1. Objective

1.1. The Examiner must personally conduct the physical examination. This chapter provides guidance for completion of Items 21 to 48 of the Application for Airman Medical Certificate.

2. General

2.1. The Examiner must carefully read the applicant's history page on the front page of the application form before conducting the physical examination and completing the Report of Medical Examination. This alerts the Examiner to possible pathological findings.

2.2. The Examiner must note in Item 60 of the Medical Application any condition found in the course of the examination. The Examiner must list the facts, such as dates, frequency, and severity of occurrence.

2.3. When a question arises, the CAAI encourages Examiners first to check this Guide and other informational documents. If the question remains unresolved, the Examiner should seek advice from the CAAI.

3. Reference Material, Forms & Job-Aids

3.1. Reference Material

3.2. Forms

3.2.1. PELF 1.3.070A – Application for Medical Certificate

3.3. Job-Aids

4. Process

ITEM 21-22. Height and Weight

Report Of Medical Examination			
21. Height (cm)	22. Weight (kg)	Statement of Demonstrated Ability (SODA) Yes No Defect Noted:	24. SODA Serial No.

ITEM 21. Height

Record the applicant's height in centimeters. 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 CAAI will place operational limitations on the pilot certificate.

ITEM 22. Weight

Record the applicant's weight in kilos.

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

Report Of Medical Examination			
21. Height (cm)	22. Weight (kg)	Statement of Demonstrated Ability (SODA) Yes No Defect Noted:	24. SODA Serial No.

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 CAAI 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 CAAI 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 the applicant's desire for a higher class.

ITEM 24. SODA Serial Number

Report Of Medical Examination			
21. Height (cm)	22. Weight (kg)	Statement of Demonstrated Ability (SODA) Yes No Defect Noted:	24. SODA Serial No.

Enter the assigned serial number in the space provided.

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

CHECK EACH ITEM IN APPROPRIATE COLUMN	Normal	Abnormal	CHECK EACH ITEM IN APPROPRIATE COLUMN	Normal	Abnormal
25 Head, face, neck and scalp			37 Vascular system (Pulse, amplitude and character, arms, legs, others)		
26 Noses			38 Abdomen and viscera (including hernia)		
27 Sinuses			39 Anus (not including digital examination)		
28 Mouth and Throat			40 Skin		
29 Ears, general (internal and external canals, Hearing under item 49			41 G-U System (Not including pelvic examination)		
30 Ear Drums (Perforation)			42 Upper and lower extremities (Strength and range of motion)		
31 Eyes, general (Vision under items 50 to 54)			43 Spine, other musculoskeletal		
32 Ophthalmoscopic			44 Identifying body marks, scars, tattoos (size and location)		
33 Pupils (Equality and reaction)			45 Lymphatics		
34 Ocular motility (Associated parallel movement, nystagmus)			46 Neurologic (Tendon reflexes, equilibrium, senses, cranial nerves, coordination, etc)		
35 Lungs and chest (not including breast examination)			47 Psychiatric (Appearance, behaviour, mood, communication, and memory)		
36 Heart (Precordial activity, rhythm, sounds, and murmurs)			48 General systemic		

All Classes:

(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.

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. There can be no permanent obstruction of the Eustachian tubes.

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 CAAI. The services of consultant ENT specialists are available to the CAAI 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 CAAI 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 licence. When the applicant is ready to take the check ride, he/she must contact the CAAI for waiver 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 licence 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. There must be free nasal air entry on both sides. There must be neither

serious malformation nor serious, acute or chronic affection of the bucca cavity or upper respiratory tract.

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. 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 CAAI. 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 AUTHORITY Decision
Loss of bony substance involving the two tables of the cranial vault	All	Submit all pertinent medical information and current status report	Requires AUTHORITY Decision
Deformities of the face or head that would interfere with the proper fitting and wearing of an oxygen mask	1	Submit all pertinent medical information and current status report	Requires AUTHORITY Decision
	2	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 AUTHORITY Decision
Obstruction of sinus ostia, including polyps, that would be likely to result in complete obstruction	1, 2	Submit all pertinent medical information and current status report	Requires AUTHORITY 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	Unfit
Sinus Tumor			
Benign - Cysts/Polyps	1, 2	If no physiologic effects, submit documentation	Asymptomatic, no observable growth over a 12-month period, no potential for sinus block - Issue
Malignant	1, 2	Submit all pertinent medical information and current status report	Unfit

[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 24hours of experiencing symptoms requiring treatment or within 24-hours after taking an antihistamine. The Examiner should document this in Item 60. 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.

