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MANUAL OF CIVIL AVIATION MEDICINE

ISRAEL MINISTRY OF TRANSPORT-CIVIL AVIATION CAAI

AVIATION MEDICAL EXAMINER GUIDE

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INTRODUCTION

The Aviation Medical Guide has been prepared to assist Aviation Medical Examiners (hereafter referred to as Examiner) in the efficient and effective performance of their duties and responsibilities as representatives of the Civil Aviation Authority of Israel.

All material contained in the Guide is keyed to the corresponding item number contained on the Medical Application Form. Medical standards are in compliance with ICAO medical standards.

The information and guidance contained in the Guide are needed to perform the duties and responsibilities delegated to each Examiner by the CAAI.

AVIATION MEDICAL GUIDE

CHAPTER 1 General Information

This chapter prescribes the requirements and procedures for issuing, renewing and re-issuing Class 1, Class 2 and Class 3 medical certificates. It provides information to assist an Aviation Medical Examiners (AME), otherwise known as an Examiner, in performing his or her duties in an efficient and effective manner.

It also describes the Examiner's responsibilities as the CAAI representative in medical certification to determine the fitness of flight crews and air traffic controllers to hold a medical certificate. Each person to be issued a medical certificate must undergo a medical exam based on the physical and mental requirements contained in this Guide. Any person who does not meet the medical requirements of this Guide may apply for the discretionary issuance of a certificate.

ICAO Annex I:1.2.4

A designated Examiner takes on a heavy responsibility. The consequences of a negligent or wrongful certification, which would permit an unqualified person to take the controls of an aircraft or control air traffic can be serious for the public, for the Government, and for the Examiner. If the exam is cursory and the Examiner fails to find a disqualifying defect that should have been discovered in the course of a thorough and careful examination, a safety hazard may be created.

1. Appointment of Aviation Medical Examiners

The State of Israel can delegate to the CAAI the designation and waiver of qualified licenced physicians in the practice of medicine as an Examiner in matters related to the examination, testing, and inspection necessary to issue a medical certificate. Designated Examiners are delegated the authority to medically examine for fitness applicants for the issue, renewal or re-issue of airman medical certificates.

2. Qualification of Aviation Medical Examiners

Examiner must complete the basic training in aviation medicine for all classes of medical examinations for the subjects listed in Appendix A and refresher training in aviation medicine medical examinations on the subjects listed in Appendix B.

Examiners should also acquire knowledge and experience of the conditions in which the holders of licences and ratings carry out their duties

ICAO ANNEX I:1.2.4.4.1

3. The Examiner is delegated authority to:

Examine applicants for, and holders of, airman medical certificates to determine whether or not they meet the medical standards for the renewal or re-issue of an airman medical certificate.

Issue or deny airman medical certificates to applicants or holders of such certificates based upon whether or not they meet the applicable medical standards.

A medical certificate issued by an Examiner is considered to be affirmed as issued unless, within 60 days after date of issuance (date of examination), it is reconsidered by the CAAI. However, if the CAAI requests additional information from the applicant within 60 days after the issuance, the CAAI has 60 days after receipt of the additional information to reverse the issuance.

The Examiner's waiver is valid for four years. The Examiner must have completed at least 10 exams for a medical certificate per year. Re-waiver will be at the discretion of the CAAI.

ICAO ANNEX I:1.2.4

4. Equipment Requirements

Examiner's must have adequate facilities for performing the required examinations and possess or agree to obtain the following equipment prior to conducting any examinations for the CAAI. History or current findings may indicate a need for special evaluations.

1. Landolt rings or similar optotypes.
2. Eye Muscle Test-Light. May be a spot of light 0.5cm in diameter, a regular muscle-test light, or an ophthalmoscope.
3. Maddox Rod. May be hand type.
4. Horizontal Prism Bar. Risley, Hughes, or hand prism are acceptable alternatives.
5. Color Vision Test Apparatus. Pseudoisochromatic plates, (American Optical Company (AOC), 1965 edition; AOC-HRR, 2nd edition); Dvorine, 2nd edition; Ishihara, Concise 14 -, 24 -, or 38-plate editions; or Richmond (1983 edition, 15-plates).
6. A Wall Target consisting of a 127 centimeter square surface with a matte finish (may be black felt or dull finish paper) and a 2-mm white test object (may be a pin) in a suitable handle of the same color as the background.
7. Standard physician diagnostic instruments and aids including those necessary to perform urinalysis.
8. Electrocardiographic equipment. Senior Examiners must have access to digital electrocardiographic equipment with electronic transmission capability.
9. Audiometric equipment. All Examiners must have access to audiometric equipment or a capability of referring applicants to other medical facilities for audiometric testing.

5. Issue of Medical Certificates

A medical certificate will be issued to any person who meets the medical requirements prescribed in this Guide, based on medical exam and evaluation of the applicant's history and condition.

Initial Class 1 medical certificates must be issued by the CAAI. Class 2 and 3 medical certificates issuance can be delegated to Examiner.

Renewal or re-issue of medical certificates

The requirements for the renewal or re-issue of a medical certificate are the same as those for the initial certificate except where otherwise specifically stated.

Renewals of Class 1, 2, and 3 medical certificates can be delegated to the Examiner.

Re-issue of Class 1 medical certificate must be done by the CAAI. Re-issue of Class 2 and 3 medical certificates can be delegated to the Examiner.

Limitations, Denials, Suspensions or Revocations

The CAAI may for medical reasons justified and notified to the applicant, limit or deny a medical certificate.

If it is established that an applicant or a certificate holder has not met, or no longer meets the medical requirements, the CAAI can suspend or revoke a medical certificate that has been issued.

ICAO Annex I:1.2.4, 1.2.5

Deferral of Medical Exam

The prescribed re-exam of a licence holder operating in an area distant from designated medical exam facilities may be deferred at the discretion of the CAAI; such deferment must only be made as an exception and must not exceed:

Flight crew members of an aircraft engaged in non-commercial operations- a single period of six months;

Flight crew members of an aircraft engaged in commercial operations-two consecutive periods of three months provided that in each case a favourable medical report is obtained after exam by a designated medical examiner of the area concerned, or if a designated medical examiner is not available, by a physician legally qualified to practice medicine in that area. A report of the medical exam must be sent to the CAAI where the licence was issued;

Private pilot-a single period not exceeding 24 months where the medical exam is conducted by an examiner designated by the contracting STATE in which the applicant is temporarily located. A report of the medical exam must be sent to the CAAI where the licence was issued.

ICAO Annex I:1.2.5.2.6

6. Medical Certification Decision Making

A. After reviewing the medical history and completing the examination, Examiners must:

- Issue a medical certificate,
- Deny the application, or
- Defer the action to the CAAI.

Examiners may issue a medical certificate only if the applicant meets all medical standards, including those pertaining to medical history unless otherwise authorised by the CAAI.

Examiners may not issue a medical certificate if the applicant fails to meet specified minimum standards or demonstrates any of the findings or diagnoses described in this Guide as "disqualifying" or "unfit".

The Examiner must be aware that an established medical history or clinical diagnosis of any of the following is disqualifying:

- Alcoholism
- Angina pectoris;
- Bipolar disorder;
- Cardiac valve replacement;
- Coronary heart disease that has required treatment or, if untreated, that has been symptomatic or clinically significant;
- Diabetes mellitus requiring insulin or other hypoglycemic medication;
- Disturbance of consciousness without satisfactory medical explanation of the cause; and
- Epilepsy;
- Heart replacement;
- Myocardial infarction;
- Permanent cardiac pacemaker;
- Personality disorder that is severe enough to have repeatedly manifested itself by overt acts;
- Psychosis;
- Problematic use of substances;
- Substance dependence;
- Transient loss of control of nervous system function(s) without a satisfactory medical explanation of cause.

Note: A history of acute toxic psychosis need not be regarded as disqualifying, provided that the applicant has suffered no permanent impairment.

DISCRETIONARY ISSUANCE

An airman who is medically disqualified for any reason may be considered by the CAAI for an Waiver for Special Issuance of a Medical Certificate (Waiver). For medical defects, which are static or nonprogressive in nature, a Statement of Demonstrated Ability (SODA) may be granted in lieu of an **Waiver**.

The Waiver or SODA would only be issued in cases where the exercise of the privileges of the licence applied for is not likely to jeopardize flight safety.

The Examiner always may defer the application to the CAAI for action. In the interests of the applicant and of a responsive certification system, however, deferral is appropriate only if:

- the standards are not met;
- there is an unresolved question about the history, the findings, the standards, or policy;
- the examination is incomplete;
- further evaluation is necessary; or
- directed by the CAAI.

The Examiner may deny certification only when the applicant clearly does not meet the standards.

The CAAI will use the services of physicians experienced in the practice of aviation medicine, when it is necessary to evaluate reports submitted to the CAAI by Examiners.

ICAO Annex I:1.2.4.8

7. No "Alternate" Examiners Designated

The Examiner is to conduct all medical examinations at their designated address only. An Examiner is not permitted to conduct examinations at a temporary address and is not permitted to name an alternate Examiner. During an Examiner's absence from the permanent office, applicants for airman medical certification must be referred to another Examiner in the area.

8. Who May Be Certified

- Age Requirements: There is no age restriction or aviation experience requirements for medical certification. Any applicant who qualifies medically may be issued a Medical Certificate.
- Language Requirements: An applicant for an Airman Medical Certificate must be able to speak, and understand the language used for radiotelephony communications. (*Note: Pursuant to Article 42 of the Convention on International Civil Aviation, the language requirement above does not apply to personnel whose licences were originally issued prior to 5 March 2004 and whose licences remain valid after 5 March 2008.*)

ICAO Annex I:1.2.9

9. Classes and Validity of Medical Certificates

An applicant may apply and be granted any class of airman medical certificate as long as the applicant meets the required medical standards for that class of medical certificate. However, an applicant must have the appropriate class of medical certificate for the flying duties the airman intends to exercise. For example, an applicant who exercises the privileges of an airline transport pilot certificate must hold a Class 1 medical certificate. That same pilot when holding only a Class 2 medical certificate may only exercise flying activities of a private pilot certificate. Finally, an applicant need not hold an airline transport airman certificate to be eligible for a Class 1 medical certificate.

Listed below are the three classes of airman medical certificates, identifying the categories of airman certificates applicable to each class.

Class 1 - Airline Transport Pilot (ATPL), Commercial Pilot (CPL); Flight Engineer

Class 2 - Private pilot (PPL), glider pilot, free balloon

Class 3 - Air Traffic Controller.

10. Validity of Medical Certificates

Class 1 Medical Certificate is valid for 12 months until age 40 and is then reduced to six months thereafter.

Class 2 Medical Certificate is valid for 24 months until age 40 and is then reduced to 12 months thereafter.

Class 3 Medical Certificate is valid for 24 months.

ICAO Annex I:1.2.5.2

Determining Validity Dates of Medical Certificates

Initial: Validity begins on the date the medical examination is performed for the initial issuance.

Renewal or Re-issue: Medical exams conducted no more than 28 days before the current expiry date will use that date as the start date of the new validity period. Medical exams conducted after the current expiry date or earlier than 28 days before expiry date will use the date of the medical exam as the start date of the new validity period.

ICAO Annex I:1.2.4.2

11. Decrease in Medical Fitness

A person who holds a current medical certificate issued by the CAAI must not exercise the privileges of their licences and related ratings at anytime they are aware of any decrease in their medical fitness which might render them unable to safely and properly exercise these privileges.

A person is taking medication or receiving other treatment for a medical condition that results in the person being unable to meet the requirements for the medical certificate.

ICAO Annex I:1.2.6

12. Use of psychoactive substances

Holders of aircrew and air traffic controller licences must not exercise the privileges of their licences and ratings while under the influence of any psychoactive substance which might render them unable to safely and properly these privileges.

Holders of aircrew and air traffic controller licences must not engage in any problematic use of substances.

ICAO Annex I:1.2.7

13. Re-examination of an Airman

A medical certificate holder may be required to undergo a re-examination at any time if, in the opinion of the CAAI or its authorised representative, there is a reasonable basis to question the airman's ability to meet the medical standards. An Examiner may NOT order such re-examination.

ICAO Annex I:2.4

14. Disposition of Applications and Medical Examinations

All original copies of completed applications and medical examinations, unless otherwise directed by the CAAI, must be submitted to the CAAI within 14 days after completion. All copies must be signed by the Examiner and applicant. In the case of the medical exam being carried out by a constituted group of Examiners, the CAAI must appoint the head of the group responsible for the coordinating the results of the exam and signing the report.

CAAI ADDRESS

The Examiner Work Copy must be retained by the Examiner as their file copy for at least three years unless exceeded by government legal requirements where the Examiner is licenced and performed the examination.

The Applicant's Copy of the application form (last page) must be given to the applicant.

ICAO Annex I:2.4.6

15. Protection and Destruction of Application Forms

Examiners are cautioned to provide adequate security for blank medical application and certificate forms to ensure that they do not become available for illegal use. When new or revised medical forms and certificates are issued, Examiners will be advised of the disposition of the old forms and certificates. If asked, the Examiner should be prepared to account for the forms. The Examiners are responsible making provisions to return of all unused forms at such time they leave (resign, retire, terminated, or death) the Examiner Program. Forms should not be shared with other Examiners.

16. Questions or Requests for Assistance

When an Examiner has a question or needs assistance in carrying out responsibilities, the Examiner should contact the CAAI.

17. Airman Appeals and Discretionary Issuance

The Ministry of Transport must use the services of physicians experienced in the practice of aviation medicine when it is necessary to evaluate reports submitted to the CAAI by Examiners (Consultants).

a. Request for Reconsideration; Special Circumstances

An Examiner's denial of a medical certificate is not a final denial. An applicant may ask for reconsideration of an Examiner's denial by submitting a request in writing to the Medical Appeals Committee of the Ministry of Transport..

b. Waiver for Special Issuance of a Medical Certificate (Waiver)

At the discretion of the CAAI, an Waiver for Special Issuance of a Medical Certificate (Waiver), valid for a specified period, may be granted to a person who does not meet the established medical standards if the person shows to the satisfaction of accredited medical CAAI that the duties authorised by the class of medical certificate applied for can be performed and will not jeopardize flight safety during the period in which the Waiver would be in force.

