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## FAA Discretionary Issuances Permit Medical Certification of Many Pilots Despite Disabilities

*Improved diagnosis and treatment have made it possible for many pilots to receive special medical certification despite conditions — including heart disease, Hodgkin's disease, lymphoma and leukemia — that once would have precluded them from obtaining approval.*

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The policy of the U.S. Federal Aviation Administration (FAA) is that "airmen with a history or clinical diagnosis of any medical condition [may] be granted discretionary medical certification through ... special issuance provisions if it [is] determined that, notwithstanding the person's failure to meet the applicable medical standard, pilot duties [can] be performed, with appropriate limitations on conditions, without endangering public safety."<sup>1</sup> In its 1994 proposal to revise the medical certification procedures and standards for pilots, the FAA said, "Overall, the safety record of pilots who were granted exemption has been at least as good as that of the general population of airmen who hold medical certificates issued under the medical standards."<sup>1</sup>

The revised medical standards that went into effect in September 1996 eliminated some outdated requirements for vision and hearing to obtain certification, and a separate new rule issued in December 1996 ended the absolute ban on pilots with insulin-treated diabetes mellitus (*Human Factors & Aviation Medicine*, March–April 1997). But regulatory changes aside, improved understanding, diagnosis and treatment of medical disorders has enabled the FAA to expand the scope of discretionary issuances of medical certification to pilots who have potentially disqualifying conditions.



U.S. Federal Aviation Regulations (FARs) Parts 61 and 67 establish three classes of medical certification (first class, airline transport pilot certificate; second class, commercial pilot certificate; and third class, private pilot, student pilot and recreational certificate). The term of validity and the physical requirements for the medical certificates vary. The first-class certificate has the most stringent physical requirements and must be renewed every six months. The second-class certificate has less stringent physical requirements and is renewed annually. The third-class certificate has the lowest physical requirements and is issued for three years if the individual is under age 40; otherwise, for two years.

If an applicant initially fails to obtain medical certification in one of these categories, it may still be possible for him or her to obtain medical certification. A medical clearance given to a pilot with disabilities who cannot otherwise qualify for medical certification is referred to broadly as a discretionary issuance (commonly known as a waiver). Discretionary issuances include special issuances and Statements of Demonstrated Ability (SODAs).

"To be granted a special issuance, a pilot has had to demonstrate by operational experience, flight testing, special practical evaluation or a special medical evaluation that he or she can

carry out the appropriate pilot duties without endangering public safety during the prescribed time period of the medical certificate,"<sup>2</sup> says the FAA. Special issuances may be authorized by the FAA Civil Aeromedical Institute (CAMI) or the U.S. Federal Air Surgeon. In a small number of cases, the U.S. National Transportation Safety Board (NTSB) may order an issuance.

A special issuance covers progressive diseases such as coronary heart disease; a SODA concerns a medical condition that is static and nonprogressive, such as an amputated limb. A major distinction between the two discretionary issuances is that a special issuance is for a specific period. After it expires, the pilot must reapply for another special issuance. A SODA, by contrast, generally has no expiration date.<sup>2</sup>

"Through special-issuance provisions," the FAA said, "many airmen have returned to productive aviation careers and others to private flying after recovery and rehabilitation from serious medical conditions without adverse impact on public safety."<sup>1</sup>

The data in Tables 1–7 (pages 2–5) relate to some of the more common medical conditions of pilots. The data were compiled from records of pilots active on Jan. 1, 1997, and include discretionary issuances granted to pilots as of that date.

**Vision.** As shown in Table 1, pilots who have lost one or both lenses of their eyes, usually through cataract surgery, can be certified if suitable corrective lenses, either spectacles or contacts, are obtained. Pilots whose natural lenses have been replaced with artificial lenses may also be certified if they meet certain criteria.

Code	Condition	Certification		
		First-class	Second-class	Third-class
134	Aphakia	141	359	1,024
139	Glaucoma	246	551	1,407
160	Artificial Lens	363	953	2,491
162	Monocular	184	638	2,169

Source: U.S. Federal Aviation Administration (FAA) Civil Aeromedical Institute (CAMI). The table shows the number of U.S. pilots active Jan. 1, 1997, who were granted discretionary issuances for specific pathologies. The codes in the table refer to the U.S. FAA's pathological-code numbers.

