

Protocol for Certification of Insulin-Treated Diabetic Applicants

The FAA has established a policy that permits the special issuance medical certification of insulin-treated applicants for third-class medical certification. Consideration will be given only to those individuals who have been clinically stable on their current treatment regimen for a period of 6 months or more. Consideration is *not* being given for first- or second-class 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 FAA will apply:

INITIAL CERTIFICATION

1. The applicant must have had no recurrent (two or more) episodes of hypoglycemia in the past 5 years and none in the preceding 1 year resulting 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:
 - A. Two measurements of glycated hemoglobin (total A₁ or A_{1c} concentration and the laboratory reference range), the first at least 90 days prior to the current measurement.
 - B. Specific reference to the applicant's insulin dosages and diet.
 - C. Specific reference to the presence or absence of cerebrovascular, cardiovascular, or peripheral vascular disease or neuropathy.
 - D. Confirmation by an eye specialist of the absence of clinically significant eye disease.
 - E. 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.
 - F. If the applicant is age 40 or older, a report, with ECG tracings, of a maximal graded exercise stress test.
 - G. The applicant shall submit a statement from his/her treating physician, aviation medical examiner, or other knowledgeable person attesting to the applicant's dexterity and ability to determine blood glucose levels using a recording glucometer.

We recommend that the medical information and Application for Airman Medical Certificate or Airman Medical and Student Pilot Certificate (FAA Form 8500-8) be submitted prior to beginning or resuming flight instruction or training.

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 FAA immediately any hypoglycemic incidents, any involvement in accidents (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 FAA.
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 glycated 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 may be accumulated and submitted annually unless there has been a change. (See No. 1 above.)
3. On an annual basis, the reports from the examining physician shall 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.

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 he or she 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 canceled.
2. One hour into the flight, at each successive hour of flight, and within one-half hour prior to landing, the airman shall 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 1 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.