The CAAI may authorise a special medical flight test, practical test, or medical evaluation for this purpose. A medical certificate of the appropriate class may be issued to a person who fails to meet one or more of the established medical standards if that person has been issued a valid Waiver and is otherwise eligible. An airman medical certificate issued in accordance with these special issuance procedures must expire no later than the end of the validity period or upon the withdrawal of the Waiver upon which it is based.

At the expiry of the Waiver an airman must again show to the satisfaction of the CAAI that the duties authorised by the class of medical certificate applied for can be performed without jeopardizing flight safety in order to obtain a new medical certificate and Waiver.

In granting an Waiver, the CAAI may consider the person's relevant ability, skill and operational experience and any medical facts that may affect the ability of the person to perform airman duties including:

The prognosis derived from professional consideration of all available information regarding the person.

Operational conditions under which the exercise of the licence will be conducted.

In granting an Waiver, the CAAI specifies the class of medical certificate to be issued and may do any or all of the following:

- Limit the duration of an Waiver;
- Condition the granting of a new Waiver on the results of subsequent medical tests, examinations, or evaluations;
- State on the Waiver, and any medical certificate based upon it, any operational limitation needed for safety; or
- An Waiver granted to a person who does not meet the applicable medical standards may be withdrawn, at the discretion of the CAAI at any time if:
 - There is adverse change in the holder's medical condition;
 - The holder fails to comply with a statement of functional limitations or operational limitations issued as a condition of certification under the special issuance section;
 - Flight safety would be jeopardized by the holder's exercise of airman privileges;
 - The holder fails to provide medical information reasonably needed by the CAAI for certification under the special issuance section; or

A person who has been granted an Waiver under the special issuance section of this Guide, based on a special medical flight or practical test, need not take the test again during later medical examinations unless the CAAI determines or has reason to believe that the physical deficiency has or may have degraded to a degree to require another special medical flight test or practical test.

If a Waiver is withdrawn at any time, the following procedures apply:

The holder of the Waiver will be served a letter of withdrawal, stating the reason for the action;

By not later than 60 days after the service of the letter of withdrawal, the holder of the Waiver may request, in writing, that the CAAI provide for review of the decision to withdraw. The request for review may be accompanied by supporting medical evidence.

Within 60 days of receipt of a request for review, a written final decision either affirming or reversing the decision to withdraw will be issued. A medical certificate rendered invalid pursuant to a withdrawal, in accordance with the special issuance section of this Guide must be surrendered to the CAAI upon request.

c. Statement of Demonstrated Ability (SODA)

At the discretion of the CAAI, a Statement of Demonstrated Ability (SODA) may be granted, instead of an Waiver, to a person whose disqualifying condition is static or non-progressive and who has been found capable of performing airman duties without endangering public safety. A SODA does not expire and authorises a designated Examiner to issue a medical certificate of a specified class if the Examiner finds that the condition described on the SODA has not adversely changed.

In granting a SODA, the CAAI may consider the person's operational experience and any medical facts that may affect the ability of the person to perform airman duties including:

The combined effect on the person of failure to meet more than one requirement; and

The prognosis derived from professional consideration of all available information regarding the person.

In granting a SODA under the special issuance section of this Guide, the CAAI specifies the class of medical certificate to be issued and may do any of the following:

State on the SODA, and on any medical certificate based upon it, any operational limitation needed for safety; or

Condition the continued effect of a SODA on compliance with a statement of functional limitations issued to the person in coordination with the CAAI.

A SODA granted to a person who does not meet the applicable standards may be withdrawn, at the discretion of the CAAI, at any time if:

There is adverse change in the holder's medical condition;

The holder fails to comply with a statement of functional limitations or operational limitations issued under the special issuance section of this Guide.

Flight safety would be jeopardized by the holder's exercise of airman privileges;

The holder fails to provide medical information reasonably needed by the CAAI for certification under the special issuance section of this Guide.

A person who has been granted a SODA under the special issuance section of this Guide, based on a special medical flight or practical test need not take the test again during later medical examinations unless the CAAI determines or has reason to believe that the physical deficiency has or may have degraded to a degree to require another special medical flight test or practical test.

If a SODA is withdrawn at any time, the following procedures apply:

The holder of the SODA will be served a letter of withdrawal stating the reason for the action. Not later than 60 days after the service of the letter of withdrawal, the holder of the SODA may request, in writing, that the CAAI provide for review of the decision to withdraw. The request for review may be accompanied by supporting medical evidence.

Within 60 days of receipt of a request for review, a written final decision either affirming or reversing the decision to withdraw will be issued. A medical certificate rendered invalid pursuant to a withdrawal, in accordance with the special issuance section of this Guide must be surrendered to the CAAI upon request.

ICAO Annex I:1.2.4.8

CHAPTER 2 Application for Medical Certification

General Information

This section contains guidance for completing items on the first page of the Application for Airman Medical Certificate form.

I. Examiner Guidance for Positive Identification of Airmen

All applicants must be asked to show proof of age and identity. On occasion, individuals have attempted to be examined under a false name. If the applicant is unknown to the Examiner, the Examiner should request evidence of positive identification. Government-issued photo identification (e.g., driver's licence, identification card issued by a driver's licence CAAI, military identification, or passport) provides age and identity and is preferred. Applicants may use other government-issued identification for age (e.g., certified copy of a birth certificate); however, the Examiner must request separate photo identification for identity (such as a work badge). Verify that the address provided is the same as that given under Item 5. Record the type of identification(s) provided and identifying number(s) under Item 61. Make a copy of the identification and keep it on file for 3 years with the Examiner work copy.

An applicant who does not have government-issued photo identification may use non-photo government-issued identification (e.g. pilot certificate, birth certificate, voter registration card) in conjunction with photo identification (e.g. work identification card, student identification card).

If an airman fails to provide identification, the Examiner must report this immediately to the CAAI.

ICAO Annex 1:1.2.4

II. Guidance for the Applicant in the completion of the Medical Application Form

The applicant is to fill in Items 1-19 in his or her handwriting using a ballpoint pen, exerting sufficient pressure for all copies, to make legible imprints upon all three copies of the form.

The applicant's passport number is not mandatory. Failure to provide is not grounds for refusal to issue a medical certificate. (See Item 4). All other items on the form must be completed.

Applicants must provide their home address. Applicants may use a private mailing address (e.g., a P.O. Box number or a mail drop) if that is their preferred mailing address; however, under Item 18 (in the "Explanations" box), they must provide their home address.

The applicant must personally enter all data and make all corrections on the application form. The applicant should initial all corrections. The application constitutes a legal document and must be completed in the applicant's handwriting. If for any reason someone other than the applicant enters information in Items 1-19, the person should initial beside that item (including any check marks), and the Examiner should add a note explaining in Item 60 the person's inability to enter the data.

Any false declaration to the Examiner by the applicant will be reported to the CAAI for such action as they may deem appropriate.

ITEMS 1-2. APPLICATION FOR; CLASS OF MEDICAL CERTIFICATE APPLIED FOR
(Hebrew forms of Application)

	CAAI Form No. PELF 1.3.070A
1. Application Form For Medical Certificate	
2. CLASS OF MEDICAL CERTIFICATE APPLIED FOR	
1 st	2 nd 3 rd

The applicant indicates which class of medical certificate desired.

The class of medical certificate sought by the applicant is needed so that the appropriate medical standards may be applied. The class of certificate issued must correspond with that for which the applicant has applied.

The applicant may ask for a medical certificate of a higher class than needed for the type of flying or duties currently performed. For example, a student pilot may ask for a Class1 medical certificate to see if he or she qualifies medically before entry into an aviation career.

The Examiner applies the standards appropriate to the class sought, not to the airman's duties - either performed or anticipated. The Examiner should never issue more than one certificate based on the same examination.

ICAO Annex 1:1.2.4

ITEMS 3-10. IDENTIFICATION

3. Name (Last, First, Initial)	4. Identification #	Citizenship
5. Address Number/Street City County/Region State (dd/mm/yyyy) 7. Hair Colour 8. Eye Colour		6. Date of Birth Postal Code 9. Sex
10. Type of licence you hold: None Airline Transport Commercial ATC Specialist Flight Engineer Flight Navigator Flight Instructor Private Student Ballon Glider Other		

The following information is required for identification of the individual who is applying for medical certification:

3. Last Name; First Name; Middle Name

The applicant's last, first, and middle name (or initial if appropriate) must be printed. All applicants without a middle name should enter "NMN" or "NONE". Nicknames and abbreviated names must not be used. *(NOTE: If the applicant's name changed for any reason, the current name is listed on the application and any former name(s) in the EXPLANATIONS box of Item 18 on the application.)*

4. Identification Number

Applicants are asked to complete all questions on the application. They are not legally required to complete Item 4.

5. Address and Telephone Number

The applicant must print a permanent mailing address, including country, and the postal code. The person must also provide a current daytime telephone number with country and city codes included.

6. Date of Birth

The applicant must enter the numbers for the day, month and year of birth in order (e.g., 29/04/2000 for 29 April 2000). Name and date of birth are the basic identifiers of airmen. The applicant should indicate citizenship (e.g., Morovia)

There is a maximum age requirement for certain air carrier pilots. Because this is not a medical requirement but an operational one, the Examiner may issue medical certificates without regard to age to any applicant who meets the medical standards.

7. Color of Hair

Color of hair should be entered as "brown," "black," "blonde," "gray," or "red." Lack of hair should be entered as "bald." No abbreviations or other colors should be used. This information is for identification only.

8. Color of Eyes

Color of eyes should be entered as "brown," "black," "blue," "hazel," "gray," or "green." No abbreviations or other colors should be used. This information is for identification only.

9. Sex The applicant should enter either male or female.

ICAO Annex I:1.2.4

ITEMS 11-12. OCCUPATION; EMPLOYER

11. Occupation	12. Employer	Telephone Number
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Occupational data are principally used for statistical purposes. This information, along with information obtained from Items 10, 14, and 15, may be important in determining whether a SODA may be issued, if applicable.

11. Occupation

This should reflect the applicant's major employment. "Pilot" should only be reported when the applicant earns a livelihood from flying.

12. Employer

The employer's name should be entered by the applicant.

ITEM 13. HAS YOUR CAAI AIRMAN MEDICAL CERTIFICATE EVER BEEN DENIED, SUSPENDED, OR REVOKED?

13. Has your CAAI Airman Medical Certificate ever been denied, suspended or revoked?

Yes No If yes, give date ____ / ____ / ____

The applicant shall check "yes" or "no." If "yes" is checked, the applicant should enter the date of action and should report details in the EXPLANATIONS box of Item 18.

The Examiner may not issue a medical certificate to an applicant who has checked "yes." The only exceptions to this prohibition are:

- The applicant presents written evidence from the CAAI that he or she was subsequently medically certificated and that an Examiner is authorised to issue a renewal medical certificate to the person if medically qualified; or
- The Examiner obtains oral or written waiver to issue a medical certificate from the CAAI.

ICAO Annex I:1.2.4

ITEMS 14-15. TOTAL PILOT TIME

Total pilot time (Civilian Only)		16. Date of Last CAAI Medical Application	
14. To Date	15. Past 6 Months	DD / MM / YYYY	No prior application

14. Total Pilot Time to Date

The applicant should indicate the total number of *civilian* flight hours and whether those hours are logged (LOG) or estimated (EST).

15. Total Pilot Time Past 6 Months

The applicant should provide the number of civilian flight hours in the 6 month period immediately preceding the date of this application. The applicant should indicate whether those hours are logged (LOG) or estimated (EST).

ITEM 16. DATE OF LAST CAAI MEDICAL APPLICATION

Total pilot time (Civilian Only)		16. Date of Last CAAI Medical Application	
14. To Date	15. Past 6 Months	DD / MM / YYYY	No prior application

If a prior application was made, the applicant should indicate the date of the last application, even if it is only an estimate of the year. This item should be completed even if the application was made many years ago or the previous application did not result in the issuance of a medical certificate. If no prior application was made, the applicant should check the appropriate block in Item 16.

ICAO Annex I:1.2.4

ITEM 17.a. DO YOU CURRENTLY USE ANY MEDICATION (PRESCRIPTION OR NONPRESCRIPTION)?

17a. Do you currently use any medication (prescription or non-prescription) No Yes (if yes, list medication(s) used and indicate whether previously reported)	Previously Reported	
	Yes	No
	Yes	No
	Yes	No

If the applicant checks yes, give name of medication(s) and indicate if the medication was listed in a previous medical examination.

This includes both prescription and nonprescription medication. (Additional guidelines for the certification of airmen who use medication may be found in Chapter 4).

For example, any airman who is undergoing continuous treatment with anticoagulants, antiviral agents, anxiolytics, barbiturates, chemotherapeutic agents, experimental hypoglycemic, investigational, mood-ameliorating, motion sickness, narcotic, sedating antihistaminic, sedative, steroid drugs, or tranquilizers must be deferred certification unless the treatment has previously been cleared by CAAI medical CAAI. In such an instance, the applicant should provide the Examiner with a copy of any CAAI correspondence that supports the clearance.

During periods in which the foregoing medications are being used for treatment of acute illnesses, the airman is under obligation to refrain from exercising the privileges of his/her airman medical certificate unless cleared by the CAAI.

Further information concerning an applicant's use of medication may be found under the items pertaining to specific medical condition(s) for which the medication is used.

ITEM 17.b. DO YOU EVER USE NEAR VISION CONTACT LENS(ES) WHILE FLYING?

17b. Do you ever use near vision contact lens(es) when flying? Yes No

The applicant should indicate whether near vision contact lens(es) is/are used while flying. If the applicant answers "yes," the Examiner should counsel the applicant that the use of contact lens(es) (bifocal or unifocal) specifically for the correction of near vision is/are inappropriate. The Examiner must note in Item 60 that this counseling has been given.

