



# Medical Requirements for Glider Flying

checklist (and the pre-leaving-home checklist!).

## Regulations regarding certification

These regulations are located in FAR 61.23, <http://tinyurl.com/ko3aswh>:

(b) Operations **not** requiring a medical certificate. A person is **not** required to hold a medical certificate ...

(1) When exercising the privileges of a student pilot certificate while seeking ...

(i) A sport pilot certificate with **glider** or balloon privileges; or

(ii) A pilot certificate with a **glider** category rating or balloon class rating;

(2) When exercising the privileges of a sport pilot certificate with privileges in a **glider** or balloon;

(3) When exercising the privileges of a pilot certificate with a **glider** category rating or balloon class rating in a **glider** or a balloon, as appropriate; *and so on*. Furthermore, no medical certificate is required when instructing on the ground or in a simulator, in the air whether or not acting as PIC, or when conducting a proficiency exam.

In case you're interested, there are 226 words in the complete section, which *in toto* means that no medical **certification** is required to pilot gliders or balloons, at any level of licensure, or in any pilot role. (We can be thankful for the traditions of the law that entertain us by obfuscating the straightforward to be comprehensive.)

## Regulations requiring abstinence

(We are talking about abstinence from pilot duties here, though other abstinence is often salubrious.) These regulations are located in FAR 61.53, <http://tinyurl.com/kngpa8w>

Operation of any aircraft is prohibited **during medical deficiency**, regardless of whether a medical certificate is held.

§61.53 Prohibition on operations during medical deficiency. ....

(b) Operations that **do not** require a medical certificate.

For operations provided for in §61.23(b) of this part, a person shall not act as pilot in command, or in any other capacity as a required pilot flight crew-member, while that person **knows or has reason to know** of any medical condition that would make the person unable to operate the aircraft in a safe manner.

Dear Dr. Dan,

I have always wanted to learn to fly a glider. I have a Medical Condition. Will this keep me from obtaining a license to fly a glider? I don't want to spend a lot of money and then find out I can't fly.

Sincerely,  
Much Yearning

Dear Much,

The only medical requirement for flying a glider is that you must judge yourself, each day, unlikely to be incapacitated at any time during the flight. The most important clues to impairment are unexpected mistakes, fatigue, drowsiness, unexpected distractibility and physical pain or disablement.

The advice of others on whether to fly will be protective.

Sincerely, Dr. Dan

### The answer.

The note and answer above are the essence of recent correspondence with a man who wants to be a glider pilot but has diabetes.

We are blessed, in soaring, with permission to exercise our own good judgment. We are not fenced by blind, indiscriminate rules. Yet this does mean that we *must* be discriminating about ourselves.

Much of what I've written during the four long years of this column has been aimed at giving you, dear reader, a little education on how to recognize whether it's a safe thing to fly, or to continue flight.

There are two sides to this decision: **medical** (or physiological) and **legal** (regulatory). These are *different*.

### 1: Legal Side

Let's first trudge through the details of the regulatory side.

For **airplanes**, the regulations are

*restrictive* in character, and any pilot must have a medical certificate. Getting a certificate involves convincing the FAA and its designated examiners, *with evidence*, that you are unlikely to experience *in-flight* incapacitation for the duration of the certificate.

**Glider** pilots are not required to have medical certification, for reasons buried in history, surely related to the relative perceived risk. To successfully be stupid, there's no need to deceive the FAA – you only need to deceive yourself that you're safe.

Traditionally, the standard of risk has been somewhat arbitrarily set at 1% per year. But don't torture your doctor by asking what your risk is. We don't know!

Instead, ask your doctor, "Knowing what you know about my health, would you fly as my passenger?" If the doctor hesitates before answering, you should hesitate before flying.

If there is hesitation, ask, "What about my health or my medications makes you stop and think? What worries you?" Of course, you must color the answer by whether the doctor has any clue about airmanship.

### Self-judgment is essential

All pilots, whether certified or not, are expected to stand down at any time a condition develops that creates a risk of in-flight incapacitation. This involves a pre-flight judgment decision, the quality of which will surely be examined after you crash.

