 inches from the target.
 - b. An occluder should be placed over the applicant's right eye.
 - c. The applicant should be instructed to keep the left eye focused on the fixation point.
 - d. The white test object should be moved from the outside border of the wall target toward the point of fixation on each of the eight 4-degree radials.
 - e. The result should be recorded on a worksheet as the number of inches from the fixation point at which the applicant first identifies the white target on each radial.
 - f. The test should be repeated with the applicant's left eye occluded and the right eye focusing on the fixation point.
2. Alternative Techniques:
 - a. A standard perimeter may be used in place of the above procedure. With this method, any significant deviation from normal field configuration will require evaluation by an eye specialist.
 - b. Direct confrontation. This is the least acceptable alternative since this tests for peripheral vision and only grossly for field size and visual defects. The Examiner, standing in front of the applicant, has the applicant look at the Examiner's nose while advancing two moving fingers from slightly behind and to the side of the applicant in each of the four quadrants. Any significant deviation from normal requires ophthalmological evaluation.

III. Aerospace Medical Disposition

A. Ophthalmological Consultations.

If an applicant fails to identify the target in any presentation at a distance of less than 23 inches from the fixation point, an eye specialist's evaluation must be requested. This is a requirement for all classes of certification. The Examiner should provide FAA

Form 8500-14, Ophthalmological Evaluation for Glaucoma, for use by the ophthalmologist if glaucoma is suspected.

B. Glaucoma.

The FAA may grant an Authorization under the special issuance section of part 67 (14 CFR 67.401) on an individual basis. The Examiner can facilitate FAA review by obtaining a report of Ophthalmological Evaluation for Glaucoma (FAA Form 8500-14) from a treating or evaluating ophthalmologist.

NOTE: See AASI for History of Glaucoma

If considerable disturbance in night vision is documented, the FAA may limit the medical certificate: **NOT VALID FOR NIGHT FLYING**

C. Other Pathological Conditions.

See **Items 31-34**, beginning on page 46.

ITEM 54. HETEROPHORIA

54. Heterophoria 20' (in prism diopters)	Esophoria	Exophoria	Right Hyperphoria	Left Hyperphoria

I. Code of Federal Regulations

First- and Second-Classes: 14 CFR 67.103(f) and 67.203(f)

(f) Bifoveal fixation and vergence-phoria relationship sufficient to prevent a break in fusion under conditions that may reasonably be expected to occur in performing airman duties. Tests for the factors named in this paragraph are not required except for persons found to have more than 1 prism diopter of hyperphoria, 6 prism diopters of esophoria, or 6 prism diopters of exophoria. If any of these values are exceeded, the Federal Air Surgeon may require the person to be examined by a qualified eye specialist to determine if there is bifoveal fixation and an adequate vergence-phoria relationship. However, if otherwise eligible, the person is issued a medical certificate pending the results of the examination.

Third-Class: No Standards

II. Examination Equipment and Techniques

A. Equipment

1. Red Maddox rod with handle.
2. Horizontal prism bar with graduated prisms beginning with one prism diopter and increasing in power to at least eight prism diopters.
3. Acceptable substitutes:

AOC Site-Screener	Maddox rod and individual prisms
Bausch & Lomb	Maddox rod and Risley rotary prism
Orthorator	OPTEC 2000 Vision Tester
Keystone Orthoscope	OPTEC 900 Vision Tester
Keystone Telebinocular	Titmus Vision Tester

B. Examination Techniques

Test procedures to be used accompany the instruments. If the Examiner needs specific instructions for use of the horizontal prism bar and red Maddox rod, these may be obtained from a RFS.

III. Aerospace Medical Disposition

1. First- and Second-class: If an applicant exceeds the heterophoria standards (1 prism diopter of hyperphoria, 6 prism diopters of esophoria, or 6 prism diopters of exophoria), but shows no evidence of diplopia or serious eye pathology and all other aspects of the examination are favorable, the Examiner should not withhold or deny the medical certificate. The applicant should be advised that the FAA may require further examination by a qualified eye specialist.
2. Third-class: Applicants for a third-class certificate are not required to undergo heterophoria testing. However, if an applicant has strabismus or a history of diplopia, the Examiner should defer issuance of a certificate and forward the application to the AMCD. If the applicant wishes further consideration, the Examiner can help expedite FAA review by providing the applicant with a copy of FAA Form 8500-7, Report of Eye Evaluation.