If the applicant checks "yes" and no further comment is noted on Application form by either the applicant or the Examiner, a letter will automatically be sent to the applicant informing him or her that the use of contact lens(es) specifically to correct near vision is/are inappropriate for flying.

ICAO Annex I:6.3.3

ITEM 18a. MEDICAL HISTORY

18a. MEDICAL HISTORY – HAVE YOU EVER IN YOUR LIFE BEEN DIAGNOSED WITH, HAD, OR, DO YOU HAVE PRESENTLY ANY OF THE FOLLOWING? Answer "yes" or "no" for every condition listed below. In the Explanations box below, you may note: "PREVIOUSLY REPORTED, NO CHANGE" only if the explanation of the condition was reported on a previous application for an airman medical certificate and there has been no change in your condition. **See Instruction Page.**

Yes	No	Condition	Yes	No	Condition	Yes	No	Condition	Yes	No	Condition
a <input type="checkbox"/>	<input type="checkbox"/>	Frequent or severe headaches	g <input type="checkbox"/>	<input type="checkbox"/>	Heart or vascular trouble	m <input type="checkbox"/>	<input type="checkbox"/>	Mental disorders of any sort; anxiety depression, etc.	s <input type="checkbox"/>	<input type="checkbox"/>	Medical rejection by military service
b <input type="checkbox"/>	<input type="checkbox"/>	Dizziness or fainting spells	h <input type="checkbox"/>	<input type="checkbox"/>	High or low blood pressure	n <input type="checkbox"/>	<input type="checkbox"/>	Substance abuse or dependence, or failed a drug test ever, or use of illegal substance(s)	t <input type="checkbox"/>	<input type="checkbox"/>	Rejection for life or health insurance
c <input type="checkbox"/>	<input type="checkbox"/>	Unconsciousness for any reason	i <input type="checkbox"/>	<input type="checkbox"/>	Stomach, liver or intestinal trouble	o <input type="checkbox"/>	<input type="checkbox"/>	Alcohol abuse or dependence; failed an alcohol test	u <input type="checkbox"/>	<input type="checkbox"/>	Admission to hospital
d <input type="checkbox"/>	<input type="checkbox"/>	Eye or vision trouble except glasses	j <input type="checkbox"/>	<input type="checkbox"/>	Kidney stone or blood in urine	p <input type="checkbox"/>	<input type="checkbox"/>	Suicide attempt	x <input type="checkbox"/>	<input type="checkbox"/>	Other illness, disability or surgery
e <input type="checkbox"/>	<input type="checkbox"/>	Hay fever or allergy	k <input type="checkbox"/>	<input type="checkbox"/>	Diabetes	q <input type="checkbox"/>	<input type="checkbox"/>	Motion sickness medication required			
f <input type="checkbox"/>	<input type="checkbox"/>	Asthma or lung disease	l <input type="checkbox"/>	<input type="checkbox"/>	Neurological disorders, epilepsy, seizures, stroke, paralysis, etc.	r <input type="checkbox"/>	<input type="checkbox"/>	Military medical discharge			

Explanations: See Instruction Page

Each item under this heading must be checked either "yes" or "no." For all items checked "yes," a description and approximate date of every condition the applicant has ever been diagnosed with, had, or presently has, must be given in the EXPLANATIONS box. If information has been reported on a previous application for airman medical certification and there has been no change in the condition, the applicant may note "PREVIOUSLY REPORTED, NO CHANGE" in the EXPLANATIONS box, but the applicant must still check "yes" to the condition.

Of particular importance are conditions that have developed since the last medical examination. If more space is needed, a plain sheet of paper bearing the applicant's full printed name, date of birth, signature, and the date should be used.

The Examiner must take the time to review the applicant's responses on the form before starting the applicant's medical examination.

The Examiner should ensure that the applicant has checked all of the boxes in Item 18 as either "yes" or "no." The Examiner should use information obtained from this review in asking the applicant pertinent questions during the course of the examination. Certain aspects of the individual's history may need to be elaborated upon. The Examiner should provide in Item 60 an explanation of the nature of items checked "yes" in Items 18.a. through 18.x. An additional sheet may be added if necessary.

Supplementary reports from the applicant's physician(s) should be obtained and forwarded to the CAAI, when necessary, to clarify the significance of an item of history. The responsibility for providing such supplementary reports rests with the applicant.

Affirmative answers alone in Item 18 do not constitute a basis for denial of a medical certificate. A decision concerning issuance or denial should be made by applying the medical standards pertinent to the conditions uncovered by the history.

Experience has shown that, when asked direct questions by a physician, applicants are likely to be candid and willing to discuss medical problems.

The Examiner should attempt to establish rapport with the applicant and to develop a complete medical history. Further, the Examiner should be familiar with the CAAI certification policies and procedures in order to provide the applicant with sound advice.

18.a. Frequent or severe headaches. The applicant should report frequency, duration, characteristics, severity of symptoms, neurologic manifestations, and whether they have been incapacitating, treatment and side effects, if any. (See Item 46)

18.b. Dizziness or fainting spells. The applicant should describe characteristics of the episode (e.g., spinning or lightheadedness), frequency, factors leading up to and surrounding the episode, associated neurologic symptoms (e.g., headache, nausea, LOC, or paresthesias). Include diagnostic workup and treatment if any. (See Items 25-30 and Item 46).

18.c. Unconsciousness for any reason. The applicant should describe the event(s) to determine the primary organ system responsible for the episode, witness statements, initial treatment, and evidence of recurrence or prior episode. Although the regulation states, "an unexplained disturbance of consciousness is disqualifying," it does not mean to imply that the applicant can be certificated if the etiology is identified, because the etiology may also be disqualifying in and of itself. (See Item 46.)

18.d. Eye or vision trouble except glasses. 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?

For glaucoma or ocular hypertension, obtain a Form 14, Report of Eye Evaluation for Glaucoma. For any other medical condition, obtain a Form 7, Report of Eye Evaluation. Under all circumstances, please advise the examining eye specialist to explain why the airman is unable to correct to visual acuity of 6/6 or 6/9. (Also see Items 31-34, Item 53, and Item 54).

18.e. Hay fever or allergy. The applicant should report frequency and duration of symptoms, and whether they have been incapacitating by the condition. Mention should also be made of treatment and side effects. The Examiner should inquire whether the applicant has ever experienced any "ear block", barotitis, or any other symptoms that could interfere with aviation safety? Barosinusitis is of concern and should also be ruled out. (See Item 26).

18.f. Asthma or lung disease. The applicant should provide frequency and severity of asthma attacks, medications, and number of visits to the hospital and/or emergency room. For other lung conditions, a detailed description of symptoms/diagnosis, surgical intervention, and medications should be provided. (See Item 35).

18.g. Heart or vascular trouble. The applicant should describe the condition to include, dates, symptoms, and treatment, and provide medical reports to assist in the certification decision-making process. These reports should include: operative reports of coronary intervention to include the original cardiac catheterization report, stress tests, worksheets, and original tracings (or a legible copy). When stress tests are provided, forward the reports, worksheets and original tracings (or a legible copy) to the CAAI. The Guide provides that, for all classes of medical certificates, an established medical history or clinical diagnosis of myocardial infarction, angina pectoris, cardiac valve replacement, permanent cardiac pacemaker implantation, heart replacement, or coronary heart disease that has required treatment or, if untreated, that has been symptomatic or clinically significant, is cause for denial. (See Item 36.)

18.h. High or low blood pressure. The applicant should provide history and treatment. Issuance of a medical certificate to an applicant with high blood pressure may depend on the current blood pressure levels and whether the applicant is taking anti-hypertensive medication. The Examiner should also determine if the applicant has a history of complications, adverse reactions to therapy, hospitalization, etc. (Details are given in Items 36 and Item 55).

18.i. Stomach, liver, or intestinal trouble. The applicant should provide history and treatment, pertinent medical records, current status report, and medication. If a surgical procedure was done, the applicant must provide operative and pathology reports. (See Item 38).

18.j. Kidney stone or blood in urine. The applicant should provide history and treatment, pertinent medical records, current status report and medication. If a procedure was done, the applicant must provide the report and pathology reports. (See Item 41).

18.k. Diabetes. The applicant should describe the condition to include, symptoms and treatment. Comment on the presence or absence of hyperglycemic and/or hypoglycemic episodes. A medical history or clinical diagnosis of diabetes mellitus requiring insulin or other hypoglycemic drugs for control are disqualifying. The Examiner can help expedite the CAAI review by assisting the applicant in gathering medical records and submitting a current specialty report. (See Item 48).

18.l. Neurological disorders; epilepsy, seizures, stroke, paralysis, etc. The applicant should provide history and treatment, pertinent medical records, current status report and medication. The Examiner should obtain details about such a history and report the results. An established diagnosis of epilepsy, a transient loss of control of nervous system function(s), or a disturbance of consciousness is a basis for denial no matter how remote the history. Like all other conditions of aeromedical concern, the history surrounding the event is crucial. Certification is possible if a satisfactory explanation can be established. (See Item 46).

- Mental disorders of any sort; depression, anxiety, etc. An affirmative answer to Item
- requires investigation through supplemental history taking. Dispositions will vary according to the details obtained. An applicant with an established history of a personality disorder that is severe enough to have repeatedly manifested itself by overt acts, a psychosis disorder, or a bipolar disorder must be denied or deferred by the Examiner. (See Items 46, and Item 47).

18.n. Substance dependence; or failed a drug test ever; or substance abuse or use of illegal substance in the last two years. "Substance" includes alcohol and other drugs (e.g., PCP, sedatives and hypnotics, anxiolytics, marijuana, cocaine, opioids, amphetamines, hallucinogens, and other psychoactive drugs or chemicals). For a "yes" answer to Item 18.n., the Examiner should obtain a detailed description of the history. A history of substance dependence or abuse is disqualifying. The Examiner must defer issuance of a certificate if there is doubt concerning an applicant's substance use. (See Item 47).

18.o. Alcohol dependence or abuse. See Item 18.n. Alcoholism is disqualifying.

18.p. Suicide attempt. A history of suicidal attempts or suicidal gestures requires further evaluation. The ultimate decision of whether an applicant with such a history is eligible for medical certification rests with the CAAI. The Examiner should take a supplemental history as indicated, assist in the gathering of medical records related to the incident(s), and, if the applicant agrees, assist in obtaining psychiatric and/or psychological examinations. (See Item 47).

18.q. Motion sickness requiring medication. A careful history concerning the nature of the sickness, frequency and need for medication is indicated when the applicant responds affirmatively to this item. Because motion sickness varies with the nature of the stimulus, it is most helpful to know if the problem has occurred in flight or under similar circumstances. (See Item 29).

18.r. Military medical discharge. If the person has received a military medical discharge, the Examiner should take additional history and record it in Item 60. It is helpful to know the circumstances surrounding the discharge, including dates, and whether the individual is receiving disability compensation. If the applicant is receiving veteran's disability benefits, the claim number and service number are helpful in obtaining copies of pertinent medical records. The fact that the applicant is receiving disability benefits does not necessarily mean that the application should be denied.

18.s. Medical rejection by military service. The Examiner should inquire about the place, cause, and date of rejection and enter the information in Item 60. It is of great assistance to the applicant and the CAAI if the Examiner can help obtain copies of military documents for attachment to the application form. If a delay of more than 14-calendar days is expected, the Examiner should transmit the Form to the CAAI with a note specifying what documents will be forwarded later under separate cover.

Disposition will depend upon whether the medical condition still exists or whether a history of such a condition requires denial or deferral under the government's medical standards.

18.t. Rejection for life or health insurance. The Examiner should inquire regarding the circumstances of rejection. The supplemental history should be recorded in Item 60. Disposition will depend upon whether the medical condition still exists or whether a history of such a condition requires denial or deferral under the government's medical standards.

18.u. Admission to hospital. For each admission, the applicant should list the dates, diagnoses, duration, treatment, name of the attending physician, and complete address of the hospital or clinic. If previously reported, the applicant may enter "PREVIOUSLY REPORTED, NO CHANGE." A history of hospitalization does not disqualify an applicant, although the medical condition that resulted in hospitalization may.

ICAO Annex I:6.2

ITEM 18b. FAMILY MEDICAL HISTORY

18b. Conviction and/or Administrative Action History – See Instructions Page					
Yes v.	No o	History of (1) any convictions (s) involving driving while intoxicated by, while impaired by, or while under the influence of alcohol or a drug; or (2) history of any conviction(s) or administrative action(s) involving an offense(s) which resulted in the denial, suspension, cancellation, or revocation of driving privileges or which resulted in attendance at an educational or a rehabilitation program.	Yes w.	No o	History of nontraffic conviction(s) (misdemeanors or felonies).

ITEM 19. VISITS TO HEALTH PROFESSIONAL WITHIN LAST 3 YEARS

19. Visit to health professional within the last 3 years Yes (Explain Below)		No See Instructions Page.
Date	Name, Address, and Type of Health Professional Consulted	Reason

ICAO Annex I:1.2.4.5

The applicant should list all visits in the last three years to a physician, physician assistant, nurse practitioner, psychologist, clinical social worker, or substance abuse specialist for treatment, examination, or medical/mental evaluation. The applicant should list visits for counseling only if related to a personal substance abuse or psychiatric condition. The applicant should give the name, date, address, and type of health professional consulted and briefly state the reason for the consultation. Multiple visits to one health professional for the same condition may be aggregated on one line.

Routine dental, eye, and periodic medical examinations and consultations with an employer-sponsored employee assistance program (EAP) may be excluded unless the consultations were for the applicant's substance abuse or unless the consultations resulted in referral for psychiatric evaluation or treatment.

When an applicant does provide history in Item 19, the Examiner should review the matter with the applicant. The Examiner will record in Item 60 only that information needed to document the review and provide the basis for a certification decision. If the Examiner finds the information to be of a personal or sensitive nature with no relevancy to flying safety, it should be recorded in Item 60 as follows:

"Item 19. Reviewed with applicant. History not significant or relevant to application."

