

[Close Window](#)

To print this page, please select File at the top of this window and then choose Print.

FAA medical certification guidelines for pilots with insulin-treated diabetes

I. Restrictions on medical certification:

- A. Individuals may be issued only a third-class airman medical certificate.
- B. Individuals may exercise only the privileges of a student, recreational, or private pilot certificate.
- C. Individuals are prohibited from operating an aircraft as a required crewmember on any flight outside the airspace of the United States of America.

II. Initial Evaluation of Individuals With Insulin-Treated Diabetes Mellitus

A. Individuals with ITDM who have no otherwise disqualifying conditions, especially significant diabetes-related complications such as arteriosclerotic coronary or cerebral disease, retinal disease, or chronic renal failure, will be evaluated for special issuance of a third-class medical certificate if they:

1. Have had no recurrent (two or more) hypoglycemic reactions resulting in a loss of consciousness or seizure within the past 5 years. A period of 1 year of demonstrated stability is required following the first episode of hypoglycemia; and
2. Have had no recurrent hypoglycemic reactions requiring intervention by another party within the past 5 years. A period of 1 year of demonstrated stability is required following the first episode of hypoglycemia; and
3. Have had no recurrent hypoglycemic reactions resulting in impaired cognitive function which occurred without warning symptoms within the past 5 years. A period of 1 year of demonstrated stability is required following the first episode of hypoglycemia.

B. In order to provide an adequate basis for an individual medical determination, the person with ITDM seeking special issuance of a medical certificate must submit the following to: Federal Aviation Administration, Civil Aeromedical Institute, AAM-310, 6500 South MacArthur, Oklahoma City, OK 73125.

1. Copies of all medical records concerning the individual's diabetes diagnosis and disease history and copies of all hospital records, if admitted for any diabetes-related cause, including accidents and injuries.
2. Copies of complete reports of any incidents or accidents, particularly involving moving vehicles, whether or not the event resulted in injury or property damage, if due in part or totally to diabetes;
3. Results of a complete medical evaluation by an endocrinologist or other diabetes specialist physician acceptable to the Federal Air Surgeon (hereafter referred to as "specialist"). This report should detail the individual's complete medical history and current medical condition. The report must include a general physical examination and, at a minimum, the following information:
 - (a) Two measurements of glycated hemoglobin (total A1 or A1C concentration and the laboratory reference normal range), the first at least 90 days prior to the current measurement;

(b) A detailed report of the individual's insulin dosages (including types) and diet utilized for glucose control;

(c) Appropriate examinations and tests to detect any peripheral neuropathy or circulatory insufficiency of the extremities;

(d) Confirmation by an ophthalmologist of the absence of clinically significant eye disease. The eye examination should assess, at a minimum, visual acuity, ocular tension, and presence of lenticular opacities, if any, and include a careful examination of the retina for evidence of any diabetic retinopathy or macular edema. The presence of microaneurysms, exudates, or other findings of background retinopathy, by themselves, are not sufficient grounds for disqualification unless it prevents the subject from meeting visual standards. However, individuals with active proliferative retinopathy or vitreous hemorrhages will not be considered for special issuance of a medical certificate until the condition has stabilized and this has been confirmed by an ophthalmologist; and

4. Verification by a specialist that the individual has been educated in diabetes and its control and has been thoroughly informed of and understands the monitoring and management procedures for the condition and the actions that should be followed if complications of diabetes, including hypoglycemia, should arise. Such verification should also contain the specialist's evaluation as to whether the individual has the ability and willingness to properly monitor and manage his or her diabetes and whether diabetes will adversely affect his or her ability to safely control an aircraft. The presence or absence of recurrent severe hypoglycemia and hypoglycemia unawareness should be noted. (See I.A. 1., 2. and 3 above.)

C. The ITDM individual applying for special issuance of a medical certificate should have been receiving appropriate insulin treatment for at least 6 months prior to submitting a request for special issuance of a medical certificate.

D. Special medical flight test. If the Federal Air Surgeon determines that there is need for an ITDM applicant to demonstrate his or her ability to comply with the medical protocol, the Federal Air Surgeon, under the provisions of Sec. 67.401, may require a special medical examination and/or medical flight test prior to a determination of the applicant's eligibility for special issuance of a medical certificate.

III. Guidelines for Individuals With ITDM Who Have Been Granted Special Issuance of Airman Medical Certificates

A. Individuals with ITDM who are granted special issuance of third-class airman medical certificates must:

1. Submit to a medical evaluation by a specialist every 3 months. This evaluation must include a general physical examination and a report of glycated hemoglobin (total A1 or A1C) concentration. This evaluation shall also contain an assessment of the individual's continued ability and willingness to monitor and manage properly his or her diabetes and of whether the individual's diabetes or its complications could reasonably be expected to adversely affect his or her ability to safely control an aircraft.