ITEM 28. MOUTH AND THROAT

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

ITEM 29. EARS, GENERAL

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Inner Ear			
No active pathological process, acute or chronic	All		Unfit
Motion Sickness	1, 2	Submit all pertinent medical information and current status report	If occurred during flight training and resolved - Issue If condition requires medication - Requires AUTHORITY Decision
No permanent disturbances of the vestibular apparatus.	1, 2		Unfit Transient conditions may be assessed as temporarily unfit.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Mastoids			
Mastoid fistula	1, 2	Submit all pertinent medical information and current status report	Unfit
Mastoiditis, acute or chronic	1, 2	Submit all pertinent medical information and current status report	Unfit
Middle Ear			
No active pathological process, acute or chronic conditions.	All		Unfit
Acoustic Neuroma	All	Submit all pertinent medical information and current status report * See Neurology Table	Unfit
Impaired Aeration	All	Submit all pertinent medical information and current status report	Unfit
Otitis Media	All	Submit all pertinent medical information and current status report	If acute and resolved – Issue If active or chronic - Unfit
Outer Ear			

Impacted Cerumen	1,2	Submit all pertinent medical information and current status report	If asymptomatic and hearing is unaffected - Issue Otherwise - Requires AUTHORITY Decision
Otitis Externa that may progress to impaired hearing or become incapacitating	All	Submit all pertinent medical information and current status report	Requires AUTHORITY Decision

ITEM 30. EAR DRUMS

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Ear Drums			
Perforation that has associated pathology;	1,2		Unfit
Perforation which has resolved without any other clinical symptoms	1	Submit all pertinent medical information	If no physiologic effects - Issue
Unhealed (unclosed) perforation of the tympanic membranes. A single dry perforation need not render applicant unfit.	1		Unfit in these instances unless the appropriate hearing requirements are complied with.

Otologic Surgery. A history of otologic surgery is not necessarily disqualifying for medical certification. The CAAI 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 CAAI.

Some conditions may have several possible causes or exhibit multiple symptomatology. Episodic disorders of dizziness or disequilibrium require careful evaluation and consideration by the CAAI. 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, 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)		

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 refer to Chapter 4, Items 50-54.
The function of the eyes and their adnexa must be normal. There must be neither active pathological condition, acute or chronic, nor any sequelae of surgery or trauma of the eyes or their adnexa likely to reduce proper vision that would interfere with the safe exercise of the applicant's licence and rating privileges.

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 and Item 54).

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.
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 131).
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.
Aqueous — hyphema or iridocyclitis.
Lens — observe for aphakia, discoloration, dislocation, cataract, or an implanted lens.
Vitreous — note discoloration, hyaloid artery, floaters, or strands.
Optic nerve — observe for atrophy, hemorrhage, cupping, or papilledema.
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 or 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 this Guide.

In amblyopia ex anopsia, the visual acuity loss is simply recorded in Item 50 of the Application Form, and visual standards are applied as usual. If the standards are not met, a Report of Eye Evaluation, CAAI Form 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 six 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 authorised, 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.

Contact lens wearers must keep readily available during the exercise of the licence a pair of suitable correcting spectacles.

6. **Orthokeratology** is acceptable for medical certification purposes, provided the airman can demonstrate corrected visual acuity in accordance with medical standards defined in this Guide. 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 this Guide. Airmen should consider possible rotation, changes, or extensions of their work schedules when deciding on orthokeratology retainer lens use.

7. **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 CAAI may grant an Waiver under the special issuance section of this Guide on an individual basis. The Examiner can facilitate CAAI review by obtaining a report of Ophthalmological Evaluation for Glaucoma (CAAI Form 14) from a treating or evaluating ophthalmologist 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 three months before the application, the likelihood of difficulties is considerably more remote, and applicants in that situation may be favorably considered by the CAAI.

An applicant with unilateral or bilateral open angle glaucoma may be certified by the CAAI (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 CAAI 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 CAAI may limit the medical certificate: **NOT VALID FOR NIGHT FLYING**

8. **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.

9. Refractive Surgery. An applicant who has been treated with

refractive surgery may be issued a medical certificate by the Examiner if the applicant meets the visual acuity standards and the Report of Eye Evaluation 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. This state of recovery is usually reached within 6- to 12-weeks after surgery. The Examiner may, of course, defer issuance and forward the ophthalmology report to the CAAI.

10. General Information. Applicants with many of the foregoing conditions may be found qualified for CAAI 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 indicate that the applicant meets the standards, the CAAI may delegate CAAI to the Examiner to issue subsequent certificates.

If there is a question regarding the need for a current specialty evaluation, the Examiner should not obtain the evaluation, but should instead transmit the completed application (CAAI Application Form) and forward any available medical records to the CAAI.