If the applicant is otherwise qualified, a medical certificate may be issued by the Examiner.

Reviewing medical authorities will ask for further information regarding visits to health care providers only where the physical findings, report of examination, applicant disclosure, or other evidence suggests the possible presence of a disqualifying medical history or condition.

If an explanation has been given on a previous report(s) and there has been no change in the condition, the applicant may enter "PREVIOUSLY REPORTED, NO CHANGE."

Of particular importance is the reporting of conditions that have developed since the applicant's last airman certification medical examination. The Examiner is asked to comment on all entries, including those "PREVIOUSLY REPORTED, NO CHANGE." These comments may be entered under Item 60.

Examiners Responsibility to review Application

The Examiner must ensure completeness and review all Items 1 through 20. A medical certificate must never be issued to an applicant who refuses to answer Item 13, Items 16 and 17, Item 18, or Item 19, or to an applicant who refuses to sign the form (Item 20, front side of the examination form). The date for Item 16 may be estimated if the applicant does not recall the actual date of the last examination.

Verify that the name on the applicant's identification media matches the name on the application form. If it does not, question the applicant for an explanation. If the explanation is not reasonable (legal name change, subsequent marriage, etc.), do not continue the medical examination or issue a medical certificate. Contact the CAAI for guidance.

CHAPTER 3 Examination Techniques and Criteria for Qualification

ITEMS 21-48 of Medical Application

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.

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.

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.

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.

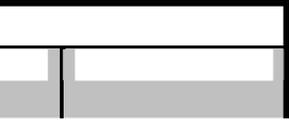
ITEM 21. Height

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);



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.

ITEMS 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		

(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:

- Bony defects of the skull
- Gross deformities
- Fistulas
- Evidence of recent blows or trauma to the head
- Limited motion of the head and neck
- 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 24-hours 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:

- *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.
- *Swelling* — abscess, allergy, cyst, exophthalmos, myxedema, or tumor.
- *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 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.

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 congenitals	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 polysomnogram, 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 polysomnogram, 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 pleura.	All	Radiography required in doubtful clinical cases	Unfit
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 airman 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, fundoscopic 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.
 - 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.
 - 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.

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

- **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.
- **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.
- **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			
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 - Unfit
2 nd Degree Mobitz I 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
2 nd Degree Mobitz II AV Block	All	CVE Protocol in accordance w/ Hypertensive Evaluation Specifications and 24-hour Holter	Unfit
3 rd Degree AV Block	All	CVE Protocol in accordance w/ Hypertensive Evaluation Specifications and 24-hour Holter	Unfit
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; bilat-carotid 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 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.

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

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 -Unfit
Raynaud's Disease	All	Document history and findings	If no impairment - Issue Otherwise - Unfit
Phlebothrombosis or Thrombophlebitis	All	See Thrombophlebitis Protocol	Unfit
		Document history and findings 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 - Unfit

ITEM 38. ABDOMEN AND VISCERA

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

The digital rectal examination is performed only at the applicant's option or if indicated by specific history or physical findings. If a digital examination is performed, the results are to be recorded in Item 59 of the application form.

All Classes

(a) No cases of disabling disease with important impairment of function of the gastrointestinal tract or its adnexae.

(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 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 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.

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 CAAI with special follow up 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 three 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. 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
Abdomen and Viscera and Anus Conditions			
Cholelithiasis	All	Document history and findings	If asymptomatic - Issue Otherwise - Unfit
Cirrhosis (Alcoholic)	All	See Substance Abuse/Dependence Disposition in Item 47,	Unfit
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	Unfit
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 - Unfit
Hepatitis C	All	Submit all pertinent medical information and current status report, include duration of symptoms, name and dosage of drugs and side effects	Unfit
Severe and moderate enlargement of the spleen persistently below the costal margin	1	Submit all pertinent medical information and current status report.	Unfit

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Abdomen and Viscera and Anus Conditions			
Inguinal, Ventral or Hiatal Hernia	All	Document history and findings	If symptomatic; likely to cause any degree of obstruction – Unfit 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	Unfit
Splenomegaly	All	Provide hematologic workup	Unfit
Disease or surgical intervention on any part of the digestive tract or its adnexae, particularly, any obstructions due to structure or compression.	All		If likely to cause incapacity in flight - Unfit
Major surgery on the biliary passages or the digestive tract or its adnexae, which involved a total or partial excision or diversion of any of these organs.	1, 2	Provide details of the operation.	Unfit - Until the AUTHORITY considers that the effects of the operation are not likely to cause incapacity in the air.
Malignancies			
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	Unfit
Colon/Rectal Cancer	All	Submit all pertinent medical records, operative/ pathology reports, current oncological status report; and current CEA and CBC	Unfit

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Malignancies			
Other Malignancies	All	Submit all pertinent medical records, operative/ pathology reports, current oncological status report, including tumor markers, and any other testing deemed necessary	Unfit
Peptic Ulcer	All	See Peptic Ulcer Protocol	Unfit

An applicant with an ileostomy or colostomy may also receive CAAI 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)		

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 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 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.

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 CAAI Application Form.

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		

All Classes

(a) 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.

(b) No medication or other treatment that the CAAI, based on 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. 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
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	Unfit
Kaposi's Sarcoma	All	Submit all pertinent medical information and current status report. See HIV Protocol	Unfit
Malignant Melanoma			
Melanoma Breslow 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	Unfit

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Malignant Melanoma			
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	Unfit
Neurofibromatosis with Central Nervous System Involvement	All	Submit all pertinent medical information and current status medical report	Unfit
Urticarial Eruptions			
Angioneurotic Edema	All	Submit all pertinent medical records and a current status report to include treatment	Unfit
Chronic Urticaria	All	Submit all records and a current status report to include treatment	Unfit

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 the application form.*

All Classes

(a) No organic, functional, or structural disease, defect, or limitation of the genitourinary system 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.

(b) 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.

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 application form.

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. Medical Disposition

(See Item 48, for details concerning diabetes and Item 57, 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 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
General Disorders			
Signs of organic disease of the kidney	All	Submit all pertinent medical information	Unfit Transient condition may be assessed as temporarily unfit
Affectations of the urinary passages and of the genital organs	All	Submit all pertinent medical information	Unfit Transient condition may be assessed as temporarily unfit
Sequelae of disease or surgical procedures on the kidneys and the urinary tract likely to cause incapacity, in particular, any obstructions due to stricture or compression.	All	Submit all pertinent medical information and status report	Unfit
Compensated nephrectomy without hypertension or uraemia	All	Submit all pertinent medical information and status report	Issue
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 – Unfit

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
General Disorders			
Cystostomy and Neurogenic bladder	All	Requires evaluation, report must include etiology, clinical manifestation and treatment plan	Unfit
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	Unfit
Renal Transplant	All	See Renal Transplant Protocol	Requires AUTHORITY 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 - Unfit
Chronic (Nephritis)	All	Submit all pertinent medical information and status report	Unfit
Nephrosis	All	Submit all pertinent medical information and status report	Unfit

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Neoplastic Disorders			
Bladder	All	Submit a current status report, all pertinent medical reports to include staging, metastatic work up, and operative report if applicable	Unfit
Other Neoplastic Disorders	All	Submit a current status report, all pertinent medical reports to include staging, metastatic work up, and operative report if applicable	Unfit
Prostatic Carcinoma	All	Submit a current status report, all pertinent medical reports to include staging, PSA, metastatic workup, and operative report, if applicable, and treatment	Unfit
Renal	All	Submit a current status report, all pertinent medical reports, include staging, metastatic workup, & operative report if applicable	Unfit

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Nephritis			
Polycystic Kidney Disease	All	Submit all pertinent medical information and status report	If renal function is normal and no hypertension - Issue Otherwise - Requires AUTHORITY Decision
Pyelitis or Pyelonephritis	All	Submit all pertinent medical information and status report	If asymptomatic - Issue Otherwise - Unfit
Pyonephrosis	All	Submit all pertinent medical information and status report	Unfit
Urinary System			
Major surgery on the urinary system which involved a total or partial excision or a diversion of any of its organs	1, 2	Submit all pertinent medical information and details of the operation.	Unfit Until medical authority considers that the effects of the operation are not likely to cause incapacity in the air.
Hydronephrosis with impaired renal function	1, 2	Submit all pertinent medical information and status report	Unfit
Nephrectomy (non-neoplastic)	1, 2	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 - Unfit
Nephrocalcinosis	1,2	Submit all pertinent medical information and status report	If calculus is not in collecting system or renal pelvis - Issue Otherwise - Unfit

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Urinary System			
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 - Unfit
Renal - Multiple episodes or Retained Stones	All	Submit current metabolic evaluation and status report	Unfit
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 - Unfit
Syphilis; at first issue of licence	All	Provide evidence, satisfactory to the Examiner, that applicant has undergone adequate treatment.	Issue

A history of recent or significant hematuria requires further evaluation.

¹¹ Complete studies to determine the possible etiology and prognosis are essential to favorable CAAI 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
GENITAL/REPORDUCTIVE SYSTEM			
Pregnancy	1, 2	Submit current evaluation and status report.	Temporarily Unfit In the absence of significant abnormalities, accredited medical conclusion may indicate fitness during the middle months of pregnancy.
Following birth or termination of pregnancy,	1, 2	Submit current medical records	Re-examination and assessed as fit.
History of severe menstrual disturbances that have proved unamenable to treatment.	All	Submit current medical records	Unfit - If the disturbances are likely to interfere with the safe exercise of the applicant's licence and ratings

~~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 the CAAI.

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		

All Classes

- (a) No active disease of the bones, joints, muscles or tendons and all serious functional sequelae of congenital or acquired disease shall be assessed as unfit. Functions after-effects of lesion affecting the bones, joints, muscles or tendons and certain anatomical defects compatible with the safe exercise of the applicants licence and rating privileges may be assessed as fit.
- (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.

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

II. 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 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	If applicant has a SODA issued on the basis of the amputation - Issue Otherwise - Requires AUTHORITY Decision After review of all medical data, the AUTHORITY may authorise a special medical flight test
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	Unfit

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	Unfit
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	Unfit
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	Unfit

For all the above conditions: If the applicant is otherwise qualified, the CAAI 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 CAAI will authorise the applicant to take a MFT in conjunction with the regular flight test. The MFT and regular private pilot flight test are conducted by an STATE inspector. This affords the applicant an opportunity to demonstrate the ability to control the aircraft despite the handicap. The STATE inspector prepares a written report and indicates whether there is a safety problem. A medical certificate and SODA may be provided to the inspector for issuance to the applicant, or the inspector may be required to send the report to the CAAI medical officer who authorised 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.

¹² Essential tremor is not disqualifying unless it is disabling.

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 - Unfit

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	Requires AUTHORITY Decision
Collagen Disease			
Acute Polymyositis; Dermatomyositis; Lupus Erythematosus; or Periarthritis 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 AUTHORITY 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 CAAI specifically authorising 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 COX2 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
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	Unfit
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 AUTHORITY 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	Unfit
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	Unfit

¹⁴ A 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 CAAI consideration. The applicant may be authorised to take a MFT along with the private pilot certificate flight test. If successful, operational limitations may be added. A statement of demonstrated ability is issued.

Other neuromuscular conditions are covered in more detail in Item 46.

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	Unfit

ITEM 44. IDENTIFYING BODY MARKS, SCARS, TATTOOS

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

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 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. 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 Application form. Medical certificates must not be issued to applicants with medical conditions that require deferral without consulting the CAAI. 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		

All Classes

(a) No significant localized and generalized enlargement of the lymphatic glands and of diseases of the blood. In cases, where accredited medical conclusion indicates the condition is not likely to affect the safe exercise of the applicant's licence and rating privileges, the applicant may be assessed as fit.

(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

(3) 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. 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
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).	Unfit
Leukemia, Acute and Chronic			
Leukemia, Acute and Chronic – All Types	All	Submit a current status report and all pertinent medical reports	Unfit
Chronic Lymphocytic Leukemia	All	Submit a current status report and all pertinent medical reports	Unfit

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	Unfit
Lymphedema	All	Submit a current status report and all pertinent medical reports. Note if there are any motion restrictions of the involved extremity	Unfit
Lymphosarcoma	All	Submit a current status report and all pertinent medical reports. Include past and present treatment(s).	Unfit
Possession of Sickle Cell Trait	1,2	Submit a current status report and all pertinent medical reports	Issue unless there is positive medical evidence to the contrary. If due to a transient condition should be only temporarily unfit.

ITEM 46. NEUROLOGIC

CHECK EACH ITEM IN APPROPRIATE COLUMN	NORMAL	ABNORMAL
46. NEUROLOGIC		

All Classes

(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 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.

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, Page 80

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. 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 CAAI. 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 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
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 US, name and dosage of medication(s) and side effects	Unfit
Intracranial Aneurysm or Arteriovenous Malformation	All	Submit all pertinent medical records, current neurologic report, name and dosage of medication(s) and side effects	Unfit

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 (including the brain stem)			
Intracranial Tumor ¹⁶	All	Submit all pertinent medical records, current neurologic report, name and dosage of medication(s) and side effects	Unfit
Pseudotumor Cerebri (benign intracranial hypertension)	All	Submit all pertinent medical records, current neurologic report, name and dosage of medication(s) and side effects	Unfit

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 CAAI and returned to flying status after a minimum satisfactory convalescence of one 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	Unfit
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 Neuro-psychological testing	Unfit

¹⁷

Factors 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.

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 specifically on the factors below, 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	Unfit
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	Unfit

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
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	Unfit
Post-traumatic Headache	All	Submit all pertinent medical records, current neurologic report, name and dosage of medication(s) and side effects	Unfit
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	Unfit
Infections of the Nervous System			
Brain Abscess; Encephalitis; Meningitis; and Neurosyphilis	All	Complete neurological evaluation with appropriate laboratory and imaging studies	Unfit

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	Unfit
Epilepsy ²⁰	All	Submit all pertinent medical records, current status report, to include name and dosage of medication(s) and side effects	Unfit
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 – Unfit
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	Unfit

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 CAAI has granted an Waiver under the special issuance section of this Guide 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. Follow-up evaluations are usually necessary to confirm continued stability of an individual's condition if an Waiver is granted under the special issuance section of this Guide.

