

FAA Safety

BRIEFING

July/August 2017

Your source for general aviation news and information



BasicMed

Begins ...

Bring On BasicMed! What You Need to Know p 8

You Asked, We Answered Your Top BasicMed Questions p 18

How to Talk To Your Doctor about BasicMed p 22



Federal Aviation
Administration

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The July/August 2017 issue of *FAA Safety Briefing* explores several key facets of the new BasicMed rule, which offers pilots an alternative to the FAA's medical qualification process for third class medical certificates. Under BasicMed, a pilot will be required to complete a medical education course every two years, undergo a medical examination every four years, and comply with aircraft and operating restrictions.



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The Basics of BasicMed

By the time you read this issue of *FAA Safety Briefing*, the new BasicMed rule (14 CFR part 61.113(i)) will have been in effect for around three months. Based on the intense level of interest we have seen and heard in the community, I imagine that a number of the pilots the FAA team will meet at AirVenture this summer will have chosen to operate under the new rules.

I will be among you. As many of you know, I have been exercising sport pilot privileges to fly my Titan *Tornado* light sport aircraft since allowing my FAA medical to lapse after a now-resolved health issue. I have flown my Piper *Cherokee* with pilots qualified to act as PIC, but she has still been very jealous to see the Titan fly a lot more often than she has. I am eager to restore the balance, if only to keep the peace in my hangar.

Rights and Responsibilities

There is no doubt that BasicMed is good and happy news for many of us, but I want to take a few minutes here to talk about rights and responsibilities or, as the FAA likes to say, privileges and limitations. It's important, so stay with me.

A few years ago, I was deeply involved in the development of 14 CFR part 117, the Flight Duty and Rest rule for commercial air transportation flight crewmembers. Some of the points I made to the community at that time are also applicable to BasicMed. Like part 117, the new rule represents what should be a familiar approach to the FAA's rules: that flight safety (via risk management) is an inherent, personal responsibility that belongs to each flight crewmember. However, with part 117, Congress charged the FAA with turning some very specific requirements into a regulation that we could implement and oversee.

In the case of part 117, Congress intended for us to develop a science-based rule that would ensure well-rested pilots. Because the science was not as robust as we hoped it would be, the FAA developed a rule based on the science and data that did exist, one intended to be a guide.

In the case of BasicMed, Congress intended for us to develop a rule that would give greater flex-

ibility to those flying for recreation and personal transportation. While the 2004 Sport Pilot rule has provided some useful information on the safety of operations with the so-called "driver's license medical," the breadth of BasicMed's applicability still puts both the FAA and the aviation community in new territory.

In Letter and in Spirit

Consequently, just as with part 117, BasicMed needs to be implemented in the spirit of its intent, and its success depends on honest, professional, mutual cooperation by all parties. Those who fly under BasicMed do not have to navigate the kind of employer/employee challenges inherent in the day-to-day operation of part 117, but the kind of safety and "just culture" issues embedded in that rule are just as important in BasicMed.

Safety assurance is a shared responsibility, and it requires a lot more than just following the letter of the regulations. Medical self-certification is expected of all pilots, but those of us using BasicMed have the same obligation to take our risk management responsibilities seriously and achieve the same safety standard we have enjoyed when using a third-class medical or flying as Sport Pilots. Just as in those other areas of operation, we need to see and avoid medical risks, and we must all adopt zero tolerance for reckless behavior. We need to demonstrate our understanding that safety management is risk management.

Fortunately, BasicMed provides not only new opportunities, but also new tools. Completing one of the new, online medical education courses is a requirement for operating under BasicMed, but whether or not you decide to use this option, enhancing your aeromedical education is very worthwhile. For everyone's benefit, I urge you to take this information — and the fit to fly self-certification responsibility — very seriously.

Now — let's go fly!

Those of us using BasicMed have a special obligation to take medical self-certification very seriously and show the world — including the many doubters — that we can measure up to the highest expectations.

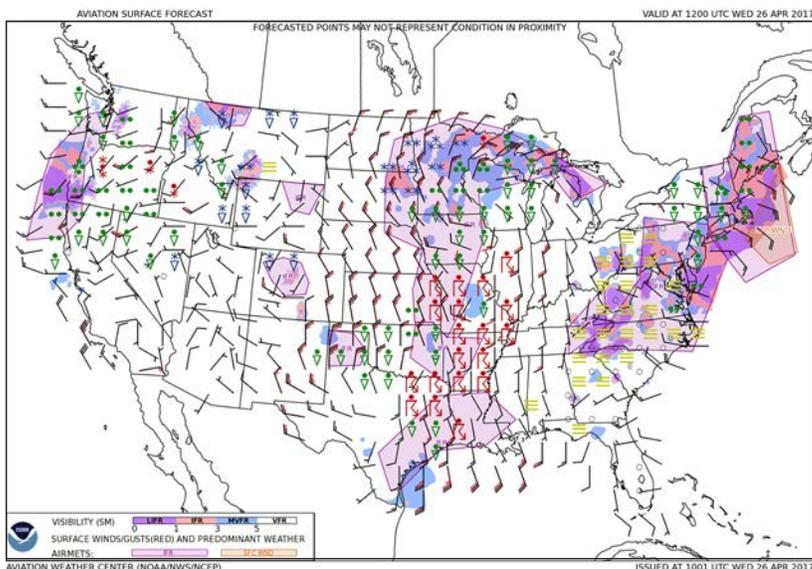


New Graphical Forecasts for Aviation

To improve operational benefits and enhance safety within the National Airspace System (NAS), the FAA will replace the Area Forecast for the continental U.S. (CONUS), a legacy textual product used to describe en route weather phenomena, with the Aviation Weather Center's new Graphical Forecasts for Aviation (GFA) now available on AviationWeather.gov/GFA. Area Forecasts for Alaska, Hawaii, the Caribbean, and the Gulf of Mexico will not change at this time.

The new, interactive GFA webpage focuses on low-altitude flights and includes the following observational weather products: Meteorological Terminal Aviation Routine Weather Reports (METARs), Precipitation/Weather (PCPN/WX), Ceiling & Visibility (CIG/VIS), Pilot Reports (PIREPs), and Radar & Satellite. Forecast information is displayed for non-meteorologists, and pilots get a complete three-dimensional picture of the weather, including forecasts and warnings for: Terminal Area Forecasts (TAFs), thunderstorms, clouds, flight category, precipitation, icing, turbulence, and wind.

The GFA and static graphical forecast images will be updated continuously at AviationWeather.gov. More details will be available in a future revision of Advisory Circular 00-45H, *Aviation Weather Services*. A short video explaining how to navigate the GFA interactive web tool is available at youtu.be/kLe6Eu3fwS0.



Flight Plan Changes in the D.C. FRZ

The FAA plans to transfer responsibility for the filing of flight restricted zone (FRZ) flight plans from Flight Service to the flight data unit, located at the Washington Air Route Traffic Control Center (ARTCC), in the fall of 2017. The transfer of this responsibility will increase security in the validation of flights allowed to operate in the FRZ. Pilots will need to use a new telephone number to call in a FRZ flight plan.

Pilots flying in the Washington, D.C. metropolitan area, designated as a Special Flight Rules Area (SFRA) that includes the FRZ, are keenly aware that aircraft are under additional security measures to protect the nation's capital. The SFRA is an area where the identification, location, and control of aircraft is required and considered national defense airspace. The SFRA consists of a lateral 30-nm radius of the DCA VOR/DME and is clearly marked on the Washington, D.C. sectional chart and the associated terminal area chart. The FRZ, which is subject to additional restrictions, is located within the SFRA and covers approximately the area within a 13-15 nm radius of Washington, D.C.

Before departure, IFR and VFR pilots seeking to fly through or within the FRZ, or depart or arrive at College Park, Potomac Airfield, or Washington Executive/Hyde Field airports currently have to file a FRZ flight plan with the Washington Hub Flight Service Station. Effective September 26, 2017, at 1200Z, the Washington ARTCC Flight Data Unit will file pilots' FRZ flight plans. These flight plans are only accepted after it has been determined that the aircraft is on the applicable waiver list, or that the pilot has provided the appropriate identification. Pilots will not be able to submit flight plans to or from a FRZ airport online. To receive search and rescue services, pilots must file a VFR flight plan with Flight Service.

The FAA will update the DC SFRA course to reflect this change, as well as provide the Washington ARTCC contact information once final. For further information on the training required to fly in the Washington, D.C. metropolitan area, visit the FAA Safety website at 1.usa.gov/2pOJm8l.

UAS Facility Maps Released

The FAA has published more than 200 facility maps to streamline the civil (part 107) drone autho-

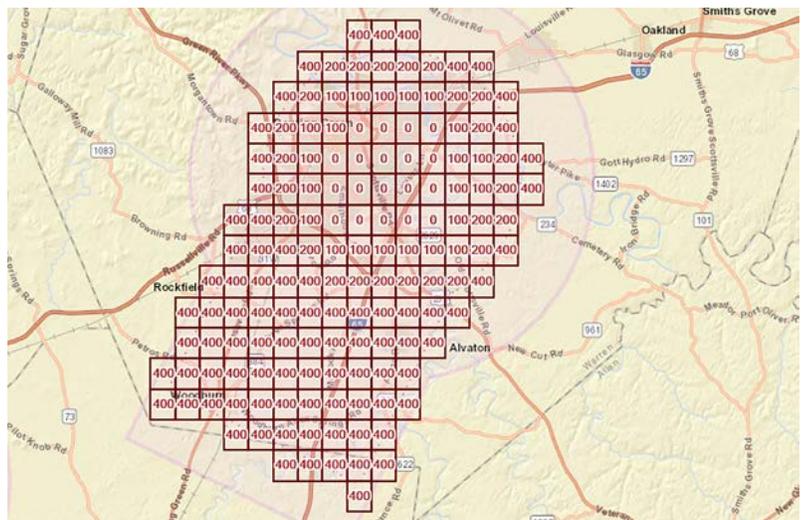
rization process. The maps depict areas and altitudes near airports where UAS may operate safely, but drone operators still need FAA authorization to fly in those areas.

This marks a key first step as the FAA and industry work together to automate the airspace authorization process. The maps are a tool to help tailor part 107 remote pilot requests to align with locations and altitudes when they complete airspace authorization applications at faa.gov/uas/request_waiver.

Operators may download the map data in several formats, view the site on mobile devices, and customize their views. The map viewer at arcg.is/2qsLdTo displays numbers in grid cells which represent the distances above ground level (AGL) in one square mile up to 400 feet where drones may fly. Zeros on the UAS facility maps indicate critical locations around airports and other aircraft operating areas, like hospital helipads, where requests to operate will require further coordination and FAA safety analysis, which can take additional time to process and may result in additional safety mitigations to be complied with by the drone operator.

Additional maps will be published every 56 days through the end of the year. The updates will coincide with the agency's existing 56-day aeronautical chart production schedule. If a map is not yet available, it can be expected in future releases.

The facility maps are an important accomplishment as the FAA collaborates with industry to safely integrate drones into the NAS. They will help



The UAS facility map viewer displays numbers in grid cells which represent the distances above ground level (AGL) in one square mile up to 400 feet where drones may fly.

improve the safety of drone and traditional aircraft operations. Questions may be directed to the FAA's UAS Integration Office via uashelp@faa.gov or by calling 844-FLY-MY-UA.

Supporting a Public Agency with UAS

If you are a certificated Remote Pilot operating your *civil* UAS in accordance with 14 CFR part 107, you may conduct a mission on behalf of a public agency (e.g., local fire department) with their expressed permission, and without specific approval

Safety Enhancement Topics

July: Pilots & Medications

Understanding how drugs can compromise a pilot's ability to control the aircraft.



August: Runway Safety

Tips and best practices that can help you avoid incursions and improve your overall runway safety.



Please visit www.faa.gov/news/safety_briefing for more information on these and other topics.



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from the FAA, as long as you can operate under the provisions of part 107.

However, some public safety missions don't allow for a safe flight under part 107 and do require approval from the FAA in the form of an authorization or waiver. If preplanning and preparation are possible, a civil UAS operator should request the FAA authorization or waiver necessary for the anticipated missions in advance. When this is not possible due to emergency circumstances, the public agency can sponsor a civil UAS operator for issuance of an emergency Special Government Interest-Certificate of Authorization (SGI-COA).

In order to enable issuance of an emergency SGI-COA, the public agency must call the FAA System Operations Security Center at (202) 267-8276 and follow up with an email to 9-ator-hq-sosc@faa.gov. The public sponsor will need the UAS operator's name, part 107 remote pilot-in-command certificate number, and the UAS registration number(s) and phone number to facilitate that approval. The small UAS operator must have a current 14 CFR part 107 Remote Pilot Certificate, and copies of any current part 107 waivers must be provided as part of the public sponsor's request for emergency airspace access and/or SGI-COA for verification by the FAA.

