

## DIABETES MELLITUS TYPE I OR TYPE II INSULIN TREATED - CGM OPTION

### H.

#### FREQUENTLY ASKED QUESTIONS (FAQs)

(Updated 08/30/2023)

#### POLICY FAQs

**1. What did it take to develop an insulin-use policy for Class I and II medical certificate for the FAA?**

Advances in diabetes management utilizing CGM technology provides pilots and the FAA better information about blood glucose levels and advanced warning of potentially dangerous glucose levels before they occur. CGM technology also allows the FAA to evaluate consistency of blood glucose control both in flight and on the ground.

**2. Why did the FAA take so long to develop an insulin-use policy for Class I/II airmen especially when other countries have allowed it for years?**

Various flight safety considerations for this serious health condition could not be safely mitigated for commercial operations until recently. Advances in technology and diabetes management now provide the FAA better parameters to consider Class I and II medical certification for some insulin-dependent airmen.

At the time of initial publication, only Canada and the United Kingdom allow the use of insulin in their pilots with an equivalent Class I or II medical. Unlike the FAA, those aviation authorities can impose specific operational limitations on the medical certificate (e.g., “valid only for two pilot operations” or requiring the other pilot to be both aware of the diabetic condition and able to provide emergency treatment.)

**3. Why is the FAA so restrictive and why is there so much testing?**

The FAA policy follows current medical standards of care for diabetes to ensure pilots are safe to fly in the complex aviation environment and reduce the risks of end-organ damage. If the latter is present, the potential risk of cognitive impairment is increased, which could be magnified in a hypoxic or high-stress environment, affecting safety.

**4. My doctor says my diabetes is well controlled and that I have no limitations. Why doesn't FAA accept that?**

While your physicians understand how to keep your blood sugar stable while on the ground, they may not be familiar with the additional challenges of the demanding aviation environment and may not consider them when determining clinical limitations. FAA guidance addresses these aviation-specific concerns.

**5. Are there additional risks when flying with diabetes?**

Yes. Hypoglycemia can lead to cognitive impairment, loss of consciousness, and seizure. Hyperglycemia can potentially cause sudden incapacitation, but it can also cause damage to eyes, heart, kidneys, and nervous system.

## BLOOD SUGAR FAQs

### 6. Why is the blood sugar range so narrow?

The recommended blood glucose range is not intended to be “narrow,” but reflects generally accepted treatment guidelines and the needs of safety. Safety concerns arise when blood sugar falls outside of the 70mg/dl - 250 mg/dL range.

### 7. Why do I need to use a CGM device even when I’m not flying? I am well controlled with finger sticks and injections. Why do I need to follow these new rules?

CGM technology allows the FAA to ensure ongoing safety through consistent blood glucose control both in flight and on the ground regardless of the pilot’s flight schedule.

### 8. I am currently on a Special Issuance (SI) for another condition. How will ITDM affect that?

Your existing SI will be invalid due to the additional diagnosis. You will need a new authorization letter.

### 9. What do I do if I develop symptoms or become incapacitated/impaired due to my blood glucose levels while I am on a trip?

- You must disqualify yourself from flight activities as required by both the SI and 14 CFR 61.53;
- Contact your treating endocrinologist to determine if there is a need to change your insulin treatment; and
- Contact your AME with details surrounding the event.
  - Your AME should contact the FAA to discuss your case.

## CONTINUOUS GLUCOSE MONITOR (CGM) AND INSULIN PUMP FAQs

### 10. Which CGMs does the FAA allow?

The FAA lists the **required** functions of CGMs in the Guide for Aviation Medical Examiners (AME Guide). While we do not endorse specific brands, we have added a list of devices we know meet these requirements. See [“Item # 4 - Continuous Glucose Monitor Data” of the ITDM Initial Certificate Consideration Requirements](#).

### 11. Why is a CGM required instead of finger stick blood sugar?

The CGM is more accurate, measuring within 10% of the actual blood sugar. It is also independent of the pilot’s action. Turbulence can make it impossible for pilots to perform finger sticks, even with an autopilot and/or second pilot. The CGMs can enable notifications and alerts for specific blood glucose values and show predictive trends, both of which are required. The CGM can also communicate with an insulin pump.

## 12. How do I know if my CGM and/or insulin pump is legal for flight as an “authorized personal electronic device?”

Most current medical devices should be approved; however, the pilot needs to verify this with the aircraft operator for the aircraft that they fly. It is not feasible for the FAA to maintain a list of approved devices due to the rapidly changing technology and to the large number of airframe and avionics combinations seen in the Part 91, 91k, 121, and 135 fleets.

See [AC 20-164A](#) for guidance.

## 13. I know I have to submit CGM data to the FAA. How do I get this information?

Most devices have the ability to print out customized data reports to your computer. Check your device’s user guide for instructions as well as computer and software requirements as these may differ between manufacturers. (Note: Some devices will not allow the export of data onto your phone or tablet.)

## 14. What do I do if my CGM device fails?

You should have all the following available during flight:

- Glucometer (glucose meter) and test strips.
- Backup sensor for the CGM device.
- Backup insulin pen available if using an insulin pump.

If the CGM stops working, go to a back-up plan for the remainder of the flight and measure your finger stick blood sugar every 30 minutes. If you are unable to correct your blood sugar, treat this as any in flight emergency and land as soon as practicable.

## 15. Do I have to get an insulin pump?

No. However, if you choose to get an insulin pump, **both the pump and CGM need to be FDA approved, both separately and in combination.** Self-built systems are **NOT** acceptable for flying.

## 16. Are there any concerns with the insulin pumps?

Yes, the pump could potentially fail or malfunction delivering too little or too much insulin.

- In the event of failure or malfunction, a backup insulin delivery must be available.
- In the event of sudden cabin depressurization, consider turning off or disconnecting the pump.
- If necessary, clear any bubbles in tubing seen with changes in cabin pressure.

## 17. Are there any features that make some insulin pumps better for flying?

The ability to suspend insulin delivery for a low reading is a good safety feature. In addition, a pump in which the insulin reservoir is not in direct line for delivery is preferred.

**18. I do not use an insulin pump. Do I need to make any changes from my normal routine on the days that I fly?**

The goal is to avoid hypoglycemia while flying. Talk with your board-certified endocrinologist about whether or not adjustments should be made on days when you are flying.

**19. What do I do if my device breaks while traveling or I run out of supplies?**

- Replace the machine as soon as possible.
- If you cannot do this, finish the scheduled trip with your back-up system (finger sticks and injections) and remain compliant with the SI.
- Once the trip concludes, do not start a new trip until the system authorized in the SI is back in place and functional.
- While you may complete at trip once on the road, you are NOT authorized to add additional legs to the trip.
- If neither the primary nor the backup system is functional, you must terminate flight activity. **This is an absolute flight safety requirement.**

**20. Is there a required ground time if I change pumps or CGM devices?**

- **If you are already using** a pump or CGM device and you change devices, no there is no ground time.
- **If you have NEVER** used a pump previously, and you start using a pump for the first time, there is a **seven (7) day** ground trial period.
- There is no required ground time if changing from an “open loop” to a “closed loop” system.