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Other Conditions			
Trigeminal Neuralgia	All	Submit all pertinent medical records, current neurologic report, name and dosage of medication(s) and side effects	Unfit
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 one 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	Unfit

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 AUTHORITY 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	Unfit

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)		

All Classes

(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 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 other personality disorder, neurosis, or other mental condition 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. (Also see Items 18.m., n., and p.).

II. Examination Techniques

The CAAI 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 CAAI 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 CAAI encourages Examiners first to check this Guide for Aviation Medical Examiners and other CAAI informational documents. If the question remains unresolved, the Examiner should seek advice from a RFS or the Manager of the CAAI.

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, follow up 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). 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 requires 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).

The Examiner, upon identifying any significant problems, should defer issuance of the medical certificate and report findings to the CAAI. This could be accomplished by contacting the CAAI.

. **Medical Disposition**

. 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.

. Denials. The CAAI 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 CAAI to grant a Waiver under the special issuance section of this Guide and, based upon individual considerations, the CAAI 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 CAAI.*

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	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 six months and discontinued for at least three months - Issue Otherwise Unfit
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	Unfit

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSTION
Psychiatric Conditions			
Bipolar Disorder	All	See III. B-3 below	Unfit
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 - Unfit
Psychosis	All	See III. B-2 below	Unfit
Pyschotropic 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 – Unfit
Substance Abuse	All	See III. B-6 below	Unfit
Substance Dependence	All	See III.B-5 below	Unfit
Suicide Attempt	All	Submit all pertinent medical information required	Unfit

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 CAAI, 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 CAAI 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 Waiver 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.).

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.

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 two 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;

. During bio-chemical testing, on such occasions as pre-employment, upon reasonable suspicion, after accidents/incidents, at intervals, and at random.

. The CAAI 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		

All Classes

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

(b) No other metabolic, nutritional or endocrine disorders, 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.

II. Examination Techniques

A protocol for examinations applicable to Item 48 (see page 121), 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 (see page 121), 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. 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
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 AUTHORITY Decision
Hemophilia	All	Submit a current status report and all pertinent medical reports. Include frequency, severity and location of bleeding sites	Unfit
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	Unfit
Polycythemia	All	Submit a current status report and all pertinent medical reports; include CBC	Unfit

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 AUTHORITY Decision
Diabetes Mellitus Diet Controlled	All	See Diabetes Mellitus Controlled by Diet and Exercise Protocol	If no glycosuria and normal Hgba1c - Issue
Diabetes Mellitus II requiring Oral Medication	2, 3	See Diabetes Mellitus II Protocol	Oral drugs administered under conditions permitting appropriate medical supervision and control - Issue
Endocrine Disorders			
Acromegaly	All	Submit all pertinent medical records; current status to include names and dosage of medication(s) and side effects	Unfit
Addison's Disease	All	Submit all pertinent medical records; current status to include names and dosage of medication(s) and side effects	Unfit

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	Unfit
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	Unfit
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 - Unfit
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	Unfit

DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Endocrine Disorders			
Hyperthyroidism	All	Submit all pertinent medical records; current status to include names and dosage of medication(s) and side effects and current TFTs	Unfit
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 - Issue Otherwise -Unfit
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 AUTHORITY Decision
Human Immunodeficiency Virus (HIV)			
Acquired Immunodeficiency Syndrome (AIDS)	All	See HIV Protocol	Unfit
Human Immunodeficiency Virus (HIV)	All	See HIV Protocol	Unfit
DISEASE/CONDITION	CLASS	EVALUATION DATA	DISPOSITION
Leukemia, Acute and Chronic			
Leukemia, Acute and Chronic - All Types	All	Submit a current status report and all pertinent medical reports	Unfit

²³

The use of thyroid replacement therapy following diagnosis of either hyperthyroidism or hypothyroidism is not disqualifying if the applicant appears clinically euthyroid pending receipt of

confirmatory laboratory tests.

CHAPTER 4 Examination Techniques And Criteria for Qualification

ITEMS 49-64 of CAAI Application Form

This chapter provides guidance for the completion of Items 49-64 of CAAI Application Form. The Examiner is responsible for conducting the examination. However, he or she may delegate to a qualified physician's assistant, nurse, aide, or laboratory assistant the testing required for Items 49-58. Regardless of who performs the tests, the Examiner is responsible for the accuracy of the findings, and this responsibility **may not** be delegated.

After all routine evaluations and tests are completed, the Examiner should make a complete review of CAAI Application Form. If the form is complete and accurate, the Examiner should add final comments, make qualification decision statements, and sign the declaration. The medical history page of the application Form must be completed in the handwriting of and signed and dated by the applicant. Upon completion of the physical examination, the entire Application Form, Items 1 through 64, **must** be electronically transmitted to the CAAI.

ITEM 49. HEARING

49. Hearing	Record Audiometric Speech Discrimination Score Below		Right Ear					Left Ear				
Conversational Voice Test at 2 meters Pass Fail		Audiometer Threshold in decibels	500	1000	2000	3000	4000	500	1000	2000	3000	4000

(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 2 meters 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. *The reference zero for calibration of pure-tone audiometers used for applying these standards is that of the International Organisation for Standardization (ISO) Recommendation R389, 1964.*

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

(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

Classes 1 and 2

The applicant must be tested on pure tone audiometric testing device using unaided hearing at first issue and then once every five years up to age 40 years, and once every three years after age 40. The hearing requirements are listed below according to the following table of acceptable thresholds, using the calibration standards of the American National Standards Institute (ASNI), 1969:

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

An applicant with a hearing loss greater than the above may be declared fit provided that:

1. The applicant can demonstrate an ability to hear an average conversational voice in a quiet room, using both ears, at a distance of 2 meters from the Examiner, with the back turned to the Examiner; and
2. The Class 1 applicant has a hearing performance in each ear separately equivalent to that of a normal person, against a background noise that will simulate the masking properties of flight deck noise upon speech and beacon signals.

3. The Class 3 applicant has a hearing performance in each ear separately equivalent to that of a normal person, against a background noise that will simulate that experienced in a typical air traffic control working environment.

The frequency composition of the background noise referred to above is defined only to the extent that the frequency ranges 600 to 4,800 Hz is adequately represented.

Alternatively, other methods providing equivalent results to those specified above must be used.

Class 3

The applicant must demonstrate an ability to hear an average conversational voice in a quiet room, using both ears, at a distance of 2 meters from the Examiner, with the back turned to the Examiner.

ICAO Annex 1:6.3.4

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 2 meters, 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 application form, 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. 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.

Equip

ment. Approval. The CAAI does not approve or designate specific audiometric equipment for use in medical certification. Equipment used for 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 application form) include a note indicating whether it is ASA or ANSI.* Only then can the CAAI 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 (dB) 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.

Hearing requirements are established in addition to the ear examination conducted during the medical examination for the physical and mental requirements.

In the choice of speech material, aviation-type material is not to be used exclusively for the above tests. Lists of phonetically balanced words in use by a number of Contracting States have given satisfactory results.

A quiet room for the purposes of testing the hearing requirements is a room in which the intensity of the background noise is less than 50 dB when measured on "slow" response of an "A"-weighted sound level meter.

For the purposes of hearing requirements, the sound level of an average conversational voice at point of output ranges from 85 to 95 dB.

III. Medical Disposition

1. Special Issuance of Medical Certificates. Applicants who do not meet the auditory standards may be found eligible for a Statement of Demonstrated Ability (SODA). An applicant seeking a SODA must make the request in writing to the CAAI. 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 CAAI may issue a combination medical certificate with the limitation:

NOT VALID FOR CONTROL ZONES OR AREAS WHERE RADIO COMMUNICATION IS REQUIRED. (See Items 25-30.)

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		51a. Near Vision	51b. Intermediate Vision	52. Colour Vision
Right 6/ Left 6/ Both 6/	Corrected to 6/ Corrected to 6/ Corrected to 6/	Pass Fail	Pass Fail	Pass Fail

Classes 1 and 2

Distant visual acuity of 6/9 or better in each eye separately, and binocular vision must be 6/6 or better with or without corrective lenses. If corrective lenses (spectacles or contact lenses) are necessary for 6/6 vision, the person may be eligible only on the condition that corrective lenses are worn while exercising the privileges of an airman certificate and ratings, and an extra pair of suitable correcting spectacles is kept readily available.

Class 3

Distant visual acuity of 6/12 or better in each eye separately, and binocular vision must be 6/9 or better, with or without corrective lenses. If corrective lenses (spectacles or contact lenses) are necessary for 6/9 vision, the person may be eligible only on the condition that corrective lenses are worn while exercising the privileges of an airman certificate and ratings, and an extra pair of suitable correcting spectacles is kept readily available.

All Classes

An applicant accepted as meeting the provisions above is deemed to continue to do so unless there is reason to suspect otherwise, in which case an ophthalmic report is required at the discretion of the [CAA]. Both uncorrected and correct visual acuity are normally measured and recorded at each re-examination. Conditions which indicate a need to obtain an ophthalmic report include: a substantial decrease in the uncorrected visual acuity; any decrease in best corrected visual acuity, and the occurrence of eye disease, eye injury or eye surgery.

ICAO Annex I:6.3.3

II. Examination Equipment and Techniques

1. Each eye will be tested separately, and both eyes together.
2. Visual acuity should be measured by means of a series of Landolt rings or similar optotypes, placed at a distance from the applicant appropriate to the method of testing adopted.
3. A metal, opaque plastic or cardboard occluder should be used to cover the eye not being examined.
4. The examining room should be illuminated at a level that corresponds to ordinary office illumination (30-60 cd/m²).

5. If the applicant wears corrective lenses, the uncorrected acuity should be determined first; then corrected acuity. If the applicant wears contact lenses they may not need to have their uncorrected visual acuity measured at each re-examination provided the history of their contact lens prescription is known.

6. Applicants with a large refractive error must use contact lenses or high-index spectacle lenses. (High-index spectacles are required to minimize peripheral field distortion.)

7. Common errors:

- Permitting the applicant to view the chart with both eyes.
- Failure to observe the applicant's face to detect squinting.
- Failure to obtain the corrected acuity when the applicant wears glasses.
- Failure to note and to require the removal of contact lenses.

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

Medical Disposition

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 CAAI consideration for grant of an Waiver under the special issuance section of this Guide 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 CAAI Form 7, Report of Eye Evaluation, which has been completed by an eye specialist .

C. Applicants whose uncorrected visual standards acuity is worse than 6/60 are required to provide a full ophthalmic report prior to initial Medical certificate and every five years thereafter. Applicants with eye disease (e.g., glaucoma) should be referred only to an ophthalmologist. The CAAI Form 7, Report of Eye Evaluation, should be provided to the specialist by the Examiner.

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 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.

Item 51.a. NEAR VISION

Item 51.b. INTERMEDIATE VISION

50. Distant Vision		51a. Near Vision	51b. Intermediate Vision	52. Colour Vision
Right 6/	Corrected to 6/	Pass	Pass	Pass
Left 6/	Corrected to 6/	Fail	Fail	Fail
Both 6/	Corrected to 6/			

All Classes

The applicant shall have the ability to read, while wearing the correcting lenses, if any, the N5 chart or its equivalent at a distance selected by that applicant in the range of 30 to 50 cm and the N14 chart at a distance of 100 cm. If this requirement is met only by the use of near correction, the applicant may be assessed as fit provided that this near correction is added to the spectacle correcting already prescribed for distance vision; if no such correction is prescribed, a pair of spectacles for near use shall be kept readily available during the exercise of the privileges of the licence. When near correction is required, the applicant shall demonstrate that one pair of spectacles is sufficient to meet both distant and near visual requirements.

N5 and N14 refer to the size of typeface used. See Near Vision Acuity Chart

Any applicant who needs near correction to meet this requirement will require "look-over", bifocal or perhaps multifocal lenses in order to read the instruments and a chart or manual held in the hand, and also to make use of distant vision, through the windscreen, without removing the lenses. Single-vision near correction (full lenses of one power only, appropriate for reading) significantly reduces distant visual acuity and is therefore not acceptable.

Whenever there is a requirement to obtain or renew correcting lenses, an applicant is expected to advise the refractionist of reading distances for the visual flight deck tasks relevant to the types of aircraft in which the applicant is likely to function.

When near correction is required in accordance with this paragraph, a second pair of near-correction spectacles shall be kept available for immediate use.

The applicant shall be required to have normal fields of vision.

The applicant shall be required to have normal binocular function.

Note: Defective stereopsis, abnormal convergence not interfering with near vision, and ocular misalignment where the fusional reserves are sufficient to prevent asthenopia and diplopia may not be disqualifying.

II. Equipment and Examination Techniques

NEAR AT 30-50 cms	INTERMEDIATE AT 100 cms
Near Vision Acuity Test Chart N5	Near Vision Acuity Test Chart N14
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

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.

III. Medical Disposition

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

If the applicant meets the uncorrected near vision standard but already uses spectacles that correct the vision, it is recommended that the Examiner enter the limitation for near vision corrective glasses on the certificate.

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 multiple defective distant and near 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 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 VISION

When near vision correction is required, a second pair of near-correction spectacles must be kept available for immediate use.

The appropriate wording for combined near and intermediate vision limitation is:

HOLDER SHALL POSSESS GLASSES THAT CORRECT
FOR NEAR AND INTERMEDIATE VISION

ITEM 52. COLOR VISION

50. Distant Vision		51a. Near Vision	51b. Intermediate Vision	52. Colour Vision
Right 6/	Corrected to 6/	Pass	Pass	Pass
Left 6/	Corrected to 6/	Fail	Fail	Fail
Both 6/	Corrected to 6/			

All Classes

Color vision: Ability to perceive those colors necessary for the safe performance of airman duties. The applicant must be tested for the ability to correctly identify a series of pseudoisochromatic plates.