III. Medical Disposition

Applicants with many visual conditions may be found qualified for CAAI 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 indicate that the applicant meets the standards, the CAAI may delegate CAAI 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 CAAI. 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]	All	Provide completed AUTHORITY Form 7 Note: applicant should be at best corrected visual acuity before evaluation	If applicant does not correct to standards request a medical flight test
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 AUTHORITY Decision
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 - Unfit
Diplopia	All	If applicant provides written evidence that the AUTHORITY has previously considered and determined that this condition is not adverse to flight safety. A MFT may be requested.	Requires AUTHORITY Decision

[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			
Hereditary, acquired conditions or congenital[3]	All	Provide completed AUTHORITY Note: applicant should be at best corrected visual acuity before evaluation	Unfit
Pterygium	All	Document findings in Item #60	If less than 50% of the cornea and not effecting central vision – Issue Otherwise - Unfit
Refractive Surgery	All	Provide completed AUTHORITY, type and date of procedure, statement as to any complications (halo, glare, haze, rings, etc.)	If visual acuity meets standards, is stable, and no complications exist - Issue Otherwise - Unfit

[3] Whether acute or chronic of either eye or adnexa, which 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).

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	Unfit
Glaucoma (treated or untreated)	All	Submit all pertinent medical information and current status report	Unfit
Macular Degeneration; Macular Detachment	All	Submit all pertinent medical information and current status report	Unfit

Tumors	All	Submit all pertinent medical information and current status report	Unfit
Vascular Occlusion; Retinopathy	All	Submit all pertinent medical information and current status report	Unfit

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	Unfit until further evaluation

Nonreaction to light in either eye acute or chronic	All	Submit all pertinent medical information and current status report	Unfit
Nystagmus[4]	All	Submit all pertinent medical information and current status report	Unfit if of recent onset
Synechiae, anterior or posterior	All	Submit all pertinent medical information and current status report	Unfit

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 AUTHORITY Decision

[4] Nystagmus 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 CAAI. 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.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION

Ocular Motility			
Inability to converge on a near object	All	Submit all pertinent medical information and current status report	Unfit
Paralysis with loss of ocular motion in any direction	All	Submit all pertinent medical information and current status report	Unfit

ITEM 35. LUNGS AND CHEST

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

All Classes

(b) No other organic, functional, or structural disease, defect, or limitation that the CAAI, 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 CAAI, 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.

(d) Radiography should form a part of the initial chest examination and should be repeated periodically thereafter.

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 CAAI Form 8. The applicant should be advised of any abnormality that is detected, and then deferred for further evaluation.

III. 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 CAAI. 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 AUTHORITY Decision

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
		Allergies	
Hay fever controlled solely by desensitization without antihistamines or other medications[567]	All	Submit all pertinent medical information and current status report, include duration of symptoms, name and dosage of drugs and side effects	If responds to treatment and without side effects - Issue Otherwise - Unfit
		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	Unfit

[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.

[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			
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 attacks are infrequent and no symptoms in flight - Issue

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	Unfit
Infectious Disease of the Lungs, Pleura, or Mediastinum			
Abscesses Active Mycotic disease Active Tuberculosis	All	Submit all pertinent medical information and current status report	Unfit
Fistula, Bronchopleural, to include Thoracostomy	All	Submit all pertinent medical information and current status report	Unfit

[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 CAAI.

[9] Certification may be granted, by the CAAI, 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
Infectious Disease of the Lungs, Pleura, or Mediastinum			
Lobectomy	All	Submit all pertinent medical information and current status report, include PFT	Requires AUTHORITY Decision
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 AUTHORITY Decision
Sleep Apnea			
Obstructive Sleep Apnea	All	Submit all pertinent medical information and current status report. Include sleep study with a polysonogram, use of medications and titration study results	Unfit
Periodic Limb Movement, etc.	All	Submit all pertinent medical information and current status report. Include sleep study with a polysonogram, use of medications and titration study results, along with a statement regarding Restless Leg Syndrome	Requires AUTHORITY Decision

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	Unfit
Malignant tumors or cysts of the lung, pleura, mediastinum, or the breast	All	Submit all pertinent medical information and current status report	Unfit
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	Unfit
Pneumothorax - Traumatic	All	Submit all pertinent medical information and current status report	If three months after resolution - Issue
Sarcoid, if more than minimal involvement or if symptomatic	All	Submit all pertinent medical information and current status report	Unfit

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Pleura and Pleural Cavity			
Spontaneous pneumothorax[10]	All	Submit all pertinent medical information and current status report	Unfit
Pulmonary			
Bronchiectasis	All	Submit all pertinent medical information and current status report	If moderate to severe - Unfit
Acute disability of the lungs or any active disease of the structures of the lungs, mediastinum or	All	Radiography required in doubtful clinical cases	Unfit

pleura.			
Extensive mutilation of the chest wall with collapse of the thoracic cage and sequelae of surgical procedures resulting in decreased respiratory efficiency at altitude.	1, 2		Unfit
Active pulmonary tuberculosis	All		Unfit
Quiescent or healed lesions known to be tuberculous, or are presumably tuberculous in origin	All		Issue

[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 airmen duties three months after the surgery. No special limitations on flying at altitude are applied.