With modern treatment for glaucoma, which may include surgery, pilots may be returned to medical certification status if they retain sufficient visual fields and experience no adverse side effects to any medication prescribed.

Under the new standards, monocular pilots may also be certified, as they have been in the past. Monocular means either

the absence of one eye or total or legal blindness in one eye. From the FAA's perspective, a person is considered monocular if one eye only is within the medical standard limits, even with correction.

**Hearing.** Table 2 lists certain conditions related to hearing. Persons with functioning hearing aids can be certified in all three medical certificate classes because the use of a functional hearing aid is equivalent in principle to vision aided by corrective lenses. Totally deaf persons have been certified to operate in non-radio control environments.

Code	Condition	Certification		
		First-class	Second-class	Third-class
220	Hearing Aids, Deafness	790	1,322	1,247
238	Ménière's Disease	17	25	72
239	Ear Pathology, Vertigo, Other Ear Pathology	515	447	815

Source: U.S. Federal Aviation Administration (FAA) Civil Aeromedical Institute (CAMI). The table shows the number of U.S. pilots active Jan. 1, 1997, who were granted discretionary issuances for specific pathologies. The codes in the table refer to the U.S. FAA's pathological-code numbers.

Ménière's disease — a combination of vertigo (dizziness), tinnitus (ringing in the ears) and deafness — does not necessarily result in loss of medical certification if appropriate treatment has been received and the symptoms have been brought under control.

Persons with a history of vertigo alone can be considered for certification if:

- The symptoms are controlled with medication that does not have side effects adverse to safe flying;
- The symptoms have subsided for a substantial time and are deemed unlikely to recur;
- The symptoms are rare and can be disregarded by the individual under conditions of flight; or,
- A specific cause of the symptoms is located and eradicated by surgery or other means.

Persons who have been successfully treated for otosclerosis (a formation of spongy bone in the middle ear leading to deafness) by surgery have been returned to flight status. Acoustic-nerve neuroma (a sensory-nerve tumor in the inner ear that can lead to deafness), treated by surgery or radiation, will not preclude the return to medical certification status in many cases.

**Cardiovascular conditions.** Table 3 lists several cardiovascular conditions that at one time would have precluded medical certification for many pilots. With advances in basic and clinical scientific research programs, pilots with a wide variety of conditions affecting the heart and blood vessels can be certified on a case-by-case basis. The clinical methodologies for diagnosis, treatment and follow-up evaluation of individuals in the categories listed in Table 3 are sufficiently developed to enable the certification for first, second or third class.

**Table 3  
Discretionary Issuances:  
Cardiovascular Conditions**

Code	Condition	Certification		
		First-class	Second-class	Third-class
420	Transplant: Heart	—	—	—
431	Myocardial Infarction	178	187	1,917
439	Angioplasty	178	147	1,466
440	Coronary Bypass	158	178	2,172
445	Cardiac Pacemaker	3	8	78
456	Mitral Valve Prolapse, Barlow's Syndrome	550	574	1,234
457	Mechanical Heart Valve	6	19	79
458	Tissue Heart Valve	4	8	43
485	Hypertension with Medication	3,042	5,865	18,223

Source: U.S. Federal Aviation Administration (FAA) Civil Aeromedical Institute (CAMI). The table shows the number of U.S. pilots active Jan. 1, 1997, who were granted discretionary issuance for specific pathologies. The codes in the table refer to the U.S. FAA's pathological-code numbers.

Pilots with transplanted hearts are not being certified, although in the past, a few were initially given third-class certification. (Tissue rejection subsequently led to loss of medical certification.) As scientific research on the rejection process advances, pilots with transplanted hearts probably will be certified.

**Genitourinary conditions.** Pilots with colitis (inflammation of the intestines) and regional ileitis (inflammation of the ileum, part of the small intestine) (Table 4) have in the past had certification problems. As a result of advances in surgical and medical treatment, pilots who suffer from these conditions are achieving certification in all three classes.

As organ transplants become increasingly common, those with kidney transplants are achieving certification in all three classes, while pilots with transplanted livers have achieved certification in second and third classes.