II. Examination Equipment and Techniques

EQUIPMENT	TEST	EDITION	PLATES
Pseudoisochromatic plates	Test book should be held 76 centimeters from applicant. Plates should be illuminated by daylight or in artificial light of the same color temperature such as that provided by CIE standard illuminants C or D65 as specified by the International Commission of Illumination (CIE). 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
		1983	-15

Acceptable Substitutes: The procedures for the Farnsworth Lantern, Farnsworth D-15, HUE 100 or OPTEC 900 Color Vision Test; Keystone Orthoscope; Keystone Telebinocular; LKC

III. 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.

B. Certificate Limitation.

Class 3 Only

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:

VALID DAYTIME ONLY

Classes 1 and 2

An applicant failing to obtain a satisfactory result on the color perception test must be assessed as Unfit.

C. Special Issuance of Medical Certificates.

An applicant who fails to obtain a satisfactory result on the color perception test, may request a signal light test. This request should be in writing and should be directed to the CAAI. If the applicant passes the signal light test, he/she can be assessed as FIT. A signal light test determines whether the applicant is able to readily distinguish the colors used in air navigation and correctly identify aviation colored lights.

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

ICAO Annex I:6.3.3, 6.2.4

ITEM 53. FIELDS OF VISION

53. Field of Vision	54. Heterophoria 20' (in prism dioptres)	Esophoria	Exophoria	Right Hyperphoria	Left Hyperphoria
Normal	Abnormal				

All Classes

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. Applicants must have normal fields of vision.

II. Examination Equipment and Techniques

1. Fifty-inch square black matte surface wall target with center white fixation point;
2millimeter white test object on black-handled holder:

- . The applicant should be seated 1 meter from the target.
- . An occluder should be placed over the applicant's right eye.
- . The applicant should be instructed to keep the left eye focused on the fixation point.
- . 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.
- . 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.
- . 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 ophthalmologist.

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

- . **Medical Disposition**
- . Ophthalmological Consultations.

If an applicant fails to identify the target in any presentation at a distance of less than 58centimeters from the fixation point, an ophthalmologist's evaluation must be requested. This is a requirement for all classes of certification. The Examiner should provide CAAI Form 14, Ophthalmological Evaluation for Glaucoma, for use by the ophthalmologist if glaucoma is suspected.

B. Glaucoma.

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. (See Item 31).

If considerable disturbance in night vision is documented, the CAAI may limit the medical certificate:

NOT VALID FOR NIGHT FLYING

C. Other Pathological Conditions. (See Items 31-34.)

ITEM 54. HETEROPHORIA

53. Field of Vision	54. Heterophoria 20' (in prism dioptres)	Esophoria	Exophoria	Right Hyperphoria	Left Hyperphoria
Normal	Abnormal				

Classes 1 and 3

(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 CAAI 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.

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. Medical Disposition

1. Class 1 and 3: 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 CAAI may require further examination by a qualified eye specialist.

2. Class 2: Applicants 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 CAAI. If the applicant wishes further consideration, the Examiner can help expedite CAAI review by providing the applicant with a copy of CAAI Form 7, Report of Eye Evaluation.

ITEM 55. BLOOD PRESSURE

55. Blood Pressure Systolic Diastolic (Sitting, mm of Mercury)	56. Pulse (Resting)	57. Urinalysis (if abnormal, give results) Normal Abnormal	Albumin	Sugar	58. ECG (Date) DD MM YYYY
----------------------------------------------------------------	---------------------	---------------------------------------------------------------	---------	-------	------------------------------

All Classes

The systolic and diastolic blood pressures must be within normal limits. 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.

Measurement of blood pressure is an essential part of the CAAI medical certification examination. The average blood pressure while sitting should not exceed 155mm 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 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 Class 1, 2, or 3 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. 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 CAAI specified limits, may, at the Examiner's discretion, have a series of three 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 CAAI 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 CAAI.

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

ITEM 56. PULSE

55. Blood Pressure Systolic Diastolic (Sitting, mm of Mercury)	56. Pulse (Resting)	57. Urinalysis (if abnormal, give results) Normal Abnormal	Albumin	Sugar	58. ECG (Date) DD MM YYYY
----------------------------------------------------------------	---------------------	---------------------------------------------------------------	---------	-------	------------------------------

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. Medical Disposition

If there is bradycardia, tachycardia, or arrhythmia, further evaluation is warranted and deferral may be indicated (see Item 36.) 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

55. Blood Pressure Systolic Diastolic (Sitting, mm of Mercury)	56. Pulse (Resting)	57. Urinalysis (if abnormal, give results) Normal Abnormal	Albumin	Sugar	58. ECG (Date) DD MM YYYY
----------------------------------------------------------------	---------------------	---------------------------------------------------------------	---------	-------	------------------------------

All Classes

(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 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.

II. Examination Techniques

Any standard laboratory procedures are acceptable for these tests.

III. 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 the application Form or attached to the form as an addendum.

ITEM 58. ECG

55. Blood Pressure Systolic Diastolic (Sitting, mm of Mercury)	56. Pulse (Resting)	57. Urinalysis (if abnormal, give results) Normal Abnormal	Albumin	Sugar	58. ECG (Date) DD MM YYYY
-------------------------------------------------------------------	---------------------	------------------------------------------------------------------	---------	-------	------------------------------

All Classes

All persons applying for medical certification must demonstrate an absence of myocardial infarction and other clinically significant abnormality on an electrocardiographic exam:

- (1) At the first application for a licence.
- (2) At the re-exam of applicants between the ages of 30 and 40 every two years;
- (3) On an annual basis after reaching the 40th birthday at each re-exam.

An ECG will satisfy this requirement 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 the application form.

- 1. If an applicant is due for a periodic ECG, the Examiner performs and transmits a current tracing according to established procedures.

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 CAAI. 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 the Application Form to verify that a tracing has been transmitted from another source. The date of that ECG should be entered in Item 58.

- 2. If an 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. The purpose of routine electrocardiography is case finding. It does not provide sufficient evidence to justify disqualification without further thorough cardiovascular investigation.

B. Currency

1. In order to meet regulatory requirements, an applicant's periodic ECG must have been performed and transmitted within 60 days prior to the date of the class1 application (Application Form). The CAAI, verifies currency of all periodic ECG's.

2. There is no provision for issuance of a 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 application form to the CAAI.

C. Interpretation

1. All ECG's required to establish eligibility for medical certification must be forwarded for interpretation to the CAAI. 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 CAAI. Abnormalities are investigated to determine their significance, if any.

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

See CAAI Form 8065-1 Instructions for Preparation and Submittal of Electrocardiogram. However, the CAAI also will accept 3-channel or 12channel strips uncut or mounted on standard mounting paper. The following steps are essential to expedite processing of these tracings:

- . All leads must be properly identified.
- . Applicant and Examiner identification must be complete and the tracing must be dated.

2. Provide a Resting tracing. Tracings must be stapled to the ECG report form to ensure that all leads are appropriately coded and interpreted.

ITEM 59. OTHER TESTS GIVEN

59. Other tests given

All Classes

(a) Whenever the CAAI finds that additional medical information or history is necessary to determine whether an applicant for or the holder of a medical certificate meets the medical standards for it, the CAAI requests that person to furnish that information or to authorise any clinic, hospital, physician, or other person to release to the CAAI all available information or records concerning that history. If the applicant or holder fails to provide the requested medical information or history or to authorise the release so requested, the CAAI may suspend, modify, or revoke all medical certificates the airman holds or may, in the case of an applicant, deny the application for an airman medical certificate.

(b) If an airman medical certificate is suspended or modified under paragraph (a) of this section, that suspension or modification remains in effect until the requested information, history, or waiver is provided to the CAAI and until the CAAI determines whether the person meets the medical standards under this part.

ICAO Annex I:1.2.4.5

II. Examination Techniques

Additional medical information may be furnished through additional history taking, further clinical examination procedures, and supplemental laboratory procedures.

On rare occasions, even surgical procedures such as biopsies may be indicated. As a designee of the CAAI, when an Examiner determines that there is a need for additional medical information, based upon history and findings, the Examiner is authorised to request prior hospital and outpatient records and to request supplementary examinations including laboratory testing and examinations by appropriate medical specialists. The Examiner should discuss the need with the applicant. The applicant should be advised of the types of additional examinations required and the type of medical specialist to be consulted. Responsibility for ensuring that these examinations are forwarded and that any charges or fees are paid will rest with the applicant. All reports should be forwarded to the CAAI

Whenever, in the Examiner's opinion, medical records are necessary to evaluate an applicant's medical fitness, the Examiner should request that the applicant sign an waiver for the Release of Medical Information (CAAI Form 21.) The Examiner should forward this waiver to the custodian of the applicant's records so that the information contained in the record may be obtained for attachment to the report of medical examination.

ITEM 60. COMMENTS ON HISTORY AND FINDINGS

60. Comments on History and Findings: AME shall comment on all "YES" answers in the Medical History section and for abnormal findings of the examination (Attach all consultation reports, ECGs, X-rays, etc. to this report before mailing).	FOR CAAI USE
	Pathology Codes:
	Coded By:
	Clerical Reject
Significant Medical History Yes No Abnormal Physical Findings Yes No	

Comments on all positive history or medical examination findings must be reported by Item Number. Item 60 provides the Examiner an opportunity to report observations and/or findings that are not asked for on the application form. Concern about the applicant's behavior, abnormal situations arising during the examination, unusual findings, unreported history, and other information thought germane to aviation safety should be reported in Item 60. The Examiner should record name, dosage, frequency, and purpose for all currently used medications.

If possible, all ancillary reports such as consultations, ECG's, x-ray release forms, and hospital or other treatment records should be attached. If the delay for those items would exceed 14 days, the Examiner should forward all available data to the CAAI, with a note specifying what additional information is being prepared for submission at a later date.

If there are no significant medical history items or abnormal physical findings, the Examiner should indicate this by checking the appropriate block.

ITEM 61. APPLICANT'S NAME

61. Applicant's Name	62. Has Been Issued for Further Evaluation	Medical Certificate No Certificate Issued – Deferred Has Been Denied – Letter of Denial Issued (Copy Attached)
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The applicant's name should be typed.

ITEM 62. Has Been Issued

61. Applicant's Name	62. Has Been Issued for Further Evaluation	Medical Certificate No Certificate Issued – Deferred Has Been Denied – Letter of Denial Issued (Copy Attached)
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The Examiner must check the proper box to indicate if the Medical Certificate, CAAI Form 9 (white), or Medical Certificate and Student Pilot Certificate, CAAI Form 8420-2 (yellow), has been issued. If neither form has been issued, the Examiner must indicate denial or deferral by checking one of the two lower boxes. If denied, a copy of the Examiner's letter of denial, CAAI Form 2, should be forwarded to the CAAI.

A. Applicant's Refusal. When advised by an Examiner that further examination and/or medical records are needed, the applicant may elect not to proceed. The Examiner should note this on the Application Form. No certificate should be issued, and the Examiner should forward the application form to the CAAI, even if the application is incomplete.

B. Anticipated Delay. When the Examiner anticipates a delay of more than 14 days in obtaining records or reports concerning additional examinations, the completed application Form should be transmitted to the CAAI with a note stating that additional information will follow. No medical certificate should be issued.

C. Issuance. When the Examiner receives all the supplemental information requested and finds that the applicant meets all the CAAI medical standards for the class sought, the Examiner should issue a medical certificate.

D. Deferral. If upon receipt of the information the Examiner finds there is a need for even more information or there is uncertainty about the significance of the findings, certification should be deferred. The Examiner's concerns should be noted on the application Form and the application transmitted to the CAAI for further consideration.

If the applicant decides at this point to abandon the application for a medical certificate, the Examiner should also note this on application Form and mail the incomplete form to the CAAI. An incomplete Application Form should not be transmitted to the CAAI for further consideration.

E. Denial. When the Examiner concludes that the applicant is clearly ineligible for certification, the applicant should be denied, using CAAI Form 2. Use of this form will provide the applicant with the reason for the denial and with appeal rights and procedures. (See Chapter 1, Item 4, Medical Certification Decision Making and Examiner Assisted Special Issuance, page 4.)

ITEM 63. DISQUALIFYING DEFECTS

63. Disqualifying Defects (List by item number)

List all disqualifying defects, diagnoses, or conditions by **ITEM NUMBER** that serve as the basis for denial or deferral in Item 63. Comments or discussion of specific observations or findings may be reported in Item 60 or submitted on a separate sheet of paper.

If the Examiner denies the applicant, the Examiner must issue a Letter of Denial, CAAI Form 2 to the applicant, and report the issuance of the denial in Item 60.

ITEM 64. MEDICAL EXAMINER'S DECLARATION

63. Disqualifying Defects (List by item number)		
64. Medical Examiner's Declaration – I hereby certify that I have personally reviewed the medical history and personally examined the applicant named on this medical examination report. This report with any attachment embodies my findings completely and correctly.		
Date of Examination	Aviation Medical Examiner's Name	Aviation Medical Examiner's Signature
ADDRESS Number / Street City		AME Serial Number
State Postal Code		AME Telephone

If the application is not transmitted electronically, the date of examination and the Examiner's name and complete address must be typed. The Examiner must personally sign the completed form. The Examiner's serial number and telephone number should be entered in the blocks provided.

The CAAI designates specific individuals as Examiners, and this status may not be further delegated to a physician who may be covering the designee's practice.

Although the CAAI does not require that the Examiner sign the Examiner's copy of the application form, the Examiner should at least personally initial this form.

