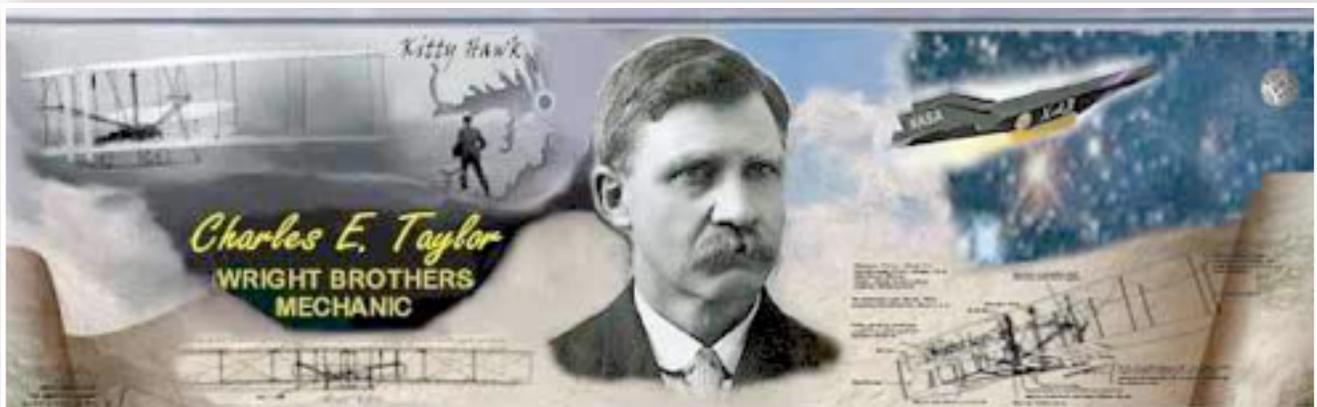


# Aviation Human Factors Industry News

*Volume XIII. Issue 04, February 19, 2017*



*From the sands of Kitty Hawk, the tradition lives on.*

Hello all,

To subscribe send an email to: [rhughes@humanfactorsedu.com](mailto:rhughes@humanfactorsedu.com)

In this weeks edition of *Aviation Human Factors Industry News* you will read the following stories:

★Human Factors and the A&P Tech

★DOT Releases 2016 Transportation Statistics

★Compressor Failure Caused Helicopter Crash

★DGCA suspends license of GoAir's aircraft maintenance engineer

★Transponder on Standby Led To Near Midair over Black Sea

★Federal lawsuit faults FAA for 2014 South Dakota plane crash

★Is My Aircraft Right for Flight

★FAA SAFETY BRIEFING

★And Much More

## Human Factors and the A&P Tech

How many of you are familiar with FAA Advisory Circular (AC) 120-72 “Maintenance Resource Management Training”? Even though it was published in 2000, the [anonymity](#) of this AC is not surprising. Why? Because we know the information is “[not mandatory and does not constitute a regulation](#),” which means AC’s are often relegated to the bottom of the required reading list. However, that does not diminish their significance, and we all should be aware of



their existence and importance. The AC publications are akin to your mom having advised you to clean your room as a kid. Perhaps it was her way of saying you don’t have to comply with this advice, but you could [experience negative consequences](#) if you ignored it.

Since AC120-72 might not make for popular reading, I am sure its sequel, [AC120-72A “Maintenance Human Factors \(MxHF\) Training](#),” would be met with the same familiarity, or lack thereof. And because AC120-72A is in draft form, the FAA is still accepting your input for the final version.

AC120-72A replaces its 44-page, 17-year-old ancestor. This new and improved version promises to be [more focused](#) on maintenance activities and us maintenance folks doing such activities. It “contains a detailed listing of information sources and resources that will help the reader prepare for and deliver an [up-to-date MxHF program](#) to endure continued efficiency, effectiveness, and safety in maintenance operations.”

Speaking of MxHF, let’s examine the [FAA-approved definition of human factors](#): “A multidisciplinary field that generates and compiles information about human capabilities and limitations, and applies it to design, development and evaluation of equipment, systems, facilities, procedures, jobs, environments, staffing, organizations, and personnel management for safe, efficient, and effective human performance.”

So by using this comprehensive and reasonable explanation of the behavioral study of us Homo sapiens, it stands to reason that MxHF is specific to us Homo sapien mechanics.