The remote pilot must operate under the part 107 regulations not specifically waived and any special provisions provided as part of the SGI-COA. Civil UAS operators are encouraged to get a written approval from the sponsor to operate on their behalf for the specific emergency and to obtain a copy of the SGI-COA from the FAA to be kept with them during the operation.

The emergency SGI-COA process works more quickly if the public agency already has a Certificate of Authorization (COA) on file with the FAA. For the latest information, see faa.gov/uas.

Can You Fly While High?

Change, the defining characteristic of history, is inevitable. Sometimes change creates conflict between state and federal laws, as is the case now that some jurisdictions around the United States approve medicinal and even recreational use of marijuana. As far as the federal government's Drug Enforcement Administration (DEA) is concerned, marijuana is classified as a Schedule 1 drug and, as such, is strictly illegal.

The debate about who's right and who's wrong about marijuana is beyond the scope of this column. My point is that even if legality was not an issue, marijuana remains a disqualifying drug. Let me be perfectly clear: If you are flying while under the influence of marijuana, you are flying impaired. If you are flying with marijuana or its metabolites detectable in your body, you are flying illegally. You should also be aware that marijuana, or its metabolites, may remain in the body for as long as 30 days after use.

Why Do We Need to Make this Statement?

In 2014, the National Transportation Safety Board (NTSB) released a long-term study of pilot impairment (go.usa.gov/x56Ky), which examined the toxicology results of pilots fatally injured between 1990 and 2012. In this study, the NTSB noticed an increased prevalence in marijuana use among those pilots. In fact, the NTSB noted that when comparing the first five years to the last five years of the study, positive marijuana results nearly doubled.

Combined with other studies that show increased marijuana use in the general population and new state laws allowing expanded medical/recreational use of marijuana, the NTSB became concerned about the potential safety impact. Its report notes that "illicit drug use is particularly concerning to transportation safety because, unlike typical therapeutic use of drugs in which impairment is often an undesired side effect, illicit drug users are often actively seeking the impairing effects of the drug." The NTSB concludes that: "Not surprisingly, there is evidence showing that taking illicit drugs significantly elevates the risk of having an aviation accident." The FAA concurs with this opinion.

What is the FAA's Policy on Marijuana?

FAA policy on marijuana use is clear. The FAA considers marijuana to be an illicit drug, regardless of whether the airman has a prescription or lives in

a state where marijuana is approved for recreational use. Illicit drug use by crewmembers (including pilots) is not allowed, as stipulated in 14 CFR part 91.17(a)(3): "(a) No person may act or attempt to act as a crewmember of a civil aircraft — (3) While using any drug that affects the person's faculties in any way contrary to safety." Parts 91.17, and 61.15, also contain penalties for conviction of crimes involving marijuana (Federal or State).

Additionally, 14 CFR part 67 (medical standards) defines substance dependence, including marijuana dependence, as a specifically disqualifying condition for all classes of medical certificates (sections 67.107, 67.207, and 67.307). This means that both the use of marijuana, and dependence upon it, are disqualifying. The DOT states that: "Marijuana remains a drug listed in Schedule I of the Controlled Substances Act.

It remains unacceptable for any safety-sensitive employee subject to drug testing under the Department of Transportation's drug testing regulations to use marijuana." (See go.usa.gov/x56kv for more).

While DOT drug testing (random and pre-employment) regulations don't apply to many general aviation pilots, the same safety sensitivity does. As I noted earlier, marijuana is a significantly impairing drug. The qualities that make it so attractive to some users are the same ones that make it particularly dangerous for an airman. It results in significant performance degradation of the executive functions of the brain (e.g., decision-making, multitasking, and situational awareness), which are absolutely critical to safe piloting.

The FAA policy is clear: No flying on marijuana. If you are not a pilot subject to drug testing, you are still risking your safety. If you are subject to drug testing, you are also jeopardizing your employment, regardless of any prescription or recreational use laws. If you do live in a state that approves medical/recreation use of marijuana, please exercise great care, and remember how long marijuana and its metabolites remain in the body, when deciding if you are ready to return to flight.

Bottom line: I recommend avoiding marijuana if you want to fly.

If you are flying while under the influence of marijuana, you are flying impaired.



Q1. I understand that the FAA will not allow a pilot to fly using monovision corrective lens, (contacts or eye glasses) where one eye is corrected for distance vision and the other is corrected for reading. What is the FAA position on cataract surgery, where this is done?

A1. Surgical monovision is treated the same as acquired monocular, and requires a Medical Flight Test and Statement of Demonstrated Ability (SODA) after a 6 month adaptation period.

Q2. Stress test noted progressive Ischemia. Nuc or Echo stress tests requested. Also a vision field test — is that vision test really a necessary test?

A2. Without knowing your specific case, I cannot answer this question. Visual field testing can be very important with some eye diseases such as glaucoma where peripheral vision is gradually lost.

Q3. If you were to have a medical condition that prevented you from flying, such as a pulmonary embolism, and you were able to get rid of the embolism and stop taking blood thinners before your next physical, are you obligated to tell the flight surgeon before you start flying again, or is it sufficient to disclose it during the next physical?

A3. You are not obligated to tell the flight surgeon; however, pulmonary embolus can be life threatening and it would be wise to discuss your condition with the flight surgeon before you return to flying. It would be important to discuss your current condition as well as your risk of future events.

Q4. I have chronic back and sciatica pain. I had a L 4-5 fusion 7 years ago. My doctors say Gabapentin would help my neuropathy. I have tried it and it helped tremendously with no side effects at all. I know it was made for seizures which I never have had, but I don't understand why someone like me can't use it? Also, if I did occasionally use it, would I be able to fly if I waited "X" amount of days and if so what would "X" be? Same question if you took a pain killer like Vicodin or a half of Percocet? Is there a time period that would allow

a pilot to occasionally use a restricted medicine but not fly until after so many hours/days after use? I would think after a surgery a pilot would be given pain killers, but eventually fly again after a certain amount of time? Thank you.

A4. We must always consider the reason a medication is being taken and not just the medication itself. If you have chronic back pain and neuropathy, it may not be in your best interest to take medications episodically. Nor would it be wise to fly with distracting back pain and neuropathic symptoms. All three of these medications depress the central nervous system. If you and your treating doctor find that rare use of these medications are in your best interest, the minimum wait times are 24 hours for Vicodin, 36 hours for gabapentin, and 72 hours for Percocet.

Q5. I want to start flying again after 30 years of flight inactivity. I am a healthy 80 year old male with a St. Jude pacemaker/defibrillator, the first one implanted in 2006, and lasting for nine years before a low battery necessitated a replacement. Now, for almost 11 years, the device has not been activated by any cardiac anomaly. Is there a possibility that I can get a 3rd class medical certificate with the device? I have a multi-engine instrument rating with about 1,500 hours logged.

A5. I am sorry to say that unless the defibrillator function of the device is inactivated, you would not be eligible for a medical certificate. You may fly with a pacemaker as long as you are not totally dependent on it.

Penny Giovanetti, D.O., received a bachelor's degree from Stanford, a master's in Environmental Health and Preventive Medicine from the University of Iowa and doctorate from Des Moines University. She completed a 27-year career as an Air Force flight surgeon. She is board certified in aerospace medicine, occupational medicine and physical medicine/rehabilitation. She is also a Fellow of the Aerospace Medical Association and a private pilot.

Send your questions to SafetyBriefing@faa.gov. We'll forward them to the Aerospace Medical Certification Division, without your name, and publish the answer in an upcoming issue.

FAA Safety Center Forums

July 24 – 30, 2017

	0830 – 0945	1000 – 1115	1130 – 1245	1:00 – 2:15	2:30 – 3:45	4:00 – 5:00
Monday July 24	Runway Safety Update Andy Miller Wings: BK2	Over the Counter Drugs and Flying FAA, Dr. David Schall Wings: BK3	Weather and Colorado Mountain Flying Bill Standerfer Wings: MK2	BasicMed-How Does it Work & Is it Right For You? Gregory Pinnell, MD Wings: BK3	Tactical IFR Guy Lieser & Panel Wings: AK2	Pilot/Controller Communication Forum Robert Obama Wings: AK2
Tuesday July 25	Don't Go Bump in the Night: Night Flying Hazards Bob McCabe Wings: AK1	Decision Making in a Crisis Cmdr. Kirk Lippold Wings: MK1	Four Landing Accident Stories: Cause & Prevention Woody Minar Wings: BK2	Fly the Easy Way; 21 things that make your flying easier, safer . . . Larry Bothe Wings: BK3	FAA Medical Update FAA, Dr. David Schall Wings: BK3	High Altitude Physiology FAA, Rogers Shaw Wings: AK2
Wednesday July 26	ADM and Risk Management for UAS Operators Kevin Morris - FPM Wings: BK3	Ditching and Water Survival COMO Robert Shafer Wings: MK2	ADS-B Prepared 2020 – Airspace, Equipment, Benefits Panel Wings: BK3	The Kings on Avoiding Unwanted Adventure John and Martha King Wings: AK1	All About Spins Catherine Cavagnaro Wings: MK2	Panel of Experts (IFR) Guy Lieser & Panel Wings: AK2
Thursday July 27	General Aviation Awards CFI of the Year AT of the Year FAA Team Rep of the Year	Would the Real PIC Please Stand Up Greg Feith Wings: AK2	*No Session* Meet the Administrator @ the EAA Pavilion *No Session*	How to Talk to ATC Heather McNevin Wings: MK2	TFRs & Interceptors: How to Avoid an Escort Major Josh Boudreaux Wings: MK2	Avoiding Runway Incursions and/or Deviations Peg Ballou Wings: BK2
Friday July 28	VOR Minimum Operational Network (VOR MON) Panel Wings: BK3	FAA Medical Update FAA, Dr. Michael Berry Wings: BK3	Visual Flight Illusions Michael Stretanski, D.O. Wings: MK2	Making Wrong a Little More Right; The Normalization of Deviance Sarah Rovner Wings: AK2	Stop Talking about Safety Tom Turner Wings: AK2	Airman Certification Standards: Update FAA, Susan Parson Wings: BK3
Saturday July 29	Check-ride Tips: Do's and Don'ts Warren Smith Wings: BK3	Professionalism & the Top-10 "Most Wanted" Undesirable Attitudes Rex Alexander Wings: AK2	Airborne NEXRAD Radar – Review, Update Accident Analysis David Strahle, MD Wings: MK1	1800WXBRIEF The Best of the Future of Flight Service Joe Daniele Wings: BK3	Fatigue/Stress in Aeronautical Decision Making FAA Rogers Shaw Wings: BK3	FAA Legal Update James Tegmeier Wings: BK3
Sunday July 30	<p>Closed</p> <p>Find a WINGS program in your area all year long at: www.faasafety.gov</p>					

Appropriate **AMT / WINGS** credit will apply to events by using associated select **#GL007XXXX** listed in each box

FAA Forum & FAA Exhibit Hall Opens Daily at 8:30 a.m.
Schedule is subject to change; for updates check the QR code to the right or go to: <https://goo.gl/ikDfP1>.





BRAD ZEIGLER

Bring On BasicMed

What the FAA's New Regulatory Relief Rule Means for You

For thousands of general aviation (GA) pilots, May Day, a.k.a. May 1, signified much more than a day of seasonal celebration. May 1, 2017 marked the start of BasicMed, the medical certificate relief that allows GA pilots, exercising private pilot privileges, to fly powered aircraft as pilot in command (PIC) without holding an FAA-issued medical certificate.

BasicMed originated from Congress and is the FAA program implementing provisions of section 2307 of the FAA Extension, Safety, and Security Act of 2016 (FESSA).

BasicMed in a Nutshell

BasicMed permits certain pilots, flying certain aircraft, to conduct certain operations, without holding a current medical certificate. It is an alternative to the third class medical certificate; however, it is not a replacement of the third class certificate, and it is not a "fourth class" certificate. BasicMed is simply another means of being able to establish medical eligibility in order to act as PIC of a powered aircraft in certain circumstances. Let's take a closer look at the details.

Are you Eligible for BasicMed?

Here are the items that you'll need to qualify for BasicMed:

Driver's License. You must hold a current and valid U.S. driver's license and have it in your personal possession when operating under BasicMed. While you might use an official passport to serve as a valid form of photo identification under section 61.3(a) (2), it may not be used in lieu of a driver's license to operate under BasicMed. An international driver's license or a foreign driver's license does not suffice either. Any restrictions on your driver's license, such as corrective lenses or "daylight driving only" will

also apply under BasicMed.

At least one Medical Certificate. You must have held a valid FAA medical certificate at any point after July 14, 2006. If that medical certificate was associated with special issuance, the expiration of the special issuance must be after July 14, 2006. Remember, if you are operating under BasicMed, your most recent medical certificate must not have been suspended or revoked, any special issuances must not have been withdrawn, and if you've since applied for another medical certificate, that completed application cannot have been denied.