MEDICAL PROTOCOLS

01. PROTOCOL FOR CARDIOVASCULAR EVALUATION
02. PROTOCOL FOR EVALUATION OF CORONARY HEART DISEASE
03. PROTOCOL FOR HISTORY OF INSULIN-TREATED DIABETES MELLITUS - TYPE I and TYPE II
04. PROTOCOL FOR HISTORY OF ORAL DIABETES MEDICATION(S) DIABETES MELLITUS – TYPE II
05. PROTOCOL FOR HISTORY OF DIABETES MELLITUS CONTROLLED BY DIET AND EXERCISE
06. PROTOCOL FOR HISTORY OF HUMAN IMMUNODEFICIENCY VIRUS (HIV) and RELATED CONDITIONS
07. PROTOCOL FOR EVALUATION OF HYPERTENSION
08. PROTOCOL FOR EVALUATION OF IMPLANTED PACEMAKER
09. PROTOCOL FOR MUSCULOSKELETAL EVALUATION
10. PROTOCOL FOR PEPTIC ULCER
11. PROTOCOL FOR RENAL TRANSPLANT
12. PROTOCOL FOR SUBSTANCES OF DEPENDENCE/ABUSE (DRUGS - ALCOHOL)
13. PROTOCOL FOR THROMBOEMBOLIC DISEASE
14. PROTOCOL FOR CARDIAC VALVE REPLACEMENT
15. PROTOCOL FOR VALVULOPLASTY

01. PROTOCOL FOR CARDIOVASCULAR EVALUATION

A current cardiovascular evaluation must include:

- An assessment of personal and family medical history
- Clinical cardiac and general physical examination
- An assessment and statement regarding the applicant's medications, functional capacity, modifiable cardiovascular risk factors
- Motivation for any necessary change
- Prognosis for incapacitation
- Blood chemistries (fasting blood sugar, current blood lipid profile to include total cholesterol, HDL, LDL, and triglycerides) performed within last 90 days

02. PROTOCOL FOR EVALUATION OF CORONARY HEART DISEASE

Myocardial infarction, angina pectoris, or other evidence of coronary heart disease is covered in this protocol. Reports and test results relating to the diagnosis in accordance with the attached protocol must be obtained and forwarded to the CAAI.

A. Requirements are for consideration for any class of airman medical certification.

1. A 6-month recovery period must elapse after the event (angina, infarction, bypass surgery, angioplasty, or stenting) before consideration can be given for medical certification.
2. Hospital admission summary (history and physical), coronary catheterization report, and operative report regarding all cardiac events and procedures.
3. A current cardiovascular evaluation must include an assessment of personal and family medical history; a clinical cardiac and general physical examination; an assessment and statement regarding the applicant's medications, functional capacity, modifiable cardiovascular risk factors, motivation for any necessary change, prognosis for incapacitation; and blood chemistries (fasting blood sugar, current blood lipid profile to include total cholesterol, HDL, LDL, and triglycerides).
4. A maximal ECG treadmill stress test must be performed no sooner than 6-months post event. All stress testing should achieve 100 percent of maximal predicted heart rate unless medically contraindicated or prevented either by symptoms, conditioning, or concurrent use of medication, such as: B-blockers, calcium channel blockers (spec. diltiazem or verapamil), and/or digitalis preparations. With the consent of the attending physician, these medications should be discontinued for at least 48 hours prior to testing in order to attain maximal stress.

The blood pressure/pulse recordings at various stages and actual ECG tracings must be submitted. Tracings must include a rhythm strip, a full 12-lead ECG recorded at rest (supine and standing) and during hyperventilation while standing, one or more times during each stage of exercise, at the end of each stage, at peak exercise, and every minute during recovery for at least five minutes or until the tracings return to baseline level. The worksheet and interpretive report must be submitted. Computer-generated, sample cycle ECG tracings are unacceptable in lieu of the complete tracings.

A **SPECT** myocardial perfusion exercise stress test using technetium agents and/or thallium may be required for consideration for any class if clinically indicated or the exercise stress test is abnormal by any of the usual parameters. The interpretive report and all SPECT images, preferably in black and white, must be submitted.

NOTE: *If cardiac catheterization and/or coronary angiography have been performed, all reports and the actual films (if films are requested) must be submitted for review. Copies should be made of all films as a safeguard against loss. Films should be labeled with the name of the pilot and a return address.*

B. Additional requirements for or unlimited* Class 1 medical certification. The following should be accomplished no sooner than 6-months post event:

1. Post-event coronary angiography. The application may be considered without post-event angiography but certification for unlimited Class 1 is unlikely without it.

2. A maximal thallium exercise stress test (See A.4).

3. Form 20, Medical Exemption Petition (Operational Questionnaire). The applicant should indicate if a lower class medical certificate is acceptable in the event ineligible for class sought.

C. Certification. Applicants found qualified for an airman medical certificate will be required to provide periodic follow-up cardiovascular evaluations including maximal stress testing. Additional diagnostic testing modalities, including radionuclide studies, may be required if indicated.

No consideration will be given for a medical certificate until all the required data have been received. The use of the applicant's full name, date of birth, and social security number on all correspondence and reports will aid the agency in locating the proper file.

It is the responsibility of each applicant to provide the medical information required to determine his/her eligibility for airman medical certification. In order to expedite processing, it is suggested that the information be sent in ONE MAILING, when possible, to:

Civil Aviation Authority Israel
P.O.B 8
Ben Gurion Airport
Israel

*Limited Class 1 medical certificate refers to a Class 1 certificate with a functional limitation such as, "Not Valid for Carrying Passengers for Compensation or Hire", "Not Valid for Pilot in Command", "Valid Only When Serving as a Pilot Member of a Fully Qualified Two-Pilot Crew", "Limited to Flight Engineer Duties Only", etc.

03. PROTOCOL FOR HISTORY OF INSULIN-TREATED DIABETES MELLITUS - TYPE I and TYPE II

The CAAI has established a policy that permits the special issuance medical certification of insulin-treated applicants for Class 2 and 3 medical certification. Consideration will be given only to those individuals who have been clinically stable on their current treatment regimen for a period of six months or more. Consideration is not being given for Class 1 certification. Individuals certificated under this policy will be required to provide substantial documentation regarding their history of treatment, accidents related to their disease, and current medical status. If certificated, they will be required to adhere to stringent monitoring requirements and are prohibited from operating aircraft outside the United States. The following is a summary of the evaluation protocol and an outline of the conditions that the CAAI will apply:

A. Initial Certification

1. The applicant must have had no recurrent (two or more) episodes of hypoglycemia in the past five years and none in the preceding one year which resulted in loss of consciousness, seizure, impaired cognitive function or requiring intervention by another party, or occurring without warning (hypoglycemia unawareness).
2. The applicant will be required to provide copies of all medical records as well as accident and incident records pertinent to their history of diabetes.
3. A report of a complete medical examination preferably by a physician who specializes in the treatment of diabetes will be required. The report must include, as a minimum:
 - Two measurements of glycosylated hemoglobin (total A₁ or A_{1c} concentration and the laboratory reference range), separated by at least 90 days. The most recent measurement submitted must be no more than 90 days old.
 - Specific reference to the applicant's insulin dosages and diet.
 - Specific reference to the presence or absence of cerebrovascular, cardiovascular, or peripheral vascular disease or neuropathy.
 - Confirmation by an eye specialist of the absence of clinically significant eye disease.
 - Verification that the applicant has been educated in diabetes and its control and understands the actions that should be taken if complications, especially hypoglycemia, should arise. The examining physician must also verify that the applicant has the ability and willingness to properly monitor and manage his or her diabetes.
 - If the applicant is age 40 or older, a report, with ECG tracings, of a maximal graded exercise stress test.
 - The applicant must submit a statement from his/her treating physician, Examiner, or other knowledgeable person attesting to the applicant's dexterity and ability to determine blood glucose levels using a recording glucometer.

NOTE: *Student pilots may wish to ensure they are eligible for medical certification prior to beginning or resuming flight instruction or training. In order to serve as a pilot in command, you must have a valid medical certificate for the type of operation performed.*

B. Subsequent Medical Certification

1. For documentation of diabetes management, the applicant will be required to carry and use a whole blood glucose measuring device with memory and must report to the CAAI immediately any hypoglycemic incidents, any involvement in accidents resulting in serious injury (whether or not related to hypoglycemia), and any evidence of loss of control of diabetes, change in treatment regimen, or significant diabetic complications. With any of these occurrences, the individual must cease flying until cleared by the CAAI.
2. At 3-month intervals, the airman must be evaluated by the treating physician. This evaluation must include a general physical examination, review of the interval medical history, and the results of a test for glycosylated hemoglobin concentration. The physician must review the record of the airman's daily blood glucose measurements and comment on the results. The results of these quarterly evaluations must be accumulated and submitted annually unless there has been a change. (See No. 1 above. If there has been a change the individual must report the change(s) to the CAAI and wait for an eligibility letter before resuming flight duties).
3. On an annual basis, the reports from the examining physician must include confirmation by an eye specialist of the absence of significant eye disease.
4. At the first examination after age 40 and at 5-year intervals, the report, with ECG tracings, of a maximal graded exercise stress test must be included in consideration of continued medical certification.

C. Monitoring and Actions Required During Flight Operations

To ensure safe flight, the insulin using diabetic airman must carry during flight a recording glucometer, adequate supplies to obtain blood samples, and an amount of rapidly absorbable glucose, in 10 gm portions, appropriate to the planned duration of the flight. The following actions shall be taken in connection with flight operations:

1. One-half hour prior to flight, the airman must measure the blood glucose concentration. If it is less than 100 mg/dl the individual must ingest an appropriate (not less than 10 gm) glucose snack and measure the glucose concentration one-half hour later. If the concentration is within 100 – 300 mg/dl, flight operations may be undertaken. If less than 100, the process must be repeated; if over 300, the flight must be cancelled.

2. One hour into the flight, at each successive hour of flight, and within one-half hour prior to landing, the airman must measure his or her blood glucose concentration. If the concentration is less than 100 mg/dl, a 20 gm glucose snack shall be ingested. If the concentration is 100 – 300 mg/dl, no action is required. If the concentration is greater than 300 mg/dl, the airman must land at the nearest suitable airport and may not resume flight until the glucose concentration can be maintained in the 100 – 300 mg/dl range. In respect to determining blood glucose concentrations during flight, the airman must use judgment in deciding whether measuring concentrations or operational demands of the environment (e.g., adverse weather, etc.) should take priority. In cases where it is decided that operational demands take priority, the airman must ingest a 10 gm glucose snack and measure his or her blood glucose level one hour later. If measurement is not practical at that time, the airman must ingest a 20 gm glucose snack and land at the nearest suitable airport so that a determination of the blood glucose concentration may be made.

04. PROTOCOL FOR HISTORY OF ORAL DIABETES MEDICATION(S) DIABETES MELLITUS – TYPE II

Applicants with a diagnosis of diabetes mellitus controlled by use of an oral medication may be considered by the CAAI for Special Issuance of a Medical Certificate. Following initiation of oral medication treatment, a 60-day period must elapse prior to certification to assure stabilization, adequate control, and the absence of side effects or complications from the medication.

Initial certification decisions shall not be made by the Examiner. These cases will be deferred to the CAAI. Examiners may be delegated CAAI to make subsequent certification decisions, subject to CAAI review and consideration.

The initial determination of eligibility will be made on the basis of a report from the treating physician. For favorable consideration, the report must contain a statement regarding the medication used, dosage, the absence or presence of side effects and clinically significant hypoglycemic episodes, and an indication of satisfactory control of the diabetes. The results of an A1C hemoglobin determination within the past 30-days must be included. Note must also be made of the absence or presence of cardiovascular, neurological, renal, and/or ophthalmological disease. The presence of one or more of these associated diseases will not be, per se, disqualifying, but the disease(s) must be carefully evaluated to determine any added risk to aviation safety.

Recertification decisions will also be made on the basis of reports from the treating physician. The contents of the report must contain the same information required for initial certification and specifically reference the presence or absence of satisfactory control, any change in the dosage or type of oral hypoglycemic drug, and the presence or absence of complications or side effects from the medication. In the event of an adverse change in the applicant's diabetic status (poor control or complications or side effects from the medication), or the appearance of an associated systemic disease, an Examiner who has been given the CAAI to issue a certificate pending further review and consideration by the CAAI must defer certification to the CAAI.

If, upon further review, it is decided that recertification is appropriate, the Examiner may again be given the CAAI to issue certificates (subject to CAAI review and consideration) based on data provided by the treating physician, including such information as may be required to assess the associated medical condition(s).

As a minimum, follow-up evaluations by the treating physician of the applicant's diabetes status are required annually for all classes.

Airmen who are diabetics should be counseled by Examiners regarding the significance of their disease and its possible complications. They should be informed of the potential for hypoglycemic reactions and cautioned to remain under close medical surveillance by their treating physicians. They should also be advised that should their oral hypoglycemic be changed or dosages modified, they should not perform airman duties until the treating physician has concluded that their conditions are under control and present no hazard to aviation safety. Airmen, who use insulin for the treatment of their diabetics, may only be considered for special issuance for Class 2 and 3 medical certification.

**05. PROTOCOL FOR HISTORY OF DIABETES MELLITUS
CONTROLLED BY DIET AND EXERCISE**

A blood glucose determination is not a routine part of the CAAI medical evaluation for any class of medical certificate. However, the examination does include a routine urinalysis. A medical history or clinical diagnosis of diabetes mellitus may be considered previously established when the diagnosis has been or clearly could be made because of supporting laboratory findings and/or clinical signs and symptoms. When an applicant with a history of diabetes is examined for the first time, the Examiner should explain the procedures involved and assist in obtaining prior records and current special testing.

Applicants with a diagnosis of diabetes mellitus controlled by diet alone are considered eligible for all classes of medical certificates under the medical standards, provided they have no evidence of associated disqualifying cardiovascular, neurological, renal, or ophthalmological disease. Specialized examinations need not be performed unless indicated by history or clinical findings. The Examiner must document these determinations on CAAI Form 8.