Now the motivation behind this genera of AC was the result of a study on crew resource management (CRM) on flight decks and a spate of [maintenance-related accidents](#) in the mid-to-late 90s. These two events created an extensive acceptance of the importance of MxHF training and programs for maintenance environments. This was also about the time the industry “[dirty dozen](#)” was introduced. These 12 human foibles have become the supporting standard upon which MxHF presentations are constructed and around which safety programs are implemented.

For the sake of our continuing education, the dirty dozen includes: lack of communication, complacency, lack of knowledge, distraction, lack of team work, fatigue, lack of resources, pressure, lack of assertiveness, stress, lack of awareness and norms.

When were the dirty dozen first published? Which aviation regulatory agency produced the original dirty dozen?

In 1994, Transport Canada, in collaboration with the aviation community, identified [12 elements of human factors](#) that degrade a technician’s ability to perform effectively and safely, creating an opportunity for maintenance errors.

So on that note, I’ll provide you with what is, in some opinion, the most pervasive of the dirty dozen — distraction. [Distraction](#) is defined as the thing that prevents a person from providing full attention to the assigned task.

The “thing” in the following example is the ubiquitous cellphone. Technicians cannot give full attention to inspecting a component while maintaining a personal discussion via a cellphone tucked between their shoulder and ear. Or worse, how can a technician text, tweet, email and maintain focus on the job? Can’t be done!

In my shop, technicians would be banned from using a cellphone while working. The only exception would be to converse with a technician or factory tech-rep about a particular job. If a personal issue is going to generate a phone call, stop working and finish the personal business. Then when resuming the job, [go back a couple of steps](#) to insure something wasn’t forgotten.

So until next time, [remember to do your job as though lives depend on it — because they do.](#)

## DOT Releases 2016 Transportation Statistics

Publication provides data on hot topics, such as infrastructure, accidents and drone safety risks.

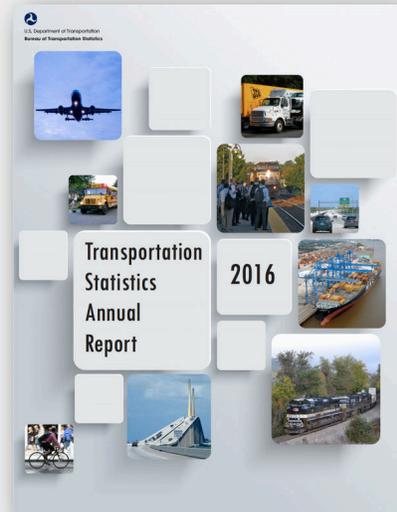
The U.S. Department of Transportation's 2016 Transportation Statistics Annual Report released last week presents [a cornucopia of aviation industry data](#).

The report's introductory look at a hot topic, infrastructure, may surprise some readers. "The majority of airport runways (commercial service, reliever, and select general aviation) are in good condition; only 2 percent are considered poor."

Aviation safety numbers confirm that U.S. air carriers and commuter airlines combined recorded zero fatalities in 2014 and only one in 2015. In seven of the last 16 years, in fact, there were no U.S. air carrier fatalities. On the general aviation side, in 2015, 376 people died in accidents, a decrease from 2014, during which 424 fatalities were reported. For the years 2010–2015, the average was 423 fatalities annually.

Although the number of general aviation fatalities was down in 2015 (376 people) compared to 2000 (596), the number of [flight hours in 2014 was also 35 percent less](#). According to preliminary estimates, the GA fatal accident rate for fiscal year 2015 was 1.03 per 100,000 flight hours, compared to a 1.10 fatal accident rate, averaged over the five prior fiscal years. [Loss of control in flight](#) remains a contributor to the majority of fatalities, whereas loss of control on the ground and engine-related system malfunctions were associated with the majority of nonfatal accidents.

The **DOT publication says** recreational, as well as the unregulated use of drones, represents safety risks to manned aircraft, their crews, airline passengers and anyone operating beneath them.



In 2014, pilots reported 238 drone sightings in the United States alone. There were about five times as many sightings (about 1,210) in 2015 from pilots of all aircraft types, including large commercial passenger aircraft. In June 2015, during the height of the summer season for hobbyists, 138 pilots reported seeing drones at altitudes up to 10,000 feet, a sizable increase from 16 reported sightings the year before. Unauthorized drone flights have also seriously interrupted aerial firefighters by grounding their tankers, an issue that increases the risk for firefighters on the ground.