In the past, persons with a history of kidney stones were generally not medically certified. It was felt that the excruciating pain of renal colic, which could be experienced at unpredictable times, could cause incapacitation and perhaps lead to an aircraft accident. Today, modern diagnostic and

**Table 4  
Discretionary Issuances:  
Genitourinary Conditions**

Code	Condition	Certification		
		First-class	Second-class	Third-class
551	Colitis, Regional Ileitis	468	547	1,247
565	Liver Transplant	—	3	15
570	Kidney Transplant	12	15	64
573	Kidney Stones	3,514	4,722	9,368
574	Male Genital System, Prostatic and Testicular Cancer	2,292	3,062	6,101

Source: U.S. Federal Aviation Administration (FAA) Civil Aeromedical Institute (CAMI). The table shows the number of U.S. pilots active Jan. 1, 1997, who were granted discretionary issuance for specific pathologies. The codes in the table refer to the U.S. FAA's pathological-code numbers.

therapeutic techniques can remove kidney stones by surgical or nonsurgical means and can provide preventive measures that minimize the possibility of future stone formation. In addition, periodic diagnostic tests can detect kidney stones at an early stage, thus decreasing the chances of subsequent renal colic by treating the developing stone condition.

Cancers of the prostate and testes are increasingly being diagnosed at an early stage through screening programs. The prostatic-specific antigen (PSA) test is an example of a relatively recent procedure that identifies many prostatic cancers at an early stage. Pilots in all three classes of medical certification have been diagnosed with medical conditions in this category. With respect to female cancers, including those of the cervix, ovaries and breasts, there will be increasing numbers of female pilots applying for medical certification with these conditions in the future.

**Neuropsychiatric conditions.** One area that has benefited from significant advances of current technologies and diagnostic methods comprises cerebral, vascular, neurological and psychiatric conditions. As shown in Table 5 (page 4), such evaluations have resulted in a number of medical certifications of persons with conditions in each of the cited categories, including an extremely small number diagnosed with narcolepsy. Flight operations require a degree of alertness that is incompatible with the unpredictable onset of sleep, so a diagnosis of narcolepsy almost always precludes medical certification.

Although schizophrenia may cause a person to be somewhat out of touch with reality, the pilot with this diagnosis may be medically certified in all three classes if the condition is confined to a narrow aspect of the individual's thought that does not impinge on safe flight operations.

Individuals who have experienced strokes (caused by some type of blood-vessel spasm, aneurysm [thinning, stretching or bulging of an artery wall] rupture or blood clot) can, following recovery, be considered for a discretionary issuance if certain

**Table 5**  
**Discretionary Issuances:**  
**Neuropsychiatric Conditions**

Code	Condition	Certification		
		First-class	Second-class	Third-class
602	Stroke	139	181	543
605	Epilepsy, Grand, Petit, Convulsive Reaction	20	34	101
607	Narcolepsy	—	2	9
620	Multiple Sclerosis, Chronic Brain Syndrome, Degenerative Nerve Disease	23	28	71
621	Parkinson's Disease	15	22	48
628	Migraine	380	662	1,927
661	Neuroses, Anxiety, Hypochondria, Phobic Conditions	1,106	1,449	4,036
662	Schizophrenia	5	14	22
663	Major Affective Disorder, Depression Plus Mania	6	7	27
683	Alcoholism — Not Special Issuance	128	105	248
685	Alcoholism — Special Issuance	751	113	70

Source: U.S. Federal Aviation Administration (FAA) Civil Aeromedical Institute (CAMI). The table shows the number of U.S. pilots active Jan. 1, 1997, who were granted discretionary issuance for specific pathologies. The codes in the table refer to the U.S. FAA's pathological-code numbers.

criteria are met. These criteria include the reduction of important risk factors such as hypertension, tobacco use and obesity; the reduction of atherogenesis factors (that is, factors which increase the risk for angina [chest pain], stroke or heart attack); and the adoption of other measures to control risk factors. If an aneurysm is successfully treated by surgery, a person may be certified if the remaining signs and symptoms are deemed not to impair performance.

Mental functioning and neurological status require assessment in each case. In addition, medical evaluators must consider the likelihood of a recurrence of the process that led to the initial stroke.