ITEM 36. HEART

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

Class 1

(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 Class 1 airman medical certification must demonstrate an absence of myocardial infarction and other clinically significant abnormality on electrocardiographic examination:

(1) At the first application for a medical licence.

(2) At re-examination between the ages of 30 and 40 years every two years.

(3) 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.

(d) An applicant must not possess any abnormality of the

heart, congenital or acquired, which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

Classes 2 and 3

Cardiovascular standards for a Class 2 and 3 airman medical certificates 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

(g) Abnormality of the heart, congenital or acquired, which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

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 CAAI 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 CAAI Application Form to the CAAI 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 CAAI 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 CAAI immediately upon completion. Inadequate evaluation, reporting, or failure to promptly submit the report to the CAAI 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 CAAI, 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 CAAI consideration. The CAAI recommends that the applicant recover for at least three months for air traffic controllers and six 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 CAAI will consider an Waiver for a Special Issuance of a Medical Certificate (Waiver) for most cardiac conditions. Applicants seeking further CAAI consideration should be prepared to submit all past records and a report of a complete current cardiovascular evaluation in accordance with CAAI specifications.

C. Medication.

1. Medications acceptable to the CAAI for treatment of hypertension in applicants include all U. S. Food and Drug Administration (FDA) 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 CAAI. 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 CAAI review requests for Waiver under the special issuance section of this Guide 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. 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 CAAI. 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 AUTHORITY Decision
Left Bundle Branch Block	All	CVE Protocol and radionuclide GXT scan	If no evidence of structural, functional or coronary heart disease - Issue Otherwise - Requires AUTHORITY Decision
Acquired Right Bundle Branch Block	All	CVE Protocol and radionuclide GXT scan	If no evidence of structural, functional or coronary heart disease - Issue Otherwise - Requires AUTHORITY Decision

History of Implanted Pacemakers	All	See Implanted Pacemaker Protocol	Requires AUTHORITY 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 AUTHORITY 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 AUTHORITY Decision

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
		Arrhythmias	
1st 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 - Unfit
2nd 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 - Unfit
2nd Degree AV Block Mobitz II	All	CVE Protocol in accordance w/ Hypertensive Evaluation Specifications and 24-hour Holter	Unfit
3rd Degree AV Block	All	CVE Protocol in accordance w/ Hypertensive Evaluation Specifications and	Unfit

		24-hour Holter	
Preexcitation	All	CVE Protocol, GXT, and 24-hour Holter	Unfit
RF Ablation	All	3-month wait, then 24-hour Holter	If Holter negative for arrhythmia, no recurrence – Issue Otherwise - Unfit

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Arrhythmias			
Supraventricular Tachycardia	All	CHD Protocol with ECHO and 24-hour Holter	Unfit

Syncope	All	CHD Protocol with ECHO and 24-hour Holter; bilatcarotid US * See Neurology Table,	Unfit
Atrial Fibrillation			
History of Atrial Fibrillation >5 years ago	All	Document previous workup for CAD and structural heart disease	If no ischemia, no history of emboli, no structural or functional heart disease - Issue Otherwise - Unfit
Chronic	All	CHD Protocol with ECHO and 24-hour Holter	Unfit
Paroxysmal/Lone	All	CHD Protocol with ECHO and 24-hour Holter	Unfit

***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			
Angina Pectoris	All		Unfit
Myocardial Infarct	1 ,2		Unfit
Myocardial Infarct	3	Satisfactory recovery reported by accredited medical conclusion	Issue
Atherectomy; CABG; PTCA; Rotoblation; or STENT	All		Unfit
Hypertension			
Hypertension requiring medication	All	Medications are compatible with the safe exercise of the applicant's licence and ratings	If controlled and no complications - Issue Otherwise -Unfit
Valvular Disease			
All Other Valvular Disease.	All		Unfit
Aortic and Mitral Insufficiency	All		Unfit
Valve Replacement	All	See Valve Replacement Protocol	Unfit
Valvuloplasty	All	See Valvuloplasty Protocol	Unfit

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 CAAI. 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 CAAI.

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 three month observation period must elapse after the procedure before consideration for certification.

10. Any other cardiac disorder not otherwise covered in this section.

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 CAAI for preliminary review. Based upon this information, it may be possible to advise an applicant of the likelihood of favorable consideration.
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		

All Classes

(a) No significant functional or structural abnormality of the circulatory tree.

(b) No other organic, functional, or structural disease, defect, or limitation that the CAAI, 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