In the past, soaring pilots not needing medical certificates were often told to "self-certify" their safety for flight, but the FARs have never required such a process. The concept is a sound one, though, and is an important step in the pre-flight



This looks innocent enough, but there's an important legal phrase in this paragraph that creates work for attorneys, juries, and insurance companies: "has reason to know."

## 2: Medical Side

This regulation demands that we actually think about our medical status before we fly. I've never seen this on any checklist, but it's an idea: **Health, Aircraft, Meteorology, Surroundings – HAMS** – might be a short list before assembling.

I could write about the possibilities exhaustingly. If there is something obvious, like a broken arm or an eye injury, or vertigo, the decision not to fly should be obvious, and the innocent bystanders are likely to stop us. At the other extreme, the symptoms of impending impairment can be subtle or intermittent.

If there are no symptoms and no diagnosis, there's no reason to know. For example, my 28 year old airline pilot fortunately had his first seizure in the ready room between flights, not in the cockpit. The only thing that might have presaged this were concussions in high school hockey. That's not enough.

On the other hand, if you've been feeling lightheaded on standing, there are both harmless and dangerous causes among the many possibilities. Thus, you have *reason to know* that you might have a potentially unsafe condition.

### When to check your health.

There are two times this is important:

- A. Before flight.
- B. After the crash.

You get to choose, at Time A, whether there will be a problem at Time B. This decision affects

- A. Your reputation.
- B. Your heirs and assigns.

The troublesome incidents happen with *subtle* impairment.

### Conditions causing un-safeness

**Stress:** If you have had a severe personal crisis, and you discover that in your day-dreams you are doing split-S turns into the ground, and this seems comforting in the circumstances, this is a solid reason not to fly even if the personal problem isn't permanent.

**Illness:** The most common thing that is potentially incapacitating is the common cold. It's an annoying but trivial illness that is potentially incapacitating because the congestion it causes may prevent the middle ear from being ventilated, and cause vertigo – an uncontrolled spinning or tumbling sensation that prevents proper control of aircraft.

**Chemicals:** The second most common thing is probably chemical impairment. Hangovers do count, but most important are antihistamines, used for sleep, colds, and allergies. Benadryl (diphenhydramine) is the worst, worse than alcohol. Only loratadine (Claritin™) and fexofenadine (Allegra™) are over-the-counter allergy meds that are clearly safe for pilots.

Having said this, allergy-induced congestion risks vertigo like colds do. Clear your congestion once with oxymetazoline nasal spray (lasts about 12 hours) or persistently with pseudoephedrine (Sudafed™ or Afrin™) or phenylephrine (Sudafed PE™) by mouth.

Test the effectiveness by making sure you can clear or "pop" your eardrums on the ground, because if you can't do it before flight, you won't be able to after the exquisite pain starts, the sensation of an icepick in the ear.

### Clues to pilot un-safeness.

Sometimes pilot un-safety is obvious: vomiting, diarrhea, breathlessness, fever with chills, pain. No pilot should attempt to pilot an aircraft then.

### Drugs or medications

All medications that affect the mind increase error rates, and make you more susceptible to fatigue. You *can* ask your doctor or pharmacist whether the medication acts on the brain.

### Forgetfulness

If you find yourself forgetting details, don't assume you've become senile, but *do* realize that something is happening. Whatever it is – fatigue, stress, illness, meds, pain – the fact of today's forgetfulness is a reason to expect surprise errors while flying.

Forgetfulness is an important clue to subtle brain malfunction. Unfortunately, it doesn't come labeled with its cause. ❧

The advertisement for Craggy Aero LLC is set against a dark background with a blue border. At the top, a circular logo contains the text "Aeroequipment Solutions for Sailplanes" around a central blue letter "A" and the company name "Craggy Aero". Below this is a yellow lightning bolt graphic and the text "Craggy Aero Ultimate Le57™". The central part of the ad displays several pieces of avionics equipment, including a large rectangular display showing a map, a smaller square display, and a circular instrument. Below the equipment is the "lx nav" logo. Further down is the "Butterfly Avionics" logo with a red butterfly icon. A circular gauge with a needle and numbers is shown next. Below that is the "lx navigation" logo. At the bottom, there are logos for "MH Aviation Oxygen Systems" and "POWER flarm CORE". The company name "Craggy Aero LLC" is prominently displayed in large, bold letters, followed by the phone number "530-905-0062" and the website "www.craggyaero.com". The tagline "Almost everything for Sailplanes" is at the very bottom.