Various types of seizures are considered for a discretionary issuance on an individual basis if the cause of the seizure is defined, if medical or surgical steps have brought the conditions under control and if, following sufficient time (which may be as much as several years), the special-issuance reviewers conclude that a recurrence is highly unlikely.

Pilots with multiple sclerosis in remission have been returned to medical certification. Persons with certain degenerative nerve diseases that are exceedingly slow in progression have also been returned to medical certification status, as have those diagnosed with certain chronic brain-syndrome conditions that,

following evaluation, are deemed not to impair brain functions important to safe flight operations.

In its early stages, Parkinson's disease can be the foundation, on a case-by-case basis, for a discretionary issuance. The ability of the affected person to intentionally override an involuntary tremor is a major factor in the decision to issue a discretionary issuance.

Discretionary issuances for migraine headache history are not uncommon. Major considerations with this condition include the frequency of the headaches, the nature of the warning aura and the ability of the individual to prevent further progression if onset — accompanied by the potential loss of the visual fields — occurs during flight.

A generalized collection of neuroses, anxiety, hypochondria and phobic conditions may, depending on the circumstances, cause problems for medical certification. The individual's response to therapy is considered, along with the degree to which the individual can mitigate the symptoms of the condition while accomplishing flight duties.

Other conditions listed in Table 5 include major affective disorder, and depression plus mania. Advanced psychiatric clinical practice and medical research make possible individual assessments of those with such conditions. Among the considerations are the remission status of the condition, the level of awareness that the affected individual has with respect to the condition, the nature of the treatment used (if any) and the response. Specialists assess the likelihood of a recurrence of symptoms and the extent to which an affected person can recognize the onset of a relapse. Pilots have been certified by discretionary issuance in all three classes.

For many years, pilots with alcohol-dependence and -abuse problems had to hide their problem or face permanent medical disqualification. Because the vast majority of such dependent individuals at some point encounter severe personal problems that lead to disclosure of their alcoholism, a large number of pilots were medically disqualified in the 1970s and early 1980s.

Following a major FAA-commissioned report from the American Medical Association (AMA), the FAA adopted a standard of two years as the minimum period of abstinence from alcohol for those with this condition who seek certification.<sup>3</sup> The FAA has given discretionary issuances reducing this period, but only when the applicant has met a number of stringent criteria, including:

- "A full commitment and partnership of the aviation employer and employee to ensure the employee's continued sobriety through monitoring;
- "Full commitment and partnership of the recovering employee with a fellow employee to ensure continued sobriety through monitoring; [and,]



- “Frequent evaluations, testing and attendance at professional aftercare treatment.”<sup>2</sup>

The treatment of alcoholism is recognized by the FAA, the Air Line Pilots Association, International (ALPA), the Allied Pilots Association (APA) and the National Institute of Alcohol and Drug Abuse as a highly desirable step that, under certain circumstances, could lead to a return to flight status by an alcohol-dependent person. Since the program began, several thousand pilots in all three classes have been returned to medical certification by discretionary issuances.

Nevertheless, FARs Part 67.107 states that a medical certificate will not be issued — or if issued, will be rescinded — if there has been substance abuse within the preceding two years. Substance abuse is defined as “use of a substance in a situation in which the use was physically hazardous, if there has been at any other time an instance of the use of a substance also in a situation in which that use was hazardous.”<sup>2</sup>

Included in the definition are a conviction or administrative warning for driving under the influence of alcohol or the cancellation, suspension or revocation of a driver’s license “while intoxicated by alcohol or a drug, while impaired by alcohol or a drug, or while under the influence of alcohol or a drug.” Furthermore, under Part 61.15, a pilot holding a medical certificate is obliged to provide “a written report of each motor vehicle action to the FAA ... no later than 60 days after the motor vehicle action.”<sup>2</sup>

Dr. W. Keith Martin, ALPA’s associate aeromedical advisor, said, “The [U.S. Federal Air Surgeon] has instructed all [aviation medical examiners] to defer the issuance of a pilot medical certificate when a pilot reports a second offense on an FAA application. The deferral generally results in a request from the FAA Medical Certification Division ... for a drug and alcohol abuse evaluation. If the evaluation results in no diagnosis of drug or alcohol abuse/dependence, the FAA will issue the pilot medical certificate. This process [, however,] can be time-consuming (six to 10 weeks), during which time a pilot will be without a medical certificate.”<sup>4</sup>