One Special Issuance. BasicMed contains several provisions that require specific actions for individuals who have ever had certain mental, cardiac, or neurological health conditions. If you have had one of those conditions, you must obtain a medical certificate with authorization for special issuance. You are required to obtain only one special issuance medical certificate for each condition in order to operate under BasicMed. If you presently have, or are newly diagnosed with, a cardiovascular, neurological, or mental health condition described in section 68.9, you may not use BasicMed until you have been found eligible for special issuance of a medical certificate. The list of special conditions from section 68.9 is listed on the BasicMed website, faa.gov/go/BasicMed.

Once you've determined your eligibility, here are the steps you'll need to take to fly under BasicMed:

Step 1: See Any State-Licensed Physician

Before you go to your appointment with a state-licensed physician of your choosing (and preferably one who's familiar with your health history), you must first complete your portion of FAA Form 8700-2, Comprehensive Medical Examination Checklist

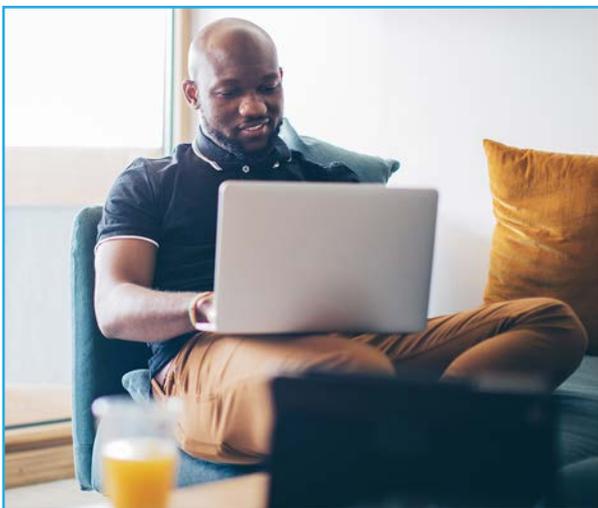
(CMEC). If the section you're required to fill out looks familiar, it should — it's derived from a previous version of FAA Form 8500-8, the medical certificate application form that now exists in MedXPress.

Section 2 of the form requires you to answer questions about your medical history. Your physician will review your responses to those questions and address any medical issues or medications taken, as they apply to operating an aircraft or motor vehicle.

In addition to reviewing your responses in section 2, your physician will conduct a medical examination of the items listed in section 3. These are similar items that an Aviation Medical Examiner would review for your third-class medical exam.

If your physician is satisfied that you present no medical conditions that would interfere with your ability to safely operate an aircraft, he or she will sign the form and complete the identifying information, including his or her state license number. Legibility is key here as you will need this information in order to print your medical education course completion certificate. Once the CMEC is completed, store it in your logbook. In order to act as PIC under BasicMed, you must have completed a medical examination in the preceding 48 months.

The FAA acknowledges that your CMEC contains private medical information, and a representative of the FAA will never ask to see the form unless there is an incident or investigation that warrants inspection of the document.



Step 2: Take the BasicMed Online Medical Course

The FAA's BasicMed website contains a list of each approved medical education course provider

for BasicMed. The courses contain several topics regarding fitness for flight, including:

- medical self-assessments;
- warning signs of potential serious medical conditions;
- risk mitigation strategies for medical conditions;
- awareness of impairment from over-the-counter and prescription drug medications; and
- regular medical checkups.

Once you complete the course, you will be required to electronically certify that you allow the FAA to access your driving records, that you're being actively treated for any medical condition that affects your ability to fly, that you've completed the CMEC, and that you understand your obligations under section 61.53 regarding operation of an aircraft during a medical deficiency.

Once you complete the course and make the required certifications, you will be required to enter information about yourself and the physician who completed the CMEC (be sure that the personal information you enter matches exactly what's on your pilot certificate). This information is transmitted to the FAA, and you will be provided with a course completion certificate to retain in your logbook. In order to act as PIC under BasicMed, you must have completed the online medical course within the preceding 24 calendar months.



Photo by James Williams

Step 3: Fly A BasicMed Covered Aircraft

Under BasicMed, you may fly any aircraft with a maximum take-off weight of 6,000 pounds or less, and certified to carry not more than six occupants. The aircraft may be type-certificated, or certified under an experimental airworthiness certificate. BasicMed makes no distinction on the number, type, or horsepower of engines, but you must adhere to the operational limitations described below.



Step 4: Know Your BasicMed Operating Limits

While BasicMed permits flights of any distance or duration, any time of the day, under visual or instrument flight rules, there are a few operational limitations that you need to be aware of. Congress established that these limitations apply to the entire flight, so take note if you routinely trade off PIC responsibilities with another pilot during a flight. Even if the pilot you are flying with holds a valid medical certificate and has the ability to operate beyond the constraints of BasicMed, you cannot act as PIC at any time during that flight if those limitations are exceeded, even if the other pilot is acting as PIC during that portion of the flight.

Max Passengers (five). You may not fly with more than five passengers, regardless of the number of seats.

U.S. Airspace. Because BasicMed is not recognized by the International Civil Aviation Organization (ICAO) as meeting internationally-agreed medical standards, you may not operate under BasicMed outside the United States unless you are authorized by the country in which the flight is conducted.

Max Altitude. While BasicMed doesn't prescribe a limitation on the service ceiling of the aircraft you are flying, you may not fly above 18,000 feet mean sea level (MSL) while operating under BasicMed. This is an important flight planning consideration if you typically fly over high terrain, weather, or just want to avoid turbulence at lower altitudes.

Max Airspeed. If you fly a fast plane, you may need to throttle back so you can remain at or below 250 knots indicated airspeed. This is indicated airspeed, so your true airspeed or groundspeed may be higher than 250 knots.

No Compensation or Hire. Just as is the case when exercising your private pilot privileges under a third-class medical certificate, you may not operate under BasicMed for compensation or for hire. The standard exceptions of section 61.113(b) still apply to BasicMed, so you may continue to split the pro-rata share of the operating expenses with your passengers or receive reimbursement for search and location efforts. Flight instructors take note: The FAA considers the compensation flight instructors receive to be for teaching, not piloting the aircraft. As such, flight instructors may receive compensation for instructing while operating under BasicMed.



Step 5: Know Your Fitness to Fly

Assessing your medical readiness for flight should not be limited to once every 1,461 days. We should be evaluating ourselves each and every time we fly. Just as we preflight the aircraft we're about to fly, we should be conducting a thorough preflight on ourselves to determine if there are any medical conditions that could prevent us from safely conducting the flight. Whether you fly under BasicMed or not, section 61.53 prohibits you from acting as PIC if you know, or have reason to know, of any medical condition that would make you unable to operate the aircraft in a safe manner.

The BasicMed online training courses provide education and resources on how to conduct this evaluation. For this reason alone, the course is worth taking, even if you don't plan to operate under BasicMed.

Step 6: Know Your Limitations

The FAA enacted BasicMed exactly as Congress prescribed. As such, there are a few things worth noting.

Dates. Note that the comprehensive medical exam must be completed in the preceding 48 months. That is exactly 1,461 days prior to the day

of the flight. On the other hand, the online medical course must be completed 24 calendar months prior to acting as PIC under BasicMed. Calendar months means that if your course was completed on May 10, 2017, you have until May 31, 2019, before you must take it again in order to continuously act as PIC under BasicMed.

Safety Pilots. You may not act as a safety pilot under BasicMed unless you also agree to act as the PIC. A safety pilot, by virtue of being a required crew-member, is required to hold a medical certificate. Because BasicMed only applies to pilots acting as PIC, a safety pilot who is not PIC must hold a valid medical certificate, and may not operate under BasicMed. This also applies to flight instructors if they are providing instrument instruction to a pilot who has agreed to act as PIC. The moment the pilot receiving instruction puts on a view-limiting device, the flight instructor has become the safety pilot, and must hold a valid medical certificate unless the flight instructor agrees to act as PIC.

Designated Pilot Examiners (DPEs). Congress did not extend the relief provided by BasicMed to DPEs, so in accordance with section 61.23(a)(3)(iv), DPEs must hold at least a third-class medical certificate in order to perform the duties of an examiner.

Aircraft Certificated to carry more than six occupants. Certain aircraft, such as variants of the Piper

PA-32 and PA-34, and other makes/models do not qualify under BasicMed because they are certificated to carry more than six occupants, even if they only have six seats installed. In order to determine the number of occupants your aircraft is certificated to carry, refer to your aircraft's type certificate data sheet, found on the FAA public website.

The FAA expects the regulatory relief offered with the BasicMed rule to be a major success for the GA community. In fact, as of this writing, more than 5,000 pilots have already completed the online course and submitted their BasicMed medical exam records. The new rule is also consistent with the FAA's shift towards risk-based regulation and decision making, shifting responsibility from the agency to the airman, and his or her physician, to collaboratively assess fitness for flight. This helps provide a winning combination for general aviation: keeping pilots safe and flying affordable.

If you have any questions or comments about the FAA's BasicMed rule, please contact us at 9-AWA-AFS-BasicMed@faa.gov. You can also find answers to frequently asked questions at go.usa.gov/xNkPs. 

Brad C. Zeigler is an aviation safety analyst with the General Aviation and Commercial Division. He is also an Airline Transport Pilot, Certificated Flight Instructor, and frequent Cessna 182 flyer around the Washington, D.C. area.



GA PILOTS

 **Federal Aviation Administration**

 **BasicMed**

Starting MAY 1 2017

Learn more at faa.gov/go/basicmed

ERRARE HUMANUM EST

To Err is Human ...

SABRINA WOODS



This might come as a shock to you, dear reader, but someday, sometime — perhaps even within the next hour or so — you will make a mistake. Actually, this is highly likely because as humans, we make dozens of little mistakes daily. They are those innocuous little “oops” that rarely manifest into anything more than an irritant; that is if they even go noticed at all. Even Lucius Annaeus Seneca, the early first century Roman philosopher, is attributed with saying “*Errare humanum est ...*” which means to err is human.

Still need convincing? Ok. When was the last time you burned your tongue diving (knowingly) into a hot piece of pizza or cup of coffee? When was the last time your glasses/cell phone/keys “took a walk” on you? And my personal favorite, when was the last time you walked purposefully into a room, only to find out you have no idea what that purpose was?

Now let’s get a little more substantial. Let’s talk about those mistakes that can rear up and really do you harm if not vigilant. When was the last time you ...

... Skipped a Full Weather Brief?

Because you were “only going to take ‘er up for an hour or so?” You might believe that a brief hop from here to there shouldn’t warrant more than a cursory glance at METARs (aviation routine weather reports), but I guarantee that Mother Nature can (and often will) have a very different take on your plans.

Managing the weather can often be the most difficult part of flying. Continued flight into instrument meteorological conditions (IMC) and encoun-

tering thunderstorms or wind shear remain firmly affixed in the top 10 causes of GA accidents. It is by far the most lethal, with more than 75 percent resulting in fatalities. This is a statistic the FAA and NTSB, as well as advocacy groups such as AOPA, EAA, the National Association of Flight Instructors (NAFI), and the Society of Aviation and Flight Educators (SAFE) are diligently working to bring down.

Long gone are the days when you had no other option but to call for an updated weather report. Today, up-to-date, accurate weather can be at your fingertips with any one of the great weather applications available out there. With a mere swipe, you can access the information needed to give you a complete mental picture of what to expect during all phases of your flight.

Even if you are flying in always-sunny Phoenix, Ariz., your safest bet is to start each and every flight with a full, standard weather briefing. Then set the app of your choice or the Adverse Condition Alerting Service (1800wxbrief.com) to give you timely, continuous updates throughout the duration of your trip. Last, always have a back-up plan for diverting ready to go just in case.

One more thing: cross-talk is a huge help in keeping the information stream flowing. The National Weather Service has a nifty pilot weather reports (PIREP) infographic (aviationweather.gov/airep) that can help with flight planning. Pilot reports that either support or cast doubt on the forecast can help your fellow aviators in making their own go/no-go decisions when planning their flights, so share the wealth!

... Didn't Top Off?

Another common cause of GA mishaps is fuel mismanagement. This fact is rather appalling considering that of all the common reasons for mishap, this one is easily the most preventable.

Photo by Tom Hoffmann



One November day in 2015, the pilot of an amateur built aircraft failed to visually check his fuel level during the preflight inspection. At the time, he guesstimated his flight would only take about 1.5 hours and that he had more than 3 hours' worth in the tanks. About 10 miles from his destination, the engine sputtered and died and he was forced to make an off-field landing. Post-accident investigation revealed only about a gallon of unusable fuel remained in the wing fuel tanks.

This pilot got lucky: he managed to walk away relatively unscathed. In a more tragic example, almost the entire Brazilian Chapecoense soccer team, as well as several support staff, were killed when, according to a preliminary report, their chartered Avro RJ85 ran out of fuel, and crashed in the Andes. Apparently, the pilot failed to include appropriate fuel stops in his flight planning.

Whether due to oversight, distraction, or miscalculation, these pilots took a gamble on getting to where they were going without physically checking or topping up the fuel. They both paid dearly for this mistake.