[http://redirect.viglink.com/?format=go&jsonp=vglnk\\_148676946227515&key=b1c8c825afd49acc0608ab158acf7ed0&libId=iz0fvf240100xt1z000DAbd6vzuh2&loc=http%3A%2F%2Fwww.flyingmag.com%2Fdot-releases-2016-transportation-statistics&v=1&out=https%3A%2F%2Fwww.rita.dot.gov%2Fbts%2Fsites%2Frita.dot.gov.bts%2Ffiles%2FSTSAR\\_2016.pdf&ref=https%3A%2F%2Fwww.google.com%2F&title=DOT%20Releases%202016%20Transportation%20Statistics%20%7C%20Flying%20Magazine&txt=DOT%20publication%20says](http://redirect.viglink.com/?format=go&jsonp=vglnk_148676946227515&key=b1c8c825afd49acc0608ab158acf7ed0&libId=iz0fvf240100xt1z000DAbd6vzuh2&loc=http%3A%2F%2Fwww.flyingmag.com%2Fdot-releases-2016-transportation-statistics&v=1&out=https%3A%2F%2Fwww.rita.dot.gov%2Fbts%2Fsites%2Frita.dot.gov.bts%2Ffiles%2FSTSAR_2016.pdf&ref=https%3A%2F%2Fwww.google.com%2F&title=DOT%20Releases%202016%20Transportation%20Statistics%20%7C%20Flying%20Magazine&txt=DOT%20publication%20says)

## **Compressor Failure Caused Helicopter Crash**

During the marker ball installation on lines above the North Saskatchewan River, the single-engine helicopter was hovering 325 feet above the ground when it experienced an engine failure and hit ground. **Both the pilot and the platform worker were killed.**

Engine failure at low altitude led to the fatal October 2015 crash of an Oceanview Helicopters Ltd. helicopter near Paynton, Saskatchewan, as its crew were installing marker balls on SaskPower hydro lines, the Transportation Safety Board of Canada (TSB) concluded Feb. 2.



TSB's investigation report **A15C0146** outlines findings in the case. The Hughes 369D helicopter operated by Oceanview Helicopters was conducting aerial work on Oct. 22, 2015, with a pilot and an external platform worker on board. During the marker ball installation, the single-engine helicopter was hovering 325 feet above the ground when it experienced an engine failure and hit the ground. Both the pilot and the platform worker were killed, and the helicopter was destroyed by fire after the impact. The accident occurred on an island in the North Saskatchewan River.

Investigators determined it is likely that the [failure of an internal engine component](#) resulted in the loss of engine power while the helicopter was in a hover, and there was insufficient altitude to conduct an autorotation landing. The report also found the risk of injury or death increases if a single-engine helicopter is operated at altitudes and airspeeds from which a successful autorotation landing may be difficult to perform.

Oceanview Helicopters Ltd., which was contracted by Forbes Bros. Ltd. to carry out the aerial work and install marker balls on power lines strung over the North Saskatchewan River, voluntarily suspended external platform worker operations after the accident and has not resumed them, the report says. It says Forbes Bros. Ltd. reported it has reviewed its helicopter operation standards, adopted the [Helicopter Association of Canada Pre-Flight Risk Assessment best practice](#) as a requirement for all Forbes Bros. Ltd. helicopter vendors, and engaged third-party aviation safety experts to assist in evaluating its helicopter practices.

[The board's findings are:](#)

1. It is likely a stage 2 compressor blade was subject to fatigue and eventual overload failure, resulting in a loss of engine power.
2. The engine failure occurred while the helicopter was in a hover. There was insufficient altitude to conduct a successful autorotation, and the helicopter collided with the terrain.
3. If a single-engine helicopter is operated within the confines of the cross-hatched region of the Height Velocity Diagram, the likelihood of a successful autorotation after an engine failure is significantly reduced, increasing the risk of injury or death.

4. If operators do not follow manufacturer-recommended procedures when operating in an erosive/corrosive environment, there is an increased risk of an undetected and premature failure of the compressor.

The board concluded the compressor failed before its prescribed overhaul period had elapsed.