ITEM 55. BLOOD PRESSURE

55. Blood Pressure		
(Sitting mm of Mercury)	Systolic	Diastolic

I. Code of Federal Regulations

All Classes: 14 CFR 67.113(b)(c), 67.213(b)(c), and 67.313(b)(c)

(b). No other organic, functional, or structural disease, defect, or limitation that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the condition involved, finds -

(1). Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held;
or

(2). May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges.

(c). No medication or other treatment that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the medication or other treatment involved finds -

(1). Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held;
or

(2). May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges.

Measurement of blood pressure is an essential part of the FAA medical certification examination. The average blood pressure while sitting should not exceed 155 mm mercury systolic and 95 mm mercury diastolic maximum pressure for all classes. A medical assessment is specified for all applicants who need or use antihypertensive medication to control blood pressure. (See Section III. B. below.)

II. Examination Techniques

In accordance with accepted clinical procedures, routine blood pressure should be taken with the applicant in the seated position. An applicant should not be denied or deferred first-, second-, or third-class certification unless subsequent recumbent blood pressure readings exceed those contained in this Guide. Any conditions that may adversely affect the validity of the blood pressure reading should be noted.

III. Aerospace Medical Disposition

A. Examining Options

1. An applicant whose pressures are within the above limits, who has not used antihypertensives for 30 days, and who is otherwise qualified should be issued a medical certificate by the Examiner.
2. An applicant whose blood pressure is slightly elevated beyond the FAA specified limits, may, at the Examiner's discretion, have a series of 3 daily readings over a 7-day period. If the indication of hypertension remains, even if it is mild or intermittent, the Examiner should defer certification and transmit the application to the AMCD with a note of explanation.

The Examiner must defer issuance of a medical certificate to any applicant whose hypertension has not been evaluated, who uses unacceptable medications, whose medical status is unclear, whose hypertension is uncontrolled, who manifests significant adverse effects of medication, or whose certification has previously been specifically reserved to the FAA.

B. Initial and Followup Evaluation for Hypertensives Under Treatment - See Hypertension Protocol

ITEM 56. PULSE

56. Pulse (Resting)

The medical standards do not specify pulse rates that, *per se*, are disqualifying for medical certification. These tests are used, however, to determine the status and responsiveness of the cardiovascular system. Abnormal pulse rates may be reason to conduct additional cardiovascular system evaluations.

II. Examination Techniques

The pulse rate is determined with the individual relaxed in a sitting position.

III. Aerospace Medical Disposition

If there is bradycardia, tachycardia, or arrhythmia, further evaluation is warranted and deferral may be indicated (see **Item 36**, page 63 for more details.) A cardiac evaluation may be needed to determine the applicant’s qualifications. Temporary stresses or fever may, at times, result in abnormal pulse readings. If the Examiner believes this to be the case, the applicant should be given a few days to recover and then be retested. If this is not possible, the Examiner should defer issuance, pending further evaluation.

ITEM 57. URINALYSIS

57. Urinalysis (if abnormal, give results)		
<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal	Albumin	Sugar

I. Code of Federal Regulations

All Classes: 14 CFR 67.113(a)(b), 67.213(a)(b), and 67.313(a)(b)

- (a) No established medical history or clinical diagnosis of diabetes mellitus that requires insulin or any other hypoglycemic drug for control.
- (b) No other organic, functional, or structural disease, defect, or limitation that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the condition involved, finds -
 - (1) Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or
 - (2) May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform those duties or exercise those privileges.

II. Examination Techniques

Any standard laboratory procedures are acceptable for these tests.

III. Aerospace Medical Disposition

Glycosuria or proteinuria is cause for deferral of medical certificate issuance until additional studies determine the status of the endocrine and/or urinary systems. If the glycosuria has been determined not to be due to carbohydrate intolerance, the Examiner may issue the certificate. Trace or 1+ proteinuria in the absence of a history of renal disease is not cause for denial.