... "Multitasked?"

There is a reason this word is in quotes. It is because multitasking is a *myth*. Our brains simply aren't designed to perfectly concentrate on more than one thing *at a time*. Before anyone protests too much, please note the emphasis here is on the words "at a time." What most people think of as multitasking is really "task switching" between several different tasks in very short intervals. While experience and training definitely help to speed up

a person's ability to "task switch" efficiently, human beings are incapable of applying 100 percent of their concentration to more than one thing at a time.

When we try to literally do everything at once, each task only gets a percentage of our full concentration. Said another way, this also means each task is getting shorted our full concentration. As Murphy often dictates, the thing getting the least attention typically has the biggest potential to bite us. So, while you are simultaneously receiving instructions from ATC, running the landing checklist, configuring your plane, *and* watching out for traffic in the area, you are really task switching from one aspect to another to accomplish everything.

The limitation is in our working memory. We use our senses to pick up information we need to make decisions. Anything we don't think is necessary, we dump. What is left over is combined with long-term memory (experience) in order to make decisions. Because we aren't receiving all of the information we need when we attempt to multitask, the quality of the information we do have to make decisions is degraded. This is how "distraction" and its equally evil fraternal twin "fixation," are born.

This magazine has discussed both of these hazards many times, but just as a quick refresher, distraction is anything that draws a person's attention away from the task at hand. The more a person attempts to multitask, the more likely he or she will become distracted by any one of the tasks.

The opposite effect is fixation. That occurs when a person only concentrates on one task despite information indicating something else might need attention too. One situation that fits both of these scenarios is when flying with other people, particularly non-pilots. While wanting to engage with your passengers is only normal, never forget your number one task is to aviate. A gentle conversation about key, silent cockpit moments prior to even stepping out to the aircraft will go a long way in ensuring your passengers don't inadvertently become a detriment to safety.

... Skipped a Checklist?

Quite often, particularly when we become comfortable with something, we have a tendency to take doing that thing for granted. We think: "nothing has ever gone wrong before, so why would it now?" I once wrote a short article about complacency (<https://go.usa.gov/x5kwq>) confessing how I totally messed up a batch of chocolate chip cookies because I got cocky and decided to skip looking at the recipe card. Long story short; nasty, hard, pale little coal



cookies. While there wasn't a whole lot of harm done in the total annihilation of what otherwise would have been a tasty snack, in the aviation world complacency and failure to use the tools provided to you (e.g., checklists) can result in mishap or worse.

Industry safety databases are full of mishaps that could have been prevented if the participants had stuck to the checklist. In aviation, perhaps none is more glaring than the May 31, 2014 crash of a Gulfstream IV that took the lives of seven people. The aircraft failed to get airborne because the pilots simply forgot to disengage the gust locks. The post-accident investigation revealed the pilots *failed to run a single checklist* between engine start and take-off. Sadly, this omission appeared to be a bit of a habit for them.

The bottom line? Complacency is a killer and checklists were written for a reason.

... Rushed a Preflight?

Similarly, rushing or bypassing a preflight is just a really bad idea. The preflight is literally that last line of defense before taking to the skies. It is your chance to ensure your bird is up to the task, and it is a chance for that previously unknown little anomaly to finally catch your attention.

Forgoing the preflight can result in anything from forgetting to release the tie-down (an embarrassing, but likely non-injurious situation) to failing to discover contaminants in the fuel. The latter is by far the most common overlooked item in a preflight and can result in power loss or complete engine failure.

Rushing a preflight is often a symptom of a dreaded ailment variously known as get-there-itis, hurry-up syndrome, or pressing. A quick review of 125 Aviation Safety Reporting System (ASRS) mishaps that fell into these categories indicated the majority (63 percent) could trace the point of error back to something missed in the preflight.

... Flew Under the Weather?

I've already mentioned paying respect to the actual weather, so that isn't what I mean here. We super-motivated, driven, eager human beings have this pesky tendency to "push through" and stiff-upper-lip-it when it comes to not feeling well and getting the job done despite it. You may not realize it, but your overall health is directly connected to your mental faculties and decision-making ability. Meaning, when you aren't feeling your best, your ability to safely and efficiently execute a task (like piloting an aircraft) is also diminished. For more tips on happy, healthy flying, check out the Angle of Attack and Checklist departments, and the article "How to Defeat Dehydration," in this magazine. Take heed because cruising around at 1,600 feet AGL is no place to suddenly have your body completely rebel and shut down on you.



Seneca, early first century Roman philosopher

Now About That Quote

To be clear, the entirety of Seneca's famous quote is *errare humanum est, sed in errare perseverare diabolicum*. It means "to err is human, but to persist in error is diabolical." What he meant was that while we are all human and therefore prone to making mistakes, consistently making the same mistakes over and over again is folly, and downright dangerous. Ensuring all of our little mistakes don't manifest to anything more than a burnt mouth and misplaced iPhone takes diligence and a real understanding of our own limitations. 

Sabrina Woods is a guest writer for FAA Safety Briefing. She is a human factors scientist with the FAA's Air Traffic Organization. She spent 12 years as an aircraft maintenance officer and an aviation mishap investigator in the Air Force.

Rx for Information

With the inauguration of BasicMed — which begins as I write this column on the long-awaited May 1, 2017 start date — pilots in the United States now have a brand-new medical qualification option. As John Duncan observes in this issue's Jumpseat column, though, BasicMed privileges come with the responsibility to take our fitness to fly very seriously.

Of course that is true regardless of your medical certificate category. Whether you fly with the new BasicMed, as a sport pilot with the “driver's license medical,” as a private pilot with a third-class medical, as a commercial pilot on a second-class medical, or as an airline transport pilot on a first-class medical, the FAA and the regulations (14 CFR section 61.53, to be precise) expect you to exercise judgment about your health and fitness for flight before every flight you take.

Human Airworthiness

As an instructor, I generally present this idea with a mechanical (airworthiness) analogy. I once sent a student out to preflight a Cessna 152, after we had jointly verified that it was airworthy in terms of compliance with applicable Airworthiness Directives and required inspections. When he got to the airplane, though, he found an impressive puddle of oil under the nose, one that was visibly expanding with a steady drip-drip-drip from the engine compartment. Solid paperwork notwithstanding, clearly our little bird was in no condition for safe flight.

So it is with human airworthiness. Your medical certificate — a term I use here to encompass everything from a driver's license medical to BasicMed to the standard medical certificate classes — is valid only as long as you meet the criteria under which it was authorized or issued. As stated in 14 CFR 61.53, no pilot can fly if the pilot “knows or has reason to know of any medical condition that would make the person unable to meet the requirements for the medical certificate necessary for the pilot operation.” That includes taking medication or receiving treatment for any medical condition that would render you unable to meet the requirements for a medical certificate. In all cases, the rules state that you must not act as pilot in command, or as a required flight crew member, if you know or have any reason to know of a medical condition that would make you unable to operate the aircraft in a safe manner.

Pilot Preflight Primer

Sometimes it's obvious that you are medically unfit to fly: ailments like a ferocious head cold, an ear infection, or a stomach bug leave little doubt.

In others cases, it may be less clear. While there have always been multiple sources of information to help you determine your fitness for any given flight, one of the many benefits of BasicMed is the associated development of FAA-approved courses designed specifically for this purpose. At this writing, the AOPA-developed BasicMed course is up and running, with another course by the Mayo Clinic expected to be available soon.

Even though I don't have any immediate plans to use BasicMed, I took the AOPA course as soon as it became available. I highly recommend it to all my fellow aviators. As with AOPA's other safety courses, the BasicMed offering is well-designed, well-paced, and packed with useful information. It is accessible via desktop computer or iPad, and you have the option of switching between the two if you need to pause and pick up again later.

Organizations such as AOPA and EAA have extensive BasicMed resources on their websites, but there's also a lot of information on the FAA's website. Resources (see below) include a dedicated BasicMed page with detailed information on the regulation, a set of frequently asked questions, links to the industry-developed courses, and to the BasicMed Comprehensive Medical Examination Checklist (CMEC) you will need to complete with a state-licensed physician. As you will see when reviewing the CMEC, it essentially asks the physician to complete a physical examination and affirm the absence of any medical condition that could interfere with the safe operation of an aircraft — which is a goal we can all support.

Learn More

BasicMed

faa.gov/go/basicmed

BasicMed Advisory Circular (AC 68-1)

go.usa.gov/x5yYc

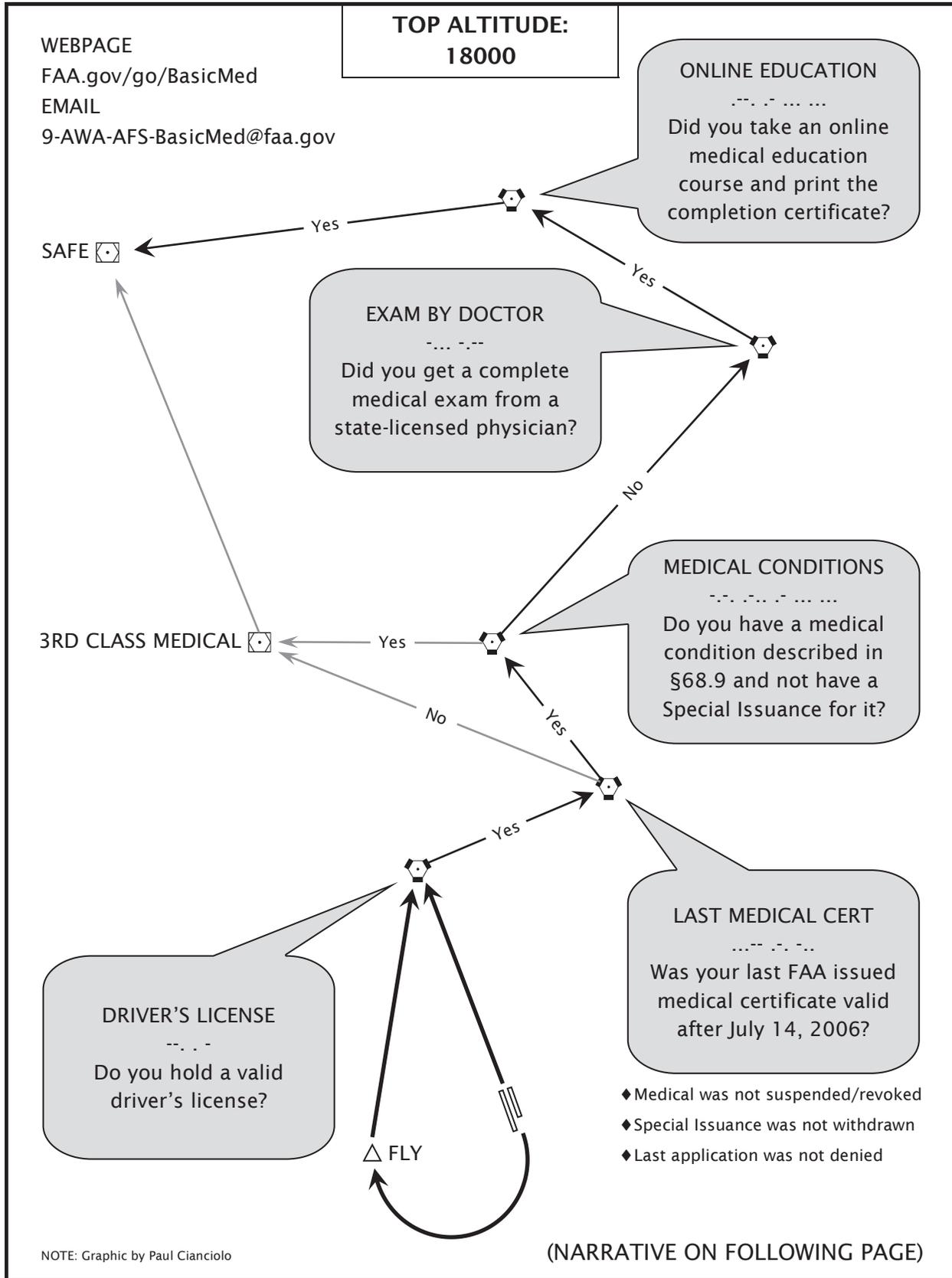
BasicMed FAQs

go.usa.gov/x5yYa

BasicMed CMEC

go.usa.gov/x5yYC

BASICMED ONE DEPARTURE



AFS-800, 1 MAY 2017 to FUTURE

AFS-800, 1 MAY 2017 to FUTURE

BASICMED ONE DEPARTURE

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BASICMED DEPARTURE ROUTE DESCRIPTION

THE AIRMAN MUST: Meet certain requirements to be eligible to fly under BasicMed ...