<http://www.tsb.gc.ca/eng/rapports-reports/aviation/2015/A15C0146/A15C0146.asp>

## **DGCA suspends license of GoAir's aircraft maintenance engineer**

According to a senior DGCA official, there were problems with the magnetic plug attached to the main gear box but the Aircraft Maintenance Engineer (AME) **did not notice it and the flight was cleared for operations.**

Aviation regulator DGCA has suspended the license of an aircraft maintenance engineer of GoAir for **failing to detect a fault** and clearing the aircraft which had to make an emergency landing at the Delhi airport. A Bengaluru-bound GoAir flight, carrying around 190 people, made an emergency landing due to technical issues on February 8. According to a senior DGCA official, there were problems with the magnetic plug attached to the main gear box but the Aircraft Maintenance Engineer (AME) did not notice it and the flight was cleared for operations.

He noted that in such conditions, the aircraft should not be operated but the engineer concerned **did not read the trouble shooting manual.**



The plane had almost completed the earlier permitted flying period of ten hours when it started for Bengaluru and without noticing that, the AME had cleared it for further journey, the official added. “Due to wrong action on the part of AME, DGCA suspended his license yesterday pending investigation,” he said.

Providing a brief chronology, the official said prior to its flight from Delhi to Bengaluru, there were some issues with this particular aircraft. Earlier, after one hour of its journey from Mumbai to Delhi, there was low oil pressure indication and chip warning. However, there was no such warning later and the same plane flew to Leh but came back to Delhi due to bad weather. Then, the aircraft was operated from Delhi to Guwahati and made return journey.

Subsequently, after these flights, the aircraft made emergency landing after taking off to Bengaluru on February 8. The Directorate General of Civil Aviation (DGCA) would be analyzing the Digital Flight Data Recorder (DFRD) to gather more information and depending on the findings there could be more regulatory actions, the official noted. There was no immediate comment from GoAir. The plane involved was an A320 neo having Pratt & Whitney engine. The DGCA official said the regulator is already in touch Pratt & Whitney seeking more data about the engine. “We have sought data... Failure of main gear box is for the first time. We are getting the worldwide data and also getting our data,” he added.

## **Transponder on Standby Led To Near Midair over Black Sea**

A Dassault Falcon 900 operated by Volkswagen and a LOT Embraer 170 flying from Warsaw to Istanbul **narrowly averted a midair** in Bulgarian airspace on June 30, 2015, passing within 0.9 nm while both were flying at FL370.



According to a recently issued [final report](#) from Bulgaria's Air Accident Investigation Unit (AAIU), the near-collision was caused [by the loss of the transponder signal](#) from LOT Flight 7293 due to the transponder being in "standby mode" and subsequent "unintentional interruption of air traffic service.

"At 11:56:19 UTC, 10 minutes after entering Romanian airspace at FL370, the LOT Warsaw-to-Istanbul flight experienced a failure and reset of its Honeywell Primus avionics, which put the transponder in "standby mode." The LOT pilots [did not notice the discrete "TCAS OFF" message](#), nor did their Embraer 170 have [updated](#) Honeywell Primus load software that displays a more prominent warning of this condition.

This was exacerbated by Romanian ATC staff, [who mistakenly believed](#) that LOT 7293 "overflowed the sector an hour before" and at 12:01 UTC "deleted LOT 7293...without a reason, and...[did not try](#) to establish radio communication." The Romanian Air Force queried ATC about an aircraft without a transponder at 12:10 UTC, and a NATO AWACS plane spotted it at 12:18, but ACC Bucharest "did not discover the connection between the unknown aircraft and LOT 7293."

Radio contact was re-established with LOT 7293 at 12:24, when the pilots informed Romania that they had passed the DINRO waypoint, about 30 nm from Bulgarian airspace. ATC then instructed the crew to contact Bulgaria's Varna East sector, [but incorrectly provided the frequency for Varna West](#).

According to the report, Bulgarian ATC tried to identify the aircraft without the transponder, including warning the Falcon 900 to look out for traffic, which it saw but [incorrectly estimated](#) to be at FL400. LOT 7293 called Varna West at 12:25:29, reporting its altitude and destination, and ATC informed the LOT crew of the transponder problem. Flight 7293 then reappeared on the radar screens at 12:27:58—a minute after passing the Falcon at 12:26:50.