Martin also said, “Simple failure to report an incident, no matter how insignificant, is often the primary cause for FAA action. The FAA’s main concern is that of ‘alcohol or drug misuse, abuse or dependence.’ A one-time incident, if properly reported, seldom results in FAA action.”<sup>4</sup>

**Limb deformities and amputations.** An entirely different kind of condition involves various limb deformities or amputations (Table 6). From the beginning of manned flight, there have been aviators who have managed to pilot aircraft despite certain physical deformities. The determining consideration is the ability of the individual to safely operate specific aircraft. These conditions are considered static, and once a determination has been made to issue medical certification, possibly through a medical flight test, the individual can attain or retain this status.

**Table 6**  
**Discretionary Issuances:**  
**Limb Deformities and Amputations**

Code	Condition	Certification		
		First-class	Second-class	Third-class
761	Deformity of Fingers and Amputations	60	118	249
766	Deformity of Hand and Wrist	63	100	208
771	Deformity of Arm Above Elbow	21	67	154
772	Deformity of Arm Below Elbow	17	33	80
Deformity of Lower Extremities:				
781	Toe	18	22	48
785	Ankle	61	111	183
790	Above Knee	23	75	153
791	Below Knee	64	141	282

Source: U.S. Federal Aviation Administration (FAA) Civil Aeromedical Institute (CAMI). The table shows the number of U.S. pilots active Jan. 1, 1997, who were granted discretionary issuance for specific pathologies. The codes in the table refer to the U.S. FAA’s pathological-code numbers.

**Metabolic and endocrine disorders.** Disturbed carbohydrate metabolism, diet-controlled diabetes and Type II diabetes controlled by oral medication have all been the basis for discretionary issuances (Table 7). Medical research and scientific understanding allow examiners to individually assess applicants with histories of any of these conditions.

Diabetes insipidus is an endocrinological condition related to insufficient antidiuretic hormone from the pituitary gland. If left

**Table 7**  
**Discretionary Issuances:**  
**Metabolic and Endocrine Disorders**

Code	Condition	Certification		
		First-class	Second-class	Third-class
931	Disturbed Carbohydrate Metabolism	124	203	373
932	Thyroid — Hyper	183	221	399
933	Thyroid — Hypo	775	1,111	2,546
935	Diabetes, Diet-controlled	177	368	930
937	Diabetes, Oral Medication	107	184	607
938	Diabetes, Insipidus	3	7	13
939	Cushing’s, Addison’s Disease	134	108	267
964	Hodgkin’s Disease	72	82	192
968	Lymphoma/Leukemia, Dyscrasia	277	274	614

Source: U.S. Federal Aviation Administration (FAA) Civil Aeromedical Institute (CAMI). The table shows the number of U.S. pilots active Jan. 1, 1997, who were granted discretionary issuance for specific pathologies. The codes in the table refer to the U.S. FAA’s pathological-code numbers.

untreated, this condition results in frequent urination. By taking the hormone under prescription, normal urine flow can be restored.

Hyper- and hypo-thyroid illness is readily treated by appropriate thyroid extracts or by synthetic thyroid hormones. Cushing's disease, which is a complex condition related to the pituitary and the adrenal glands (excesses of certain hormones from one or the other, or both), and Addison's disease, which is a deficiency of one or both of these hormones, can be treated so the affected person can maintain a normal lifestyle.

Clearly, many diseases and conditions that only 10 years ago disqualified many pilots from medical certification — including Hodgkin's disease, lymphoma, leukemia, blood dyscrasia and other conditions — have, through advances in clinical research and treatment, been brought under sufficient control to enable medical certification in a large number of cases.

As in the past, the Federal Air Surgeon's central concern is whether the pilot can, despite certain medical conditions, safely operate an aircraft without causing harm to himself or other persons, or damage to the aircraft or other property. For the vast majority of those who enjoy relatively good health and want to fly, medical certification is possible.♦

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