06. PROTOCOL FOR HISTORY OF HUMAN IMMUNODEFICIENCY VIRUS (HIV) RELATED CONDITIONS

Persons on antiretroviral medication will be considered only if the medication is approved by the U.S. Food and Drug Administration and is used in accordance with an acceptable drug therapy protocol. Acceptable protocols are cited in *Guidelines for the Use of Antiretroviral Agents in HIV-Infected Adults and Adolescents* developed by the Department of Health and Human Services Panel on Clinical Practices for Treatment of HIV Infection.

Application for special issuance must include reports of examination by a physician knowledgeable in the treatment of HIV-infected persons and a medical history emphasizing symptoms and treatment referable to the immune and neurologic system. In addition, these reports must include a "viral load" determination by polymerase chain reaction (PCR), CD4+ lymphocyte count, a complete blood count, and the results of liver function tests. An assessment of cognitive function (preferably by *Cogscreen* or other test battery acceptable to the CAAI) must be submitted. Additional cognitive function tests may be required as indicated by results of the cognitive tests. At the time of initial application, viral load must not exceed 1,000 copies per milliliter of plasma, and cognitive testing must show no significant deficit(s) that would preclude the safe performance of airman duties.

Follow-up evaluations of applicants granted certification will include quarterly determinations of viral load by PCR, a CD4+ cell count, and the results of other laboratory and clinical tests deemed appropriate by the treating physician. These will be included in a written status report provided by the treating physician every 6 months. In addition, the results of cognitive function studies will be required at annual intervals for medical clearance or medical certification of and Class 1 and 3 applicants. Class 2 applicants will be required to submit cognitive function studies every two years.

Adverse clinical findings, including significant changes in cognitive test results or an increased viral load exceeding 5,000 copies per milliliter shall constitute a basis for withdrawing medical certification.

Exceptions, if any, will be based on individual consideration by the CAAI.

07. PROTOCOL FOR EVALUATION OF HYPERTENSION

Initial: The Examiner may issue all classes of medical certificates to otherwise qualified airmen whose hypertension is adequately controlled with acceptable medications without significant adverse effects. In such cases, the Examiner shall:

1. Conduct an evaluation or, *at the applicant's option*, review the report of a current (within preceding six months) cardiovascular evaluation by the applicant's attending physician. This evaluation must include pertinent personal and family medical history, including an assessment of the risk factors for coronary heart disease, a clinical examination including at least three blood pressure readings, separated by at least 24-hours each, a resting ECG, and a report of fasting plasma glucose, cholesterol (LDL/HDL), triglycerides, potassium, and creatine levels. A maximal electrocardiographic exercise stress test will be accomplished *if it is indicated by history or clinical findings*. Specific mention must be made of the medications used, their dosage, and the presence, absence, or history of adverse effects.
2. Summarize the results of this evaluation in Item 60 of the transmitted application and forward the appropriate documents to the CAAI.
3. Report the results of any additional tests or evaluations that have been accomplished.
4. If appropriate, state in Item 60 on the CAAI Application Form that the applicant's blood pressure is adequately controlled with acceptable medication, there are no known significant adverse effects, and no other cardiovascular, cerebrovascular, or arteriosclerotic disease is evident.
5. Defer certification if the person declines any of the recommended evaluations.

Medications:

- Medications acceptable to the CAAI for treatment of hypertension in airmen include all 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 **not** usually 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.
- The Examiner may submit for the CAAI review requests for Waiver under the special issuance section in 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.

Follow-up: Follow-up evaluations must include a current status report describing at least the medications used and their dosages, the adequacy of blood pressure control, the presence or absence of side effects, the presence or absence of end-organ complications and the results of any appropriate tests or studies. This evaluation can be performed by the Examiner if the Examiner can attest to the accuracy of the above information.

Hypertension follow-ups are required annually for Class 1 and 3 medical certificate applicants and at the time of renewal for Class 2 certificate applicants.

Duration of Certificates: The duration of the certificate will be valid until the time of normal expiration, unless otherwise specified by the CAAI.

08. PROTOCOL FOR EVALUATION OF IMPLANTED PACEMAKER

A two month recovery period must elapse after the pacemaker implantation to allow for recovery and stabilization. Submit the following:

1. Copies of hospital/medical records pertaining to the requirement for the pacemaker, make of the generator and leads, model and serial number, admission/discharge summaries, operative report, and all ECG tracings.
2. Evaluation of pacemaker function to include description and documentation of underlying rate and rhythm with the pacer turned "off" or at its lowest setting (pacemaker dependency), programmed pacemaker parameters, surveillance record, and exclusion of myopotential inhibition and pacemaker induced hypotension (pacemaker syndrome), Powerpack data including beginning of life (BOL) and elective replacement indicator/end of life (ERI/EOL).
3. Readable samples of all electronic pacemaker surveillance records post surgery or over the past six months, or whichever is longer. It must include a sample strip with pacemaker in free running mode and unless contraindicated, a sample strip with the pacemaker in magnetic mode.
4. An assessment and statement from a physician regarding general physical and cardiac examination to include symptoms or treatment referable to the cardiovascular system; the airman's interim and current cardiac condition, functional capacity, medical history, and medications.
5. A report of current fasting blood sugar and a current blood lipid profile to include: total cholesterol, HDL, LDL, and triglycerides.
6. A current Holter monitor evaluation for at least 24-consecutive hours, to include select representative tracings.
7. A current M-mode, 2-dimensional echocardiogram with Doppler.
8. A current Maximal Graded Exercise Stress Test Requirements.

An ECG treadmill stress test should achieve 100% of predicted maximal heart rate unless medically contraindicated or prevented either by symptoms or medications. Beta blockers and calcium channel blockers (spec. diltiazem and verapamil), or digitalis preparations should be discontinued for 48-hours prior to testing (if not contraindicated) in order to obtain maximum heart rate and only with consent of the treating physician. The worksheet with blood pressure/pulse recordings at various stages, interpretive report, and actual ECG tracings must be submitted. Tracings must include a rhythm strip, a full 12-lead ECG recorded at rest (supine and standing) and during hyperventilation while standing, one or more times during each stage of exercise, at the end of each stage, at peak exercise, and every minute during recovery for at least five minutes or until the tracings return to baseline level. Computer generated, sample-cycle ECG tracings are unacceptable in lieu of the standard tracings. If submitted alone may result in deferment until this requirement is met.

9. It is the responsibility of each applicant to provide the medical information required to determine his/her eligibility for airman medical certification. A medical release form may help in obtaining the necessary information.

All information shall be forwarded in one mailing to:

Civil Aviation Authority Israel
P.O.B 8
Ben Gurion Airport
Israel

No consideration can be given for special issuance until all the required data has been received.

The use of the airman's full name and date of birth on all correspondence and reports will aid the agency in locating the proper file.

09. PROTOCOL FOR MUSCULOSKELETAL EVALUATION

The Examiner should defer issuance.

An applicant with a history of musculoskeletal conditions must submit the following if consideration for medical certification is desired:

- Current status report
- Functional status report
- Degree of impairment as measured by strength, range of motion, pain

NOTE: *If the applicant is otherwise qualified, the CAAI may issue a limited certificate. This certificate will permit the applicant to proceed with flight training until ready for a medical flight test. At that time, and at the applicant's request, the CAAI (usually the CAAI) will authorise the student pilot to take a medical flight test in conjunction with the regular flight test. The medical flight test and regular private pilot flight test are conducted by an CAAI inspector. This affords the student an opportunity to demonstrate the ability to control the aircraft despite the handicap. The CAAI inspector prepares a written report and indicates whether there is a safety problem. A medical certificate and statement of demonstrated ability (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 CAAI medical officer who authorised 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 device(s) (and, if necessary, even the specific aircraft) must always be used when exercising the privileges of the airman certificate.

10. PROTOCOL FOR PEPTIC ULCER

An applicant with a history of an active ulcer within the past three months or a bleeding ulcer within the past six months must provide evidence that the ulcer is healed if consideration for medical certification is desired.

Evidence of healing must be verified by a report from the attending physician that includes the following information:

- Confirmation that the applicant is free of symptoms
- Radiographic or endoscopic evidence that the ulcer has healed
- The name and dosage of medication(s) used for treatment and/or prevention, along with a statement describing side effects or removal

This information must be submitted to the CAAI. Under favorable circumstances, the CAAI may issue a certificate with special requirements. For example, an applicant with a history of bleeding ulcer may be required to have the physician submit follow-up reports every six months for one year following initial certification.

The prophylactic use of medications including simple antacids, H-2 inhibitors or blockers, proton pump inhibitors, and/or sucralfates may not be disqualifying, if free from side effects.

An applicant with a history of gastric resection for ulcer may be favorably considered if free of sequelae.

11. PROTOCOL FOR RENAL TRANSPLANT

An applicant with a history of renal transplant must submit the following if consideration for medical certification is desired:

1. Hospital admission, operative report and discharge summary
2. Current status report including:
 - The etiology of the primary renal disease
 - History of hypertension or cardiac dysfunction
 - Sequela prior to transplant
 - A comment regarding rejection or graft versus host disease (GVHD)
 - Immunosuppressive therapy and side effects, if any
 - The results of the following laboratory results: CBC, BUN, creatinine, and electrolytes

12. PROTOCOL FOR SUBSTANCES OF DEPENDENCE/ABUSE (DRUGS - ALCOHOL)

The Examiner must defer issuance.

An applicant with a history of substances of dependence/abuse (drugs - alcohol) must submit the following if consideration for medical certification is desired:

- A current status report from a health care provider specializing in addictive disorders.
- A personnel statement attesting to the substance and amount, and date last used
- If attended a rehabilitation clinic/center, provide dates and copies of treatment plan

NOTE: *The applicant may be required to submit additional information before medical disposition can be rendered.*

13. PROTOCOL FOR THROMBOEMBOLIC DISEASE

An applicant with a history of thromboembolic disease must submit the following if consideration for medical certification is desired:

1. Hospital admission and discharge summary

2. Current status report including:

- Detailed family history of thromboembolic disease
- Neoplastic workup, if clinically indicated
- PT/PTT
- Protein S & C
- Leiden Factor V
- If still anti-coagulated, submit all International Normalized Ratio (INR) from time of hospital discharge to present

14. PROTOCOL FOR CARDIAC VALVE REPLACEMENT

Applicants with tissue and mechanical valve replacements are considered after the following:

A six month recovery period shall elapse after the valve replacement to ensure recovery and stabilization. Class 1 initial applicants are reviewed by the CAAI cardiology panel.

1. Copies of hospital/medical records pertaining to the requirement for the valve to include make, model, serial number and size, admission/ discharge summaries, operative report, and pathology report.
2. A current evaluation from your attending physician regarding your use of Coumadin to confirm stability without complications, drug dose history and schedule, and International Normalized Ratio (INR) values accomplished at least monthly during the past 6-month period of observation.
3. A current report from your treating physician regarding the status of your cardiac valve replacement. This report should address your general cardiovascular condition as well as any symptoms of valve or heart failure and any related abnormal physical findings, and must reveal satisfactory recovery and cardiac function without evidence of embolic phenomena, significant arrhythmia, structural abnormality, or ischemic disease.
4. A current 24-hour Holter monitor evaluation to include select representative tracings.
5. Current M-mode, 2-dimensional echocardiogram with Doppler. Please submit the video resulting from this study.
6. A current maximal treadmill stress test. An ECG treadmill stress test should achieve 100 percent of predicted maximal heart rate unless medically contraindicated or prevented either by symptoms or medications. Beta blockers and calcium channel blockers (specifically diltiazem and verapamil), or digitalis preparations should be discontinued for 48-hours prior to testing (if not contraindicated) in order to obtain maximum heart rate and only with consent of the treating physician. The worksheet with blood pressure/pulse recordings at various stages, interpretive report, and copies of actual ECG tracings must be submitted. Tracings must include a rhythm strip, a full 12-lead ECG recorded at rest (supine and standing) and during hyperventilation while standing, one or more times during each stage of exercise, at the end of each stage, at peak exercise, and every minute during recovery for at least five minutes or until the tracings return to baseline level. Computer generated, sample-cycle ECG tracings are unacceptable in lieu of the standard tracings and if submitted alone may result in deferment until this requirement is met.
7. If cardiac catheterization and coronary angiography have been performed, all reports and films must be submitted, if required, for review by the agency. Copies should be made of all films as a safeguard against loss.
8. Following heart valve replacement, Class 1 certificate holders shall be followed at six month intervals with clinical status reports and at 12-month intervals with a CVE, standard ECG, and Doppler echocardiogram. Holter monitoring and GXT's may be required periodically if indicated clinically. Class 2 certificate holders, the above follow-up testing will be required annually unless otherwise indicated.

9. Mechanical Heart Valve Replacement. All applicants following mechanical heart valve replacement must be anti-coagulated.

10. Multiple Heart Valve Replacement. Applicants who have received multiple heart valve replacements must be deferred. However, the CAAI may consider certification of all classes of applicants who have undergone a Ross procedure (pulmonic valve transplanted to the aortic position and pulmonic valve replaced by a bioprosthesis).

It is the responsibility of each applicant to provide the medical information required to determine his/her eligibility for airman medical certification. A medical release form may help in obtaining the necessary information.

All information shall be forwarded in one mailing to:

Civil Aviation Authority Israel
P.O.B 8
Ben Gurion Airport
Israel

No consideration can be given for special issuance until all the required data has been received.

Use of the above reference number and your full name on any reports or correspondence will aid us in locating your file.

15. PROTOCOL FOR VALVULOPLASTY

An applicant with a history of valvuloplasty must submit the following if consideration for medical certification is desired.

Valvuloplasty (surgical or balloon) for Mitral or Pulmonary Stenosis:

Initial:

- A six month period must elapse before consideration for any class medical certification
- Cardiovascular Examination (CVE)
- ECG
- Echocardiography and a symptom-limited GXT must show an acceptably increased exercise capacity without ischemia

Follow-up: Required annually.

- CVE
- Echocardiography
- ECG

- When indicated a 24-hour Holter and a GXT

Valvuloplasty (surgical or balloon) for Aortic Stenosis:

- A favorable determination is unlikely if this procedure was performed after age 16
- Same as the above initial requirements