[https://www.mtitc.government.bg/sites/default/files/uploads/zveno/final\\_report-lot7293-wgt62n\\_eng.pdf](https://www.mtitc.government.bg/sites/default/files/uploads/zveno/final_report-lot7293-wgt62n_eng.pdf)

## Federal lawsuit faults FAA for 2014 South Dakota plane crash

The widow of a South Dakota man who was killed in a plane crash in 2014 is blaming the Federal Aviation Administration for the accident. Natalie Rau says in a federal lawsuit that the FAA failed to ensure that a South Dakota wind farm **had lighted turbines** and the agency **neglected to diagram the farm on aeronautical charts**. She's seeking unspecified damages.

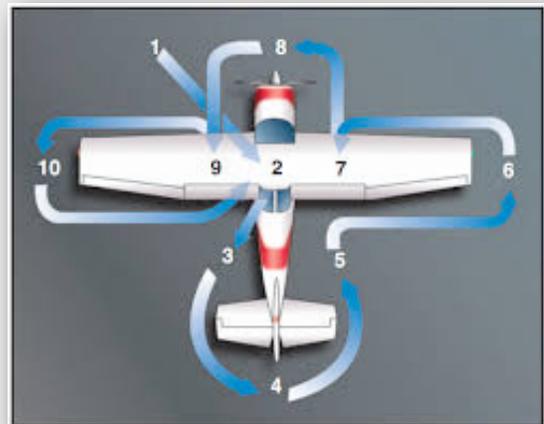


Rau's husband, Logan, of Java, was a passenger on the single-engine Piper that went down after colliding with a turbine while attempting a nighttime descent into the Highmore airport. All four people aboard the plane were killed.

The lawsuit says the FAA's **aeronautical charts were not up to date** at the time of the crash. Government attorneys did not immediately respond to an email request for comment.

## Is My Aircraft Right for Flight?

The [Jan/Feb 2017 issue](#) of *FAA Safety Briefing* focuses on risk management and follows the framework of the PAVE checklist: **P**ilot, **A**ircraft, **e**nVironment, and **E**xternal Pressures. Today we look at the “A” in PAVE to learn more about how to ensure your **A**ircraft is fit for flight. For tips on how to properly evaluate your aircraft prior to takeoff, check out the article, “Is My Aircraft Right for Flight?”



<https://adobe.ly/2iePJ4p>

[http://www.faa.gov/news/safety\\_briefing/2017/media/JanFeb2017.pdf](http://www.faa.gov/news/safety_briefing/2017/media/JanFeb2017.pdf)

## **FAA SAFETY BRIEFING**

### **Say Ahh...A Pilot's Guide to Self-Assessing Risk**

There are three basic questions pilots should ask themselves before any flight: Am I healthy? Am I legal? And am I proficient? Explore how to assess and address pilot risk in each of these areas...



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## **Slow Onset Hypoxia Represents the Highest Risk of Fatality**

Over the last 15 years, there have been numerous high altitude rapid decompression events that have all resulted in safe landings without associated fatalities.



However, there is a weak link when it comes to slow onset hypoxia associated with the failure of pressurization on ascent or a slow depressurization at cruise altitude while addressing a primary inflight threat...

[http://r20.rs6.net/tn.jsp?f=001DOIFrIsPLnNsv7zfPkuo09Hgx3kEs82vibu1mDNVmoXDMIKkMkLLriCvu4ebWtNPWkVtxmdecLmPvRCQYbjjxef4Mz4e\\_JB3MwXa8pguLlbr3saXKzYYOFLhGMnuVBXOhEk3EiShprL0VCNxWBeoU6cvhFJz5NXoU03t4P2MEN\\_5oA1dP-h5sg3OqM3YSJzL6j\\_fTok2PEPPKslzK9wFA\\_eqxptBJE738u6lOngbhYRNWnlapnNDjQnMdA80BnHNMMQbxthM46IYBCCjMoG4sQ==&c=XD5Mb-PSAYn15GychX81GKh1kyYu0KOQbIGBEcG1LEKWcLOIYph1qA==&ch=Gsimbt3hKpQWb3JB2FY7BmCIMK26z0iaL0JvYXUtOGkIN\\_BRQ8dFcw==](http://r20.rs6.net/tn.jsp?f=001DOIFrIsPLnNsv7zfPkuo09Hgx3kEs82vibu1mDNVmoXDMIKkMkLLriCvu4ebWtNPWkVtxmdecLmPvRCQYbjjxef4Mz4e_JB3MwXa8pguLlbr3saXKzYYOFLhGMnuVBXOhEk3EiShprL0VCNxWBeoU6cvhFJz5NXoU03t4P2MEN_5oA1dP-h5sg3OqM3YSJzL6j_fTok2PEPPKslzK9wFA_eqxptBJE738u6lOngbhYRNWnlapnNDjQnMdA80BnHNMMQbxthM46IYBCCjMoG4sQ==&c=XD5Mb-PSAYn15GychX81GKh1kyYu0KOQbIGBEcG1LEKWcLOIYph1qA==&ch=Gsimbt3hKpQWb3JB2FY7BmCIMK26z0iaL0JvYXUtOGkIN_BRQ8dFcw==)