The Examiner may request additional urinary tests when they are indicated by history or examination. These should be reported on FAA Form 8500-8 or attached to the form as an addendum.

See General System, **Item 48**, page 123 for more details.

ITEM 58. ECG

58. ECG (Date)		
MM	DD	YYYY

I. Code of Federal Regulations

First-Class: 14 CFR 67.111(b)(c)

(b) A person applying for first-class medical certification must demonstrate an absence of myocardial infarction and other clinically significant abnormality on electrocardiographic examination:

- (1) At the first application after reaching the 35th birthday; and
- (2) On an annual basis after reaching the 40th birthday.

(c) An ECG will satisfy a requirement of paragraph (b) of this section if it is dated no earlier than 60 days before the date of the application it is to accompany and was performed and transmitted according to acceptable standards and techniques.

Note: All applicants for certification may be required to provide ECG's when indicated by history or physical examination.

II. Examination Techniques

A. Date. The date of the most recent ECG shall be entered in Item 58 of FAA Form 8500-8 for all first-class applicants.

1. If a first-class applicant is due for a periodic ECG, the Examiner performs and transmits a current tracing according to established procedures. (See **Section II. D.** below).

However, some applicants (such as airline transport pilots who are employed by air carriers with medical departments) may have their company transmit a current ECG directly to the FAA. The Examiner need not require such an applicant to undergo another ECG examination and, if the applicant is otherwise qualified, a medical certificate may be issued. The Examiner should attach a statement to FAA Form 8500-8 to verify that a tracing has been transmitted from another source. The date of that ECG should be entered in Item 58.

2. If a first-class applicant is not required to have a periodic ECG with the current examination, the Examiner should record the date of the preceding ECG in Item 58.

3. If a second- or third-class applicant gives a history of having had an electrocardiogram, the test and date may be entered in Item 59. More importantly, the Examiner should indicate in Item 60 of FAA Form 8500-8 the history and its significance, if any.

4. If the applicant provides no statement and refuses to have a current ECG submitted by the Examiner, the Examiner should defer issuance of the medical certificate. When an ECG is due but is not submitted, the FAA will not affirm the applicant's eligibility for medical certification until the requested ECG has been received and interpreted as being within normal limits. Failure to respond to FAA requests for a required current ECG will result in denial of certification.

B. Currency

1. In order to meet regulatory requirements, a first-class applicant's periodic ECG must have been performed and transmitted within 60 days prior to the date of the first-class application (FAA Form 8500-8). The AMCD, verifies currency of all periodic ECG's.

2. There is no provision for issuance of a first-class medical certificate based upon a promise that an ECG will be obtained at a future date. In such circumstances, the Examiner should defer issuance and mail the completed FAA Form 8500-8 to the AMCD.

C. Interpretation

1. All ECG's required to establish eligibility for medical certification must be forwarded for interpretation to the Manager of the AMCD. This does not preclude submission of an interpretation by or through the Examiner.
2. Interpretation is accomplished by the staff and consultant cardiologists at the AMCD. Abnormalities are investigated to determine their significance, if any.

D. Technique and Reporting Format for Required ECG's on First-class Applicants

The method for recording and transmitting ECG's is by digital electronic data transfer by the Examiner to the AMCD. Senior Examiners who perform first-class medical examinations are required to have access to this capability.

International Examiners who submit ECG's should use the following format for preparation and submission:

1. See FAA Form 8065-1, Instructions for Preparation and Submittal of Electrocardiogram. However, the FAA also will accept 3-channel or 12-channel strips uncut or mounted on standard mounting paper. The following steps are essential to expedite processing of these tracings:
 - a. All leads must be properly identified.
 - b. Applicant and Examiner identification must be complete and the tracing must be dated.
2. Such hard-copy ECG's are microfilmed for permanent retention in the AMCD. Only tracings that can be microfilmed are acceptable.
3. Provide a Resting tracing. Tracings must be stapled to the ECG report form to ensure that all leads are appropriately coded and interpreted.