1. The airman must hold a valid and current U.S. driver's license.
2. The airman must have held a FAA medical certificate at some point after July 14, 2006. The most recent certificate must not have been revoked or suspended. If the certificate was associated with a special issuance, that special issuance authorization must not have been withdrawn. The most recent submitted application for a medical certificate must not have been submitted and denied.
3. The airman must not have a mental health disorder, neurological disorder, or cardiovascular condition as described in 14 CFR part 68.9 unless the process for obtaining a special issuance authorization for that condition has been completed.
4. The airman must receive a comprehensive medical examination from a state-licensed physician using the FAA BasicMed checklist.
5. The airman must complete an online BasicMed medical education course and retain the completion certificate.

THE AIRCRAFT MUST: Not be authorized to carry more than 6 occupants or have a maximum take-off weight more than 6,000 pounds.

THE OPERATION MUST: 1) Carry no more than 5 passengers; 2) Remain within the United States and maintain 18,000 feet or below; 3) Fly at 250 KIAS or less; 4) Not offer service for compensation or hire.

THE PILOT MUST: Retain the signed comprehensive medical examination checklist and BasicMed online course completion certificate in logbook, and the PIC must carry driver's license when operating under BasicMed.

BASICMED NOTES:

- ◆ No operations during medical deficiency (14 CFR part 61.53)
- ◆ May operate day or night, VFR or IFR
- ◆ Must be PIC; May not act as safety pilot unless also acting as PIC
- ◆ May store documents as digital copies in electronic logbook
- ◆ Operational limitations apply to whole flight, from take-off to touch-down
- ◆ Instructors receiving compensation for flight instruction may operate under BasicMed

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BASICMED ONE DEPARTURE



JENNIFER CARON

You Asked, We Answered

Your Top BasicMed Questions

BasicMed Begins — These two small words have so much meaning for me and my fledgling aviation career. Did you know that a fledgling is a young bird learning to fly? Well, that’s me. But in this case, I’m a young bird with medical issues — and I’m planning to one day switch from my “driver’s license medical” under the sport pilot rules to a third-class medical flying as a private pilot. BasicMed now affords me the option to choose between flying with a medical certificate, or operating under BasicMed. However, like many of us in the GA community I have some questions, both general and specific.

To get the answers, I took a look at the FAA’s frequently asked questions (FAQ) page at faa.gov/go/basicmed. Although it’s an extensive list of FAQs, updated regularly as more and more questions come in, I wanted to find out which questions are the most common, and the most shared, by pilots who want to fly under BasicMed. I went straight to the experts, and met with the FAA’s BasicMed team.

Here’s a list of the top 20 BasicMed questions, answered by the FAA’s BasicMed experts, that I’d like to share with you.

The Basics

Do I Qualify for BasicMed?

You probably qualify for BasicMed; nearly all pilots do! You will need the following:

- A current and valid U.S. driver’s license.
- A valid FAA medical certificate, held at any point after July 14, 2006. If that medical

certificate was associated with special issuance, the expiration of the special issuance must be after July 14, 2006. Your most recent medical certificate must not have been suspended or revoked, and any special issuances must not have been withdrawn, and if you’ve since applied for another medical certificate, that completed application cannot have been denied.

- For pilots who have ever had certain mental, cardiac, or neurological health conditions, you will need a one-time only, special issuance medical certificate for that condition. If you already got a special issuance for that diagnosis, then you don’t have to get another one. But if you haven’t had a special issuance for that condition, and you currently have, or you are newly diagnosed with, one of the cardiovascular, neurological, or mental health conditions described in the list of special conditions, you may not use BasicMed until you have been found eligible for special issuance of a medical certificate. For the list of special conditions, see Medical Conditions Requiring One Special Issuance at faa.gov/go/basicmed.

For more information, take a look at this issue’s BasicMed infographic (BasicMed One Departure), in the centerfold of this issue. For complete details, check out the feature article, “Bring on BasicMed!” also in this issue.

Student Pilots

I'm new to aviation, can I use BasicMed?

As a student pilot this question is near and dear to my heart. But, I'm sorry to say if you have never held an FAA-issued airman medical certificate, you do not qualify for BasicMed. Since every BasicMed pilot will need to have held a medical certificate at any time after July 14, 2006, you will need to get one, FAA medical certificate to qualify. However, for those of us who have, or have previously held, an FAA-issued airman medical certificate issued at any point after July 14, 2006, you're good to go.

Flight Instructors

Can I exercise my flight instructor certificate when acting as pilot in command (PIC) under BasicMed?

"Yes, but the key term here is PIC," explains Brad Zeigler, FAA Aviation Safety Analyst and contributing expert on the BasicMed Advisory Circular, AC 68-1A. "An individual may only operate under BasicMed when acting as PIC of an aircraft that is covered under BasicMed," says Zeigler.

The bottom line is you can exercise your flight instructor certificate as PIC under BasicMed, as long as you are flying a covered aircraft (an aircraft that meets the BasicMed requirements). To see the provisions for a covered aircraft, visit the Aircraft Requirements section at faa.gov/go/basicmed.

Zeigler goes on to say, "in case you were wondering whether you can accept compensation for flight instruction while operating under BasicMed, the answer is 'yes,' you may. The FAA generally considers the compensation associated with flight instruction as compensation for teaching, not for flying."

Safety Pilots

Can I use BasicMed to act as a safety pilot, instead of holding a medical certificate?

Again, the key term here is PIC. You can use BasicMed while performing the duties of a safety pilot, but only if you are also acting as the PIC. Confused? To clarify, I turned again to Zeigler to shed more light on this topic. "Congress specified that BasicMed applies only to those who are acting as PIC," says Zeigler. "If you are not acting as PIC, you cannot use BasicMed in lieu of a medical certificate." In this case, a safety pilot is considered a required flight crewmember, and a flight crewmember is required to hold a medical certificate. If the flight crewmember is not acting as PIC, he or she cannot utilize BasicMed. The safety pilot in this

instance requires an FAA-issued airman medical certificate," explains Zeigler.

Practical Tests

Can I use BasicMed privileges to take an Airline Transport Pilot practical test?

Yes, you can, as long as you are flying in a covered aircraft (an aircraft that meets the BasicMed requirements) for that practical test. A person taking any FAA practical test is exercising no more than private pilot privileges because the conducted operation is not for compensation or hire, so they can fly under BasicMed.

Third-Class Medical Holders

Is the third-class medical application similar to the Comprehensive Medical Examination Checklist (CMEC) for BasicMed?

Yes. The CMEC is derived from the same exact form used to apply for a FAA medical certificate. It has many of the same questions, and the exam includes the same items. The significant difference is that a state-licensed physician performs a BasicMed comprehensive examination, while an Aviation Medical Examiner (AME), using standards specified in part 67, performs the FAA-issued airman medical exam.

I just completed a third-class medical exam and received a third-class medical certificate. Can I skip the BasicMed comprehensive medical exam, and just use my third-class medical certificate to qualify for BasicMed?

In this case, the answer is no. "The congressional mandate that authorizes BasicMed," Zeigler cites, "did not allow for an exam, associated with an FAA-issued medical certificate, to substitute for a BasicMed comprehensive medical examination."

But can I be examined by my AME for BasicMed, and for a FAA medical certificate at the same time?

Yes. An AME can elect to conduct a comprehensive medical examination for BasicMed in the same visit as an examination for an FAA-issued medical certificate. As Zeigler explains, "while a BasicMed comprehensive exam is outside the scope of an AME's official duties as a representative of the FAA, they may conduct the BasicMed physical exam and sign the CMEC by virtue of being a state-licensed physician, and the exam may be conducted concurrently with an exam for a medical certificate."



I already have a third-class medical certificate. Can I fly under BasicMed at the same time?

Yes, you can. “BasicMed does not replace a third-class medical, and you can qualify for both at the same time. You do not lose one certificate in favor of another one. BasicMed is an alternative to the third-class medical, it is not a fourth class medical,” Zeigler clarifies. “But,” Zeigler advises, “you have to choose one for each flight; you can’t switch from BasicMed to using your medical, or vice-versa, in mid-flight.”

For dual BasicMed and third-class holders, after your third-class expires after two years, you can continue to fly under BasicMed for up to 48 months from the date of the comprehensive medical exam.

Do I need to keep my expired, paper medical certificate?

It’s not required, but it’s a good idea to keep it. Quick tip — take a picture of it with your phone, or scan it into your computer files.

Types of Doctors

What kind of physician can perform the BasicMed medical exam?

A BasicMed CMEC requires a state-licensed physician to conduct the medical exam, and that physician must be the signatory on the CMEC.

The FAA relies on the determination of each state, territory, and U.S. possession as to which persons it will license as physicians. If the person holds a license as a physician issued by any state, territory, or possession, then that person meets the requirement as a state-licensed physician.

But can a physician extender (such as a nurse practitioner or physician assistant) conduct the BasicMed exam?

A physician extender is a health care provider who is not a physician but does perform some medical activities typically done by a physician. Physician extenders are generally nurse practitioners or physician assistants. Registered nurses, medical techni-

cians, and medical support personnel also assist with certain elements of an examination, but they are not considered to be physician extenders. Section 2307 of the FAA Extension, Safety, and Security Act of 2016 (FESSA) regulation on BasicMed did not specifically exclude participation by a physician extender, however under BasicMed, the physician is responsible for conducting the medical examination, and the physician must be the signatory on the CMEC.

How do I find a doctor?

A BasicMed CMEC requires a state-licensed physician to conduct the medical exam, and a physician that is familiar with your complete health history is a good choice. Many physicians are familiar with examinations similar to the BasicMed exam, as in physician’s examinations for sports or exercise, a return to work clearance, or a scuba-diving physical.

BasicMed encourages you to have an open dialogue with your doctor. See the article “Doctor, Doctor, Let Me Give You the News” in this issue. It discusses ways in which you can talk to your doctor about BasicMed.

Special Issuance

I had a special issuance in the past. When do I need to get another one?

You need to undergo the FAA process for special issuance if you newly develop (or have never held a special issuance for) any of the following medical conditions since the last time you received a FAA medical certificate:

Mental Health: (i) personality disorder severe enough to have repeatedly manifested itself by overt acts, (ii) psychosis, (iii) bipolar disorder, and (iv) substance dependence within the previous two years.

Neurologic: (i) epilepsy, (ii) disturbance of consciousness without satisfactory medical explanation of the cause, and (iii) a transient loss of control of nervous system functions without satisfactory medical explanation of the cause.

Cardiac: (i) myocardial infarction (heart attack), (ii) coronary heart disease that has required treatment, (iii) cardiac valve replacement, and (iv) heart replacement.

Where do I find more information on BasicMed Special Issuance Medical Certificates?

For more information on the conditions requiring special issuance, visit faa.gov/go/basicmed. For more special issuance FAQs and answers, visit go.usa.gov/xNbRn.

Medical Questions

What's an acceptable blood pressure to fly under BasicMed?

Consult your physician for answers to all your medical questions. It is up to your doctor to use his or her best judgment. Keep in mind that BasicMed is not a medical certificate.

The CMEC Form

Here's a quick tip. You must print out your completed CMEC. The CMEC is a worksheet between you and your doctor. It is not submitted to the FAA.

Another tip — make sure your doctor's handwriting on the CMEC is legible! I know, I know, sometimes your doctor's handwriting can look like ancient Sanskrit at times, but ask your doctor to print legibly their name, address, and state license number on the form. You will need to enter the physician's name and state license number later when you complete the process for printing your BasicMed course completion certificate.

Best practice — keep the completed, signed CMEC in your file cabinet, or better yet, scan it into your computer.

The Course Completion Certificate

I've mislaid my BasicMed course completion certificate. Can I still fly under BasicMed?

Unfortunately, no. Even though you don't have to have your BasicMed Course Completion Certificate or your CMEC with you when you fly, if you lose either of these documents, you may not fly under BasicMed. It's a great idea to hold on to both forms for safe keeping — file away the hard copies, or scan both into your computer.

7-Seater Aircraft

My PA-32 (Piper Cherokee Six series aircraft) is "authorized to carry not more than six occupants" because it used to have a seventh seat in the back, but that seventh seat hasn't been installed in 40 years. Can I fly my Cherokee Six using BasicMed?

The FAA BasicMed team has provided detailed information on aircraft authorized by type certificate to be equipped with both six and seven seats, and whether or not these aircraft are considered covered aircraft under the BasicMed requirements. Visit the main FAQ page at go.usa.gov/xNbRn for details.

Can I Ask the FAA BasicMed Experts?

Yes! Send your questions by email in writing to 9-awa-afs-basicmed@faa.gov. In less than a week, you will receive an answer from the FAA headquarters' team of BasicMed experts. *Please note that the FAA team cannot provide medical or legal advice, or provide responses to hypothetical, "what if" scenarios.*

As BasicMed begins, and continues forward as another medical qualification along with the traditional FAA medical certificate, I am confident in the knowledge that one day, I will progress from fledgling student to private pilot — with the option to fly under BasicMed! ✈️

Jennifer Caron is an assistant editor for FAA Safety Briefing. She is a certified technical writer-editor, and is currently pursuing a Sport Pilot Certificate.