2. Carry and use a digital whole blood glucose measuring device with memory that is acceptable to the FAA. Provide records of all daily blood glucose measurements for review by the specialist at each 3-month evaluation required above and, if required, to the FAA at any time.

3. Provide to the FAA, on an annual basis, written confirmation by a specialist that the individual's diabetes remains under control and without significant complications and that he or she has demonstrated reasonable accuracy and recordation of his or her blood glucose measurements with the above described device.

4. Provide to the FAA, on an annual basis, confirmation by an ophthalmologist of the absence of clinically significant disease that would prevent the individual from meeting current visual standards.

5. Provide to the FAA, immediately, a written report of any episode of hypoglycemia

associated with cognitive impairment, whether or not it resulted in an accident or adverse event.

6. Provide a written report to the FAA, immediately, of involvement in any accidents, including those involving aircraft and motor vehicles, or other significant adverse events, whether or not they are believed related to an episode of hypoglycemia.

7. Provide to the FAA, immediately upon determination by a specialist or other physician, any evidence of loss of diabetes control, significant complications, or inability to manage the diabetes. In such a case, the individual shall cease exercising the privileges of his or her airman certificate until again cleared medically by the FAA.

IV. Glucose Management Prior to Flight, During Flight, and Prior to Landing

A. Individuals with ITDM shall maintain appropriate medical supplies for glucose management at all times while preparing for flight and while acting as pilot-in-command (or other flightcrew member). At a minimum, such supplies shall include:

1. An FAA-acceptable whole blood digital glucose monitor with memory;
2. Supplies needed to obtain adequate blood samples and to measure whole blood glucose; and
3. An amount of rapidly absorbable glucose, in 10 gram (gm) portions, appropriate to the potential duration of the flight.

B. All disposable supplies listed above must be within their expiration dates.

C. The individual with ITDM, acting as pilot-in-command or other flightcrew member, shall establish and document a blood glucose concentration equal to or greater than 100 milligrams/deciliter (mg/dl) but not greater than 300 mg/dl within 1/2 hour prior to takeoff. During flight, the individual with ITDM shall monitor his or her blood glucose concentration at hourly intervals and within 1/2 hour prior to landing. If a blood glucose concentration range of 100-300 mg/dl is not maintained, the following action shall be taken:

1. Prior to flight. The individual with ITDM shall test and record his or her blood glucose concentration within 1/2 hour prior to takeoff. If blood glucose measures less than 100 mg/dl, the individual shall ingest an appropriate 10 gm glucose snack (minimum 10 gm) and recheck and document blood glucose concentration after 1/2 hour. This process shall be repeated until blood glucose concentration is in the 100-300 mg/dl range. If blood glucose concentration measures greater than 300 mg/dl, the individual shall follow his or her regimen of blood glucose control, as provided to the FAA by his or her attending physician, until the measurement of blood glucose concentration permits adherence to this protocol.

2. During flight.

(a) One hour into the flight, at each successive hour of flight, and within 1/2 hour prior to landing, the individual shall measure and document his or her blood glucose concentration. Listed below are blood glucose concentration ranges and the actions to be taken when they occur during flight:

(1) Less than 100 mg/dl: The individual shall ingest a 20 gm glucose snack and recheck and document his or her blood glucose concentration after 1 hour.

(2) 100-300 mg/dl: The individual may continue his or her flight as planned.

(3) Greater than 300 mg/dl: The individual shall land as soon as practicable at the nearest suitable airport.

(b) The individual, as pilot, is responsible for the safety of the flight and must remain cognizant of those factors that are important in its successful completion. Accordingly, in recognition of such elements as adverse weather, turbulence, air traffic control changes, or other

variables, the individual may decide that a scheduled, hourly measurement of blood glucose concentration during the flight is of lower priority than the need for full, undivided attention to piloting. In such cases, the individual shall ingest a 10 gm glucose snack. One hour after ingesting of this glucose snack, the individual shall measure and document his or her blood glucose concentration. If the individual is unable to perform the measurement of his or her blood glucose concentration for the second consecutive time, the individual shall ingest a 20 gm glucose snack and shall land as soon as practicable at the nearest suitable airport. The individual, under these circumstances, is not required to measure and document his or her blood glucose concentration within 1/2 hour prior to landing.

3. Prior to landing. Except as noted above, the individual must measure and document his or her blood glucose concentration within 1/2 hour prior to landing.