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## Fatigue

Many things may make us fatigued (lacking energy or initiative). Work, illness, stress, meds, poor sleep, and so on. Think about this. Some fatigue is trivial, something like boredom, and easily relieved. Other fatigue is pervasive and creates malfunction – If you feel fatigued *before* a flight, will you feel less fatigued after 2 or 3 hours in the air?

Yes, you might! We've all felt the lift of something wonderful – the delight of children in seeing us, the joy of success, the miracle of soaring flight.

On the other hand, many of us have physically or emotionally exhausting jobs or social stresses. As a primary-care internist taking "call," I have a great deal of experience with this, and it makes us very error prone. In a rapidly evolving in-flight surprise there is not time for reflective self-monitoring, and tired people make many errors, especially failure to look, see, hear, and listen.

The important thing, when we feel fatigued before flight, is to ask "Why?" This understanding will tell us whether flying will be an antidote. If it feels safe, we should still restrict ourselves to a local flight, and only head out on course if the fatigue vanishes. There are many times that I've flown a local 30 km triangle when the plan was for 300 km, but fatigue wasn't cured by the joy of flight.

Fatigue that begins *during* flight – like any other physical or psychological disorder – may be a reason to land. There's never a good reason to push our limits when soaring. This is a recreation. (There has never been a life-saving glider flight, but many have been life-ending.)

## Drowsiness

Sleepiness is a special matter, different from fatigue. The most common cause of daytime sleepiness in the portly (obese) is sleep apnea, and persistent daytime drowsiness is a sound reason to go ask for the expensive *sleep study* and make flights short or to refrain from flying.

Another cause of drowsiness is *motion* – yes, motion such as flying a glider. Socially, this is why we rock or walk babies. Medically, it's called the *sopite syndrome* (it's a "condition" when we don't want it to happen).

Caffeine is a safe and effective antidote to mild drowsiness. If you're prone to in-flight drowsiness as I am, hydrate with caffeine or snack on caffeinated energy blocks. Remember that it takes about 30 minutes to be absorbed, so lead that duck by half an hour.

## Mistakes

Finally, no matter what the reason, if you find yourself making uncharacteristic small mistakes, you're not fit to fly until you've figured out why and solved the problem. Sometimes it's a matter of simply cooling off our emotions; often, it's a matter of having too many things going on. Seldom is it purely medical, and a pill is never the answer.

## Readings

Years ago, I wrote a long essay, *Clues You Can Use*, to help pilots understand what physical symptoms can presage impairment. John Carlyle converted it to .pdf format, available at <http://tinyurl.com/13t9ryc>. It's worth reading.

My monthly Soaring Rx column has addressed this sometimes. The columns trove is at <http://tinyurl.com/qf4gdza> and some specific columns are

What's Medical impairment? <http://tinyurl.com/onnf9kk>

What's Heart impairment? <http://tinyurl.com/nytdook>

What's Cognitive impairment? <http://tinyurl.com/kkmjtbtd>

What is Judgment? <http://preview.tinyurl.com/karluypp>

How should I eat differently? <http://tinyurl.com/o4yxufs> and <http://tinyurl.com/nq8j9rm>

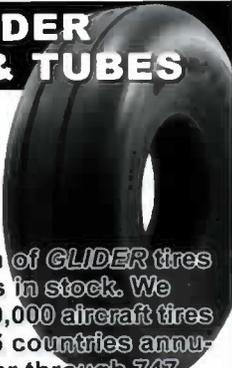
## Making the to-fly decision

You are the only one responsible for your decision to fly or to continue a flight. The consequences affect everyone else. There are no Health Police, no tickets, no fines. Just the Laws of Gravity and Aerodynamics – and the Judge can be pretty harsh.

## Acknowledgments

Thanks to Mark Tess for inspiring this discussion, and to Bill Walter for pointing him in my direction. Thanks to Steve Dee for editorial suggestions. ✈

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