Learn More

Take a look at the BasicMed Advisory Circular
go.usa.gov/xNkcd

Find the FAA Pharmaceuticals (Therapeutic Medications) Do Not Issue – Do Not Fly list
faa.gov/go/dni

See medical facts for pilots in Chapter 8 of the FAA's Aeronautical Information Manual (AIM 8-1-1)
faa.gov/air_traffic/publications





JAMES WILLIAMS

Doctor, Doctor, Let Me Give You the News

How to Talk to Your Doctor about BasicMed

By the time you read these words, one of the biggest-ever changes in pilot medical certification will have started. BasicMed is a shift in the way many pilots will meet their required medical qualification for conducting lower-risk, non-commercial flying.

If you are among those intending to use BasicMed, the first question in your mind may be “which doctor should I go see?” BasicMed offers new options you’ll want to consider.

There are two key factors here: who you wish to partner with, and who wishes to partner with you.

A Different Kind of Dance

In the pre-BasicMed world, things were pretty straightforward. If you needed a medical exam, you’d book an appointment with your chosen AME. The AME would conduct the exam. You’d walk out of the office with your new medical certificate (in the vast majority of cases). This system is still available to you should you choose it.

In the BasicMed world, the concept is to take the BasicMed checklist to your Primary Care Physician (PCP), who evaluates your condition for each item on the checklist, and signs off on your fitness for flight. But BasicMed gives you significantly more latitude regarding which physician you choose to

use. “Any state-licensed physician may conduct a comprehensive examination for BasicMed,” explains John Linsenmeyer, the FAA Flight Standards Lead for BasicMed. “It’s obviously best to go to the physician who is the most acquainted with your overall health, but you can choose any other physician you’ve been to, or your AME, or even a physician who’s seeing you for the first time,” Linsenmeyer continued.

But for physicians, simply being qualified is only one part of the equation. BasicMed is opening up the door to thousands of physicians who now have the authority to sign an airman off as being medically eligible to fly recreationally in GA aircraft. At this point, quite a few of those physicians will be unaware that they now have this authority. In some cases, physicians who haven’t heard of BasicMed may have reservations about conducting these sorts of examinations. Under BasicMed, though, you still have plenty of options even if your PCP or AME has chosen not to participate.

Presentation is Key

In some cases, you may find yourself educating your doctor on BasicMed. Many physicians are aware of the FAA medical certification program, and may assume an FAA-approved doctor (an AME)

must sign the comprehensive medical examination checklist (CMEC). Because they are unfamiliar with BasicMed, they may be hesitant to perform the comprehensive examination without further research.

When selecting a physician to conduct the BasicMed exam, be sure to inform the physician's staff prior to the appointment. If they have questions about BasicMed, direct them to the FAA's BasicMed website for more details. If your physician of choice elects not to offer BasicMed exams, ask them for a referral to a physician who offers the service.

Ideally, you would be able to find a doctor who is familiar with your history. Based on early anecdotal evidence from pilots who have completed BasicMed examinations, the physicians who seem the most willing to conduct BasicMed physicals are the ones who already conduct physical exams on a routine basis (such as physicians who perform annual preventative medicine physicals, physicals for clearance to play on sports teams, or to attend summer camp, or for certain occupational physical exams).

Be Prepared

The best way to prepare for the examination is to make sure you have thoroughly answered the questions in Section 2 of the CMEC and provided the necessary information for the physician to evaluate your medical history. Fortunately, many medical insurance companies offer online access to your medical records, which will help you to answer questions about visits to health professionals and prescription

medications. If you've held a FAA medical certificate in the past, with a special issuance authorization, you will want to share that information with your physician, as well as any recent tests that may provide insight as to your current medical status.

If your doctor has concerns, deal with them directly. This is where taking a page from the FAA process might be beneficial. During the special issuance process, the FAA often requests more information in order to mitigate a specific concern. If there is an issue that causes concern for your physician, ask them what further information about your health condition you could collect that would help them feel more comfortable about signing you off for BasicMed.

It might also help to note that while your doctor is examining each item on the checklist, he or she is not certifying that you meet the specific criteria of a traditional FAA medical certificate. "How you deal with any issue is between you and your doctor," Linsenmeyer explains. "That means that any conditions that don't fall under those specifically outlined in the regulation are up to you and your doctor to resolve. So, you certainly want to explore possible resolutions with your physician." It's worth noting that while the doctor is signing off on the form today, the obligation for determining your fitness for flight ultimately resides with you, as it always has.

While the doctor is signing off on the form today, the obligation for determining your fitness for flight ultimately resides with you, as it always has.



Doctor's Education

One of the main reasons doctors might be uncomfortable with BasicMed is that they might not have training or experience in aviation medicine. BasicMed doesn't provide a medical "standard," like part 67 does for medical certificates. BasicMed relies on the physician's general medical training (and their own experience and discretion) to make the decision about whether the pilot has a health condition (or combination of conditions) that precludes them from operating under the limited recreational flying allowed under BasicMed.

In drafting the bill that created BasicMed, Congress gave this broad discretion to physicians to exercise their own medical discretion when conducting the physical exam. This means that much of the decision-making on what is, and is not acceptable, is left to the judgment of your own doctor, rather than a FAA-prescribed medical standard. This gives you and your doctor latitude in how they resolve any issues, and it also reinforces the same responsibility you have when flying using a medical certificate.

You must make a risk determination on your fitness for flight every single time you get in the cockpit,

no matter when your most recent BasicMed physical or FAA medical certificate exam occurred. You need to remember to be realistic about any potential challenges in your medical fitness. By being realistic and honest about medical conditions, you can work toward finding a sensible solution with your doctor, including the possibility that you will need to do more work to address any troubling medical conditions before flying under BasicMed. It's a good idea to have some suggestions ready as to how you might be able to mitigate those concerns when you go to your doctor for your BasicMed physical exam.

While we've always advocated a strong partnership to help with medical certification, BasicMed exists to provide another alternative to pilots. Whether you opt to operate under BasicMed, or continue to maintain a medical certificate, your objective should be the same — ensuring that you are healthy, and fit to fly. ✈️

James Williams is FAA Safety Briefing's associate editor and photo editor. He is also a pilot and ground instructor.

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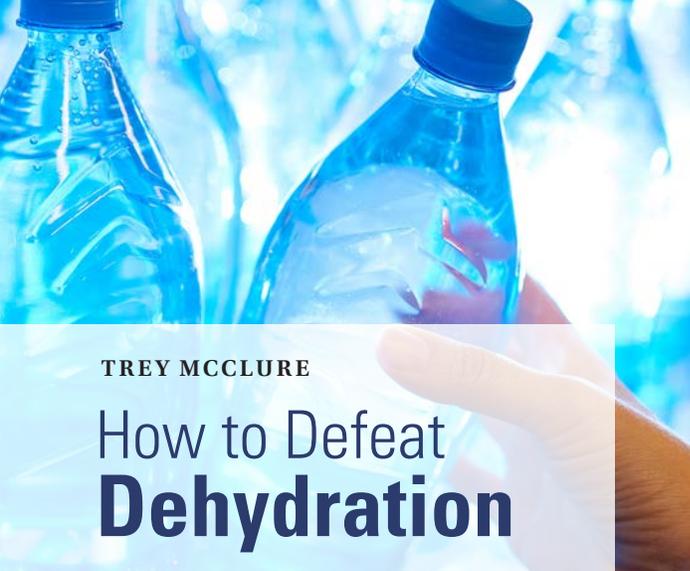


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TREY MCCLURE

How to Defeat Dehydration

The Forgotten Risk to Flight Safety

With the summer months now upon us, it's the perfect time to take advantage of outdoor activities — whether it's going to local fly-ins, getting some tee time in, or simply enjoying a little back porch sitting with a glass of sweet tea. As we increase our physical activities and the temperature starts to rise, it's important to be reminded of the effects of dehydration, especially if flying is part of your plan for summer fun.

Dehydration is commonly associated with an increase in outside air temperature, but other factors — such as operating in a low humidity environment, and consuming hydration-zapping liquids such as alcohol, coffee, and soda, among others can contribute greatly to dehydration. Even performing common, everyday tasks at the airport such as moving an aircraft out of the hangar, going through the typical fueling process, or preflighting on a hot ramp can quickly starve the body of precious liquid resources.

The body is made up of 70-percent water, and the brain is the first organ that senses a need to replace lost fluids. When you are dehydrated, you will start to experience symptoms like headaches, lightheadedness, and fatigue. Since water is vital for blood and oxygen enrichment of the cells, symptoms can further progress to poor decision-making, dizziness, muscle fatigue, and pain in joints and muscles as a condition called hypoxia sets in. The bottom line is that dehydration can significantly decrease physical and cognitive performance, and that's the last thing you want to experience mid-flight.

The key to preventing dehydration is to stay hydrated, and the key to staying hydrated is to plan ahead. Once you experience the sensation of thirst, you are more than likely already dehydrated. Depending on the environment, regaining hydration by simply drinking water can be difficult in a timely manner, since your body is continuously losing fluids.

Drinking plenty of water daily helps our body function properly, but just how much water do we need? That depends on the individual, but it's recommended we drink at least five, 8-ounce glasses of cool water a day. As our physical activity level increases, so does our need to intake more water. To maintain the optimum level of hydration, increase your water intake to match.

If plain water is “hard to swallow,” consider sports drinks or other flavoring to make plain water more palatable. Be cautious to limit your intake of sugary and caffeinated drinks, as these are diuretics and can work against your hydration plan.

Quick tip: add a bottle of water or a small sports drink to your flight bag. It's always a good idea to carry a bottle of water along on your flight to help maintain hydration. That handy bottle of water can serve as a helpful reminder to drink up, and will be a measure of how much water you have already consumed. There are also apps available for your phone or tablet that can help track water intake, and you can set reminders to let you know when it's time to drink up.

Another tip: plan your preflight or fueling activities during cooler times of the day, if you can, to avoid or minimize sun exposure, as our bodies can more easily maintain a sufficient hydration level in cooler temperatures. In addition, you can add a baseball cap, and lightweight, light colored clothing to your flight bag.

Last, but not least, be mindful of personal situations, such as a recent illness. Fluid loss can be common during a period of illness, leading to dehydration even without exposure to the outside elements.

In light of this review, as I jet off to the horizon this summer, I will plan to enjoy a little more time in the shade and factor in some glasses of cool water with my sweet tea! 

Trey McClure is a General Aviation Operations Frontline Manager in the Jackson, Mississippi Flight Standards District Office.

Learn More

Dehydration and the Pilot, FAA Airmen Education Programs

go.usa.gov/xNEUe

“Defeating Dehydration,” FAA Safety Briefing, Jul/Aug 2010

go.usa.gov/xNEUh

The 2017 National GA Award Honorees

Every year for more than 50 years, the General Aviation Awards program and the FAA have recognized aviation professionals for their contributions to GA in the fields of flight instruction, aviation maintenance/avionics, and safety.

The FAA will present the recipients of this year's awards with individual plaques in July, during EAA AirVenture 2017 in Oshkosh, Wisc., and their names will be added to the large permanent plaque located in the lobby of the EAA AirVenture Museum. Also included in the prize package for each national honoree is an all-expenses-paid trip to Oshkosh to attend the awards presentation and other special GA Awards activities.

Nominations and applications for the 2018 General Aviation Awards will be accepted starting July 1, 2017. If you are acquainted with a CFI, AMT, Avionics Tech, or FAAS Team Rep whom you think might be deserving of an award at the local, regional, or national level, we encourage you to nominate him or her. If you are an aviation professional with a distinguished career in one of these categories, we encourage you to apply. For more information about nominating or applying, please go to: GeneralAviationAwards.com/nominations.

2017 National Flight Instructor of the Year

Charles Orville Gensler of Parker, Colo., has had a lifelong interest in aviation. His father, who served as an Air Force pilot during three wars, took him to countless airshows where he watched the Thunderbirds and Blue Angels perform. This led Gensler to enroll in Air Force ROTC at The Citadel where he earned a bachelor's degree in civil engineering. Upon graduation in 1974, he entered Air Force flight training and graduated near the top of his class.

Gensler was selected as an Air Force instructor pilot, and he quickly discovered his true passion as a teacher. He accepted a position as a career trainer in the Air Force, and spent the next 24 years in various roles educating and training military pilots.

After military retirement, Gensler turned his attention to general aviation, embarking on a quest to bring GA pilot training closer to the level of proficiency offered by the military and airlines. For the next seven years, he served as chief flight instructor of the Aspen Flying Club. Then in 2007, he co-founded Independence Aviation in Denver and served as its chief flight instructor for the next six years. At Independence, he helped grow the business from three CFIs and

two airplanes to more than 18 instructors and 13 aircraft. He continues to instruct at Independence Aviation as chief flight instructor emeritus.

Gensler was one of the first CFIs in the Denver area to begin teaching in technically advanced aircraft. In 2004 he became one of the first Cirrus Standardized Instructor Pilots (CSIPs) in the area, and in 2011 qualified as a Platinum CSIP (one of only 81 worldwide). Gensler was also an early adopter of tablets in the GA cockpit, and has conducted numerous safety seminars on the effective use of this technology. He is also a strong proponent of the use of flight simulators and flight training devices to help maintain pilot proficiency, and was instrumental in incorporating the Redbird Xwind training device into the curriculum at Independence Aviation. In 2016, he led a team that developed a novel, continuous proficiency training program at Independence, called the *Complete Proficiency Approach*, for GA pilots to receive recurrent proficiency training every 60 days throughout the year.

Gensler has logged more than 9,400 hours of flight time — 8,000 of them instructing. He has been an active FAAS Team representative for more than 15 years. Chuck volunteered to be the co-general manager of the EAA Pilot Proficiency Center at AirVenture 2016, supervising 20 instructors conducting more than 25 training scenarios in a variety of Redbird flight simulators. Based on his strong performance, he was asked to fill this role again at AirVenture 2017.



2017 National Aviation Technician of the Year

Brian John Carpenter of Corning, Calif., has become the go-to guy when it comes to the construction and maintenance of light-sport aircraft. Anytime he's not teaching a light-sport repairman workshop, you'll probably find Carpenter in his hangar at the Corning Municipal Airport working on his electric motor glider or creating an educational aviation YouTube video.



Carpenter has had a passion for aviation since he was a child building and flying remote control aircraft. In 1979 he earned his pilot certificate while in the Navy. After graduating from Helena Vocational Training Institute in Montana with an airframe and powerplant (A&P) mechanic certificate, he worked as a lead mechanic for the former large aircraft operation and maintenance company, Aero Union. By 1985, he was the chief inspector and was later promoted to director of maintenance in 1990.

In 1991 Carpenter opened his own aviation company, Rainbow Aviation Services, which is a full-service fixed-base operator (FBO) in Corning, Calif. Rainbow's light-sport repairman courses have been taught throughout the United States and Australia. The company is a source of light-sport expertise for aviation enthusiasts, flight instructors, mechanics, and even FAA inspectors. Carpenter has mentored more than 3,000 repairmen since the light-sport rule was implemented in 2004 and is the only active provider of FAA-approved training for the light-sport repairman rating.

Carpenter has built 36 aircraft and is an innovative aircraft designer. His current project is the EMG-6 electric motor glider. He is developing a low cost, electric aircraft to meet the needs of the average person, making the aircraft affordable, and creating complete video instruction for the build. Carpenter has also designed more than 100, 3D-printed parts for use on the EMG-6.

2017 National FAA Safety Team Representative of the Year

Mark Alan Ducorsky of Lakeland, Fla., started flying in 1973 taking flying lessons at Camp Solo, which was a youth summer camp in Bangor, Maine. He soloed on his 16th birthday, and passed his private pilot checkride on his 17th birthday. After graduating from high school in Hyde Park, N.Y., Ducorsky enrolled in Embry-Riddle Aeronautical



University in Daytona Beach with the intention of becoming an airline pilot. However, there he discovered his true passion was to teach flying.

Ducorsky worked as a freelance CFI in Dutchess County, N.Y., and at several part 61 and 141 flight schools. He taught countless people to fly, including his future wife, who is now a CFI herself.

Ducorsky later became a sales manager for, and later an executive and an owner, of a food manufacturer. Over the next 16 years, the company enjoyed dramatic growth due to the company's use of business aviation that he developed during the course of his tenure there. The company had its manufacturing plant in Mexico and headquarters in El Paso, Texas, so Ducorsky traveled there and throughout North America on a regular basis. While south of the border, he provided

advanced and recurrent multi-engine training to expatriate American pilots residing in northern Mexico.

Over the years, Ducorsky has provided a lot of his flight instruction on a pro bono basis. Between 1992 and 2002, he underwrote a free flight scholarship for an underprivileged young adult from the Bronx, N.Y., every other year. His philosophy about flight training was straightforward: He never wanted money to be his motivator as it related to training people to fly. He always felt strongly that this was how he could provide the best, most comprehensive flight training to his students, which was motivated by his love of and passion for aviation, and he had faith that his monetary needs would come organically.

Ducorsky is a high-activity, FAA designated pilot examiner out of the Orlando Flight Standards District Office where he performs more than 200 certifications and practical tests per year in airplanes and gliders. He is a Gold Seal and Master CFI with more than 7,000 hours of instruction given, a former part 141 chief pilot, and a current part 141 check airman. He is also chairman of the Lakeland Aero Club, a part 141 instructor, and check airman in the Polk State College professional pilot program, and the chief instructor and director of scholarships and youth programming for Sun 'n Fun Fly-In, Inc.

Since 2013, Ducorsky has served as the lead representative for the FAASTeam in Orlando. He has participated in more than 100 WINGS-qualified safety seminars, events, and other activities.



Update: Airman Certification Standards for AMTs

This issue focuses on ensuring healthy pilots but, since healthy airplanes are a key component in the safety equation, the health and well-being of those who keep our airplanes airworthy and in a condition for safe flight is just as important. Broadly speaking, part of our well-being, whether we fly airplanes or maintain them, includes having the right knowledge, risk management ability, and skill to perform our respective duties.

As those in the pilot training world probably know by now, the FAA and three separate groups of aviation training industry experts have spent the last six years working to improve certification testing and training

for pilots. A year ago, this team — formally known as the Airman Certification Standards Working Group (ACS WG) — responded to the maintenance training community’s plea to DO SOMETHING, NOW, to make similar updates and improvements to certifica-

tion testing for aviation maintenance technicians (AMTs). The suite of exams includes three types of tests for each certificate (airframe and/or powerplant), along with a general section that covers both categories. The tests are a specific written examination, an oral exam, and a practical test.

With significant help from our industry partners on the ACS WG, the FAA is making substantial progress toward the first Airman Certification Standards (ACS) document for AMTs. By adding knowledge and risk management elements to each skill subject in today’s Practical Test Standards (PTS), the FAA and the ACS WG are defining what an applicant needs to *know* (knowledge), *consider* (risk management), and *do* (skill) to pass both the knowledge test (written and oral) and the certification (practical) test for an airman certificate or rating. The resulting ACS thus becomes the single source set of standards for both the knowledge and practical tests that an AMT applicant must pass in order to earn a certificate.

Full Speed Ahead

Since we first reported on this development last summer, the FAA and the industry members of the ACS WG have made substantial progress in defining

and incorporating knowledge and risk management elements into the skill subjects now provided in the PTS for general, airframe, and powerplant. The first AMT ACS will not only be the single source set of standards for the knowledge and practical tests; it will also bring the knowledge, risk management, and skill standards for general, airframe, and powerplant into a single document.

Standards drive the development and/or revision of guidance (e.g., FAA H-series handbooks) and, ultimately, knowledge test questions that align with both standards and guidance. While the FAA *does not* — indeed, *cannot* — share the development or revision of knowledge test questions with industry, the agency does rely on the ACS WG members’ expertise to develop the standards (i.e., the ACS for each certificate/rating) and to revise the supporting handbooks and other guidance materials used for teaching and training. So, in addition to transforming the standards, the ACS team has dedicated many hours to developing recommendations to update the FAA H-series handbooks for mechanics and using public data (e.g., sample knowledge tests), to identify topics and types of test questions that need to be changed — revised or, in some cases, deleted entirely.

As any training or practicing AMT knows, aircraft maintenance is a fast moving, rapidly changing field that demands constant work to keep up with developments like “glass cockpit” avionics and composite materials. Given how critical aircraft maintenance is to safety, the airman certification system that trains, tests, and certifies AMTs has to do the same. The ACS format will help the FAA and its industry partners achieve this goal by ensuring that future AMTs benefit from its integrated presentation of knowledge, risk management, and skill standards which, by being up-to-date and fully aligned with guidance materials and knowledge test questions, will greatly enhance the foundational health of the aviation maintenance industry.

Susan Parson (susan.parson@faa.gov, or @avi8rix for Twitter fans) is editor of FAA Safety Briefing. She is an active general aviation pilot and flight instructor.

The integrated ACS presentation of knowledge, risk management, and skill standards that are up-to-date and fully aligned with guidance materials and knowledge test questions, will greatly enhance the foundational health of the aviation maintenance industry.

Learn More

FAA Airman Testing web page
faa.gov/training_testing/testing



Fighting Fatigue

Webster's Dictionary defines the word fatigue as "physical or mental exhaustion; weariness." Some further digging reveals that it has Latin origins in the mid-17th century with the term *ad fatim*, meaning to be at satiety or at a bursting point. I have to chuckle and wonder if those word originators were new parents; "bursting point" seems like an all-too-fitting description of my exhaustion level soon after my second daughter's arrival. I have always heard people talk about sleeping while standing up, but I can now say I have personally confirmed this phenomenon! To fight off fatigue, you just learn to rest wherever and whenever you can. I think many new parents can relate to this, but it almost gets to the point where you can vividly remember the time and place of any good rest periods — and you talk about them with the same fervor a fisherman would use to describe his prize catch.

My personal favorite was a snooze I snuck in after a drive to the pediatrician. Both the newborn and my 18-month-old were snug in their car seats, and mommy had passed out between them. With the car still parked in the driveway, I contorted myself over and around two bucket seats and the gear shift, closed my eyes, and was dreaming before my head hit the perforated leather. I can only imagine what the neighbors were thinking! All I know is that the whole family got an hour power nap, and we were all better for it.

When it comes to aviation however, managing fatigue is a far more serious subject with often deadly repercussions. Search for the term pilot fatigue in the National Transportation Safety Board's (NTSB) probable cause reports and you'll see exactly what I mean. As further evidence of its importance, the NTSB also elevated the topic of reducing fatigue-related accidents to its 2017 Most Wanted List of Transportation Safety Improvements ([ntsb.gov/safety/mwl](https://www.ntsb.gov/safety/mwl)). The bottom line is that airplanes are complex machines that demand our complete attention; there's simply no room for the performance-robbing attributes of fatigue when flying.

For most general aviation pilots, managing fatigue often boils down to one basic concept: individual responsibility. You might hear that term echoed elsewhere in this issue, as it is one of the key tenets of the FAA's new BasicMed regulation that enables pilots to fly without holding a medical cer-

tificate, providing they meet certain requirements. Medical self-certification is a big part of that responsibility, and it entails an honest assessment of your fitness to fly before each and every flight — including a check of your fatigue-meter.

As I wrote in the article "Say Ahh: A Pilot's Guide to Self-Assessing Risk," in the January/February 2017 issue of *FAA Safety Briefing*, managing fatigue requires you to listen to what your body is telling you. If you're feeling sluggish and find yourself uncontrollably yawning, take heed. Keep in mind also that fatigue isn't limited to just these more obvious signs. It's often a more insidious problem fueled by a creeping accumulation of inadequate rest (e.g., long nights at the office, a new baby in the house, etc.). The effects of fatigue on a task like flying can be equally subtle — a pilot may not recognize loss of attention, slowed reaction times, or poor judgment until it's too late.

The simple solution to addressing fatigue is to get more rest. I know, you've heard it a thousand times, but strive for eight hours of uninterrupted rest per night. A wristwatch activity tracker might be helpful in monitoring your daily rest cycles. I get a daily reminder from mine of how woefully sleep-deprived I am these days. Thankfully, flying is not on my immediate radar.

Although fatigue is certainly a prevalent factor in many aviation accidents, it is also one of the most preventable. Improving your self-discipline along with having a greater awareness of your personal limitations (both physical and mental) can often make all the difference in having an enjoyable, productive, and most importantly, safe flight.

Now get some rest and feel free to brag about it. I won't mind!

Tom Hoffmann is the managing editor of FAA Safety Briefing. He is a commercial pilot and holds an A&P certificate.

Learn More

FAA Brochure — Fatigue in Aviation

go.usa.gov/xkMwc

NTSB Most Wanted List — Reduce Fatigue-Related Accidents

go.usa.gov/x5zdT

Improving Safety for Air Ambulance Operations

In 2014, the FAA announced a final rule governing helicopter air ambulances and other commercial rotorcraft. Then-Transportation Secretary Anthony Foxx called it a “landmark rule for helicopter safety.” FAA Administrator Michael Huerta added that the rule “will help reduce risk and help pilots make good safety decisions through the use of better training, procedures, and equipment.”

The sweeping rule covered everything from flight rules and procedures, to communications, training, and on-board safety equipment for part 135 (commercial, on-demand air carriers) helicopters. Due to the rule’s significant scope, its requirements have been implemented in phases. The final phase — installing flight data monitoring systems — is due to be completed by April 2018, says FAA Aviation Safety Inspector Andrew Pierce, who supports FAA inspectors and industry stakeholders through the rule’s implementation.

Before the 2014 rules, the part 135 accident rate fluctuated greatly, reaching a high of 22 accidents (6 fatal accidents) in 2007.

Helicopter accidents, especially those involving air ambulance operations, have become high-profile, news-making events because of the often dramatic and sometimes doubly tragic nature of these accidents. These factors led the FAA to make helicopter operations safer.

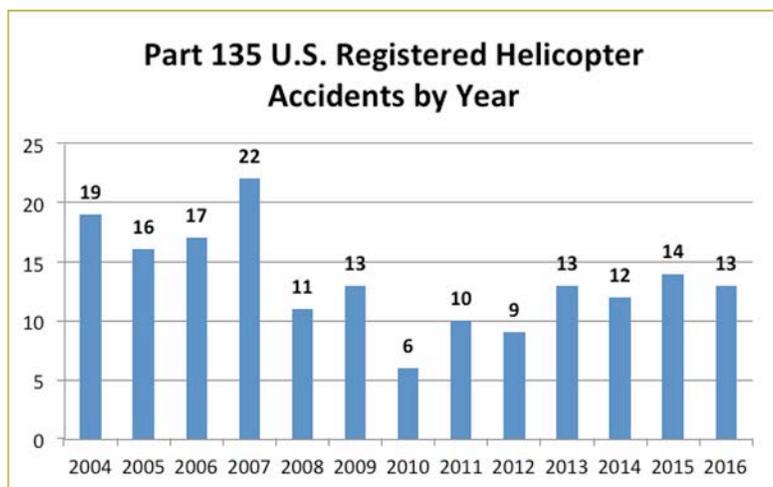
Safety steps under the new rules include a requirement for helicopters to be equipped by April of this year with radio altimeters, which tell pilots their aircraft’s height above ground. Previ-

ous requirements included requiring that pilots be regularly tested to handle flat-light, whiteout, and brownout conditions, as well as on their ability to recover from inadvertent encounters with instrument meteorological (IMC) conditions. Since part 135 helicopters are typically used for tour, air taxi, and air ambulance flights, these two requirements are meant to ensure that a pilot flying passengers can safely handle an unexpected and potentially dangerous weather or environmental situation.

By the time you read this article, air ambulance companies should have equipped their helicopters with terrain awareness and warning systems, and ensured that pilots in command have an instrument rating. Other recently implemented regulatory requirements include pre-flight, risk-assessment programs that require helicopter air ambulance pilots to consider the likelihood of, and mitigation for, encountering fog, high winds, visibility, or cloud ceilings below set standards, or any combination of these and other factors that could put the flight at an unacceptably high risk. Another new rule requires large helicopter air ambulance operators to implement operations control centers staffed with specialists who can provide pilots with information about changes in weather conditions and who review pilots’ risk assessments.

Next up for helicopter air ambulances is flight data monitoring systems. These systems can report a helicopter’s GPS position, altitude, and airspeed at least once a second, and some provide a video camera and audio recording of radio and intercom conversations during a helicopter flight. “Having these systems provides a flight history so that investigators can better determine what happened should an accident occur,” says Pierce. “Also, operators can use the systems to review pilot operating methods and decision making, which should help develop better training programs.” According to Pierce, these systems can cost anywhere from a few thousand dollars to more than \$15,000 and \$20,000, depending on the systems’ sophistication.

These requirements may seem extensive, but as of March 25, 2017, part 135 Helicopter Air Ambulances had not suffered a fatal accident for more than a year — a significant improvement in helicopter safety. This attention to safety has given the United States the world’s safest and most sophisticated aerospace system.



Sources: National Transportation Safety Board, Federal Aviation Agency Rotorcraft Directorate



The 5-Mile Airport Rule for Drones

If you are flying a drone within 5 miles of an airport, are you allowed to fly if you notify ATC? I have looked online, but seems to be some debate on what's the truth.

—Justin

Hi Justin — If you are flying a model aircraft under 14 CFR part 101 rules, section 101.41(e) states that for a model aircraft flown within 5 miles of an airport, the operator of the aircraft provides the airport operator and the airport air traffic control tower (when an air traffic facility is located at the airport) with prior notice of the operation. In other words, you are allowed to fly under all model aircraft rules if you did your due diligence to notify the airport and Air Traffic Control (ATC), if ATC is available, then you can fly, as long as ATC approved your flight. Notification doesn't mean asking for permission, but if a model aircraft is operated when advised not to, and it endangers the safety of the National Airspace System (NAS), the operator is subject to enforcement action.

... But if for commercial use in flying a drone, DJI phantom 4, or Inspire 1 then you can't? Even if you notify ATC?

If you're flying a non-hobby drone under 14 CFR part 107, then the 5 mile airport rule does not apply. As a certificated remote pilot operating under part 107, you may fly in Class G (uncontrolled) airspace regardless of the distance to the nearest airport without contacting ATC, or the airport operator, provided you follow all of the other provisions of part 107 to avoid conflict with other aircraft. For controlled airspace (classes B, C, D, and E) you must first obtain an airspace authorization before conducting your flight. For airspace authorizations, see faa.gov/uas/request_waiver.

More Ins and Outs of ADS-B

I have been reading the latest FAA Safety Briefing on ADS-B. Currently, if I am flying VFR without ADS-B, ATC may or may not see me depending upon

my altitude. If they do see me, they do not know that I am "N12345" unless I were to contact them and ask for VFR flight following, etc. Under ADS-B, will ATC always see me as "N12345" even if I am not under VFR flight following, or an IFR flight plan?

—John

Thanks for your question, John. An aircraft target will be identified to ATC by the transmitted flight identification code (e.g., "N12345") when operating within ADS-B coverage. However, ATC has display options where they can suppress the N-number for VFR aircraft that are not receiving flight following services, and some controllers will set these options to "declutter" their display. Additionally, GA operators that employ UAT transceivers have the option in VFR operations, when they are squawking 1200 and flying below FL180, to select "anonymous mode," which enables the transceiver to broadcast a randomized ICAO address. The transceiver reverts back automatically to the assigned ICAO address, and default flight ID, when the beacon code is changed from 1200.

FAA Safety Briefing welcomes comments.

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Find, Fix, Fly!

Pilots have a unique perspective. Flying lets us see the world in a different way, but our passion for aviation also gives many of us a different take on medical issues. For a non-pilot, a serious medical condition might first bring up fears of dying. For many pilots, though, diagnosis of the same medical condition might first arouse fears of not flying. There are aviators among us who may even perceive not flying as a fate worse than dying. That may be extreme, but most pilots can certainly empathize with the visceral “what-happens-to-my-medical” fear that has shadowed reporting any visit to a medical professional on the Application for Airman Medical Certificate (otherwise known as Form 8500-8).

Thanks to a lot of dedicated work by a lot of people, both inside and outside the federal government, pilots who fly for recreation or personal transportation have a new and, for many, less stressful aviation medical option in the form of the BasicMed rule. As Flight Standards Service Director John Duncan writes in this issue’s Jumpseat department, BasicMed is a very welcome development that, like so many things in life, carries responsibilities along with the privileges it offers.

Focusing on the Fix

We have written a lot about the FAA’s Compliance Philosophy (see January/February 2016 issue at www.faa.gov/news/safety_briefing/archive for detailed information). To recap, the Compliance Philosophy is the enabling guidance for the FAA’s risk-based oversight approach to compliance. It stresses a problem-solving approach where enhancement of the individual or organization’s safety performance is the goal. It promotes communication, collaboration, and proactive risk management to find safety problems before they cause an accident, and use of the most effective tools to ensure a positive, permanent fix.

This approach certainly applies to managing your health. It has always been the case that the FAA expects compliance on medical requirements, and it has always been the case that compliance includes honest communication about issues that affect your health, and thus your ability to safely operate an aircraft.

Many pilots, though, have perhaps been hesitant to fully communicate with their doctors for fear of complicating issuance of the all-important medical certificate. I get it, because I certainly experienced

some trepidation when multiple sclerosis forced me to take the special issuance route several years ago. Like others, though, I found that I benefited from the hard work the FAA’s medical certification staff has done over the past few years, not only to speed consideration of special issuance, but also to expand both the range of certifiable conditions and the avenues available (e.g., CACI — Conditions AMEs Can Issue).

BasicMed provides yet another option, one that truly leaves no excuse for anything but full and frank discussion with your state-licensed physician about your health. Expressed in terms of the Compliance Philosophy, BasicMed (as well as the traditional avenues to medical certification) is about using open communication with your provider to find any health problems that could adversely affect your ability to safely operate an aircraft, to use the most appropriate treatments to fix those problems, and to monitor results to ensure that any health/safety issues are fully resolved.

Tips

Regardless of the route you take to meet one of the paths to aviation medical qualification, here are some tips to remember if your health is an issue.

Get the facts. Use the many resources available these days to learn as much as you can about the certification implications of your particular medical condition. A good place to start is the medical certification home page on the FAA’s website (faa.gov/pilots/medical), or the FAA’s BasicMed portal (faa.gov/go/basicmed).

Use all resources. The Aircraft Owners and Pilots Association (AOPA), the Experimental Aircraft Association (EAA), and other aviation organizations provide BasicMed and traditional medical certification information, advice, and advocacy for their members.

Resolve the problem. Work with your physician to resolve any issues — remember that your health is the most important consideration, always.

Document. If your condition requires special issuance or (in the case of BasicMed) a one-time FAA approval, be sure to have your physician document the specifics, your treatment, and your prognosis in the format and level of detail that the FAA requires.

Doing your part will speed the FAA’s evaluation and get you back into the cockpit as quickly as possible — which is what all pilots want.

FAA Faces

Brad Zeigler *Aviation Safety Analyst*



“I’m probably one of the few people whose interest in aviation safety as a career started before I ever set foot in an aircraft,” says FAA Aviation Safety Analyst Brad Zeigler. His interest first arose from the tragic loss of his uncle in a plane crash near Martha’s Vineyard, and the teenage Zeigler sought answers as to what went wrong that fateful day.

Zeigler describes his namesake uncle as a larger-than-life figure who flew bush planes in Alaska, ferried single-engine airplanes over the Atlantic, and was a fish spotter up and down the east coast. “He checked off pretty much all of the cool uncle boxes,” Zeigler recalls. In his quest for closure on his uncle’s accident, Zeigler soon discovered his own passion for flying when he took his first ride in an airplane — a 1931 Stinson SM-8A used for sightseeing around Cape Cod — on his sixteenth birthday. “I was hooked.”

Four years later, Zeigler began taking flying lessons and earned his private pilot certificate in 1994 in college. While a career stint in IT steered him away from aviation for nearly a decade, he later returned to his aviation goals starting with an instrument rating, commercial single and multi-engine, and finally, a flight instructor certificate. Zeigler eventually left his IT job, pursued an MBA program, and convinced the Virginia Department of Aviation to bring him on as an unpaid graduate intern. He later was employed as a contractor supporting the FAA’s Wide Area Augmentation System program, while he continued to build his flight experience by flight instructing and conducting airborne traffic reporting.

From there, Zeigler was hired as a federal employee in the FAA’s Office of Airports, working with the Airport Improvement Program, and then the Airport Compliance Program, before moving to his current position in the Flight Standards Service’s Gen-

eral Aviation and Commercial Division. There Zeigler deals mainly with airman certification policy. He was heavily involved in the formulation and implementation of the part 107 Small Unmanned Aircraft rule, and is currently focused on BasicMed implementation.

“Our division seems to get involved in everything,” says Zeigler. “We’re best known for being the keepers and experts for all things part 61, but we also deal with part 141 (flight schools), remote pilot certification for 107, and we frequently dip our toes into various other sections of the regulations. As anyone who has ever read a regulation knows, they are quite intertwined.”

Zeigler cites outreach as one of the challenges for his branch. That is especially evident with his work on the BasicMed rule which, as Zeigler observes, has many nuances that may not always be clear at first glance. “Most folks don’t spend a lot of time reading the Federal Register, the United States Code, or even the regulations for that matter, so it is important to me that our guidance and outreach materials do an effective job of informing the pilot community.”

Zeigler and his Flight Standards colleagues also field questions about what standards physicians should be using under BasicMed. “I try to make it clear that BasicMed is an airman eligibility rule, not a medical certification rule. Congress empowered state-licensed physicians to apply their own clinical judgment when examining someone for a BasicMed. The FAA publishes standards in part 67 for FAA medical certificates and provides guidance to Aviation Medical Examiners. The standards and guidance can be accessed by anyone, but a physician conducting a BasicMed exam is under no obligation to use them.”

As a proud aircraft owner and an active member of the GA flying community, Zeigler recognizes the importance of BasicMed to many airmen. However, he points out that no matter what medical qualification you use, your objective should always be the same: flying the aircraft in a safe manner. “It doesn’t matter if you have a chronic health condition or you’re battling seasonal allergies, flying with a medical deficiency that affects your ability to safely fly the airplane is hazardous to you, your passengers, and anyone who shares the airspace with you. My hope is that BasicMed will allow every airman to keep an open dialog with the physicians who treat them on their health and their fitness to fly, without fearing the loss of a medical certificate.”





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Legendary flight instructors and King Schools owners John and Martha King understand the importance of high quality aviation safety information. That's why they read *FAA Safety Briefing* magazine.