## **11 Silent But Deadly Killers Of Pilots**

Fatal aviation accidents aren't always caused by engine fires and alarms going off in the cockpit. In fact, most deadly accidents are caused by silent threats. Here's what you need to know.

### **1) Hypoxia**

Oxygen deficiency in the blood, body tissues, and cells leads to impairment and total incapacitation if left unchecked. The body's failure to absorb oxygen can be caused by a number of things including (but not limited to): low pressure at high altitudes, alcohol, medications, anemia, G-Forces, shock, etc. **It often occurs subtly, and each person reacts differently to hypoxia. So go through altitude chamber training if you can.**

It causes dozens of aircraft crashes each and every year. [Learn more about hypoxia and why your knowledge of it is so crucial.](#)

### **2) Pyrolysis - Organophosphates**

Pyrolysis can occur from pyrolyzed engine oil or hydraulic fluids. According to medical research, 1 in 10 people are more susceptible than normal. Worse yet, it's symptoms are similar to carbon monoxide, largely undetectable.



Organophosphates are dangerous gases that are associated with engine gases in the aircraft cabin. In 2011, a Lufthansa A380-800 crew experienced one of these occurrences when an engine was washed just before their flight. **Upon landing, one cabin crew member tested positive for gas compounds similar to those found in deadly Sarin gas.**

### 3) Bad Attitudes

The FAA's list of hazardous attitudes accurately represents the danger we pose to ourselves in the air. Failing to recognize and change hazardous attitudes can result not only in putting yourself in danger, but your passengers too.

### 4) Medications

Many medications are banned or restricted by the FAA, for good reason. Not limited to prescriptions, over the counter medications can severely inhibit your mental and physical capacities too, especially during time-sensitive emergency situations.

Additionally, many medications are known to have adverse interactions in the body at altitude, promoting the development of hypoxia symptoms. **Always have new medications checked by your local Aviation Medical Examiner before you fly.**

### 5) Complacency

Failing to perform checklists isn't usually thought of as a deadly threat to pilots, but it's one of the worst. Skipping or forgetting procedures before, during, and after a flight makes you less situationally aware, and infinitely more prone to accidents.

### 6) Icing Conditions

Didn't notice ice building up on your wings? Hopefully it's not too late. Enable deicing and anti-icing equipment right away, or exit icing conditions altogether. Noticing ice buildup can be tough, especially at night. Make sure to check for known icing conditions through weather briefings and pilot reports before you takeoff.

**It happens silently. Ice builds up on your aircraft until reaching a critical point where your wings simply won't produce enough lift for flight.** Instability, powered descents, and stalls come next. Reacting too late might not get you out of this dangerous situation. Don't forget about Carburetor icing either!

## 7) Poor Communication

What about communication could be so deadly? There's a number of things that can put you directly at risk if you don't communicate clearly and correctly. Failing to communicate with ATC about emergencies and failing to communicate together with a crew-member are too notable examples.

## 8) Disorientation

Flying through the clouds is not without risk: between 5-10% of all general aviation accidents result from **spatial disorientation**, and of those accidents, 90% of them are fatal.

One of the best (and safest) ways to prevent yourself from becoming a victim to one of these illusions is to grab an instrument instructor on the next cloudy day and go flying. Get an IFR block of airspace and practice some maneuvers in the clouds - climbs, descents, and turns.

## 9) Fatigue

Whether you're a busy student with lots of ground school work or an airline pilot flying multiple legs per day, fatigue is a threat for aviators. Flying while fatigued is equivalent in many cases to flying under the influence of alcohol.

Fortunately, new FAA regulations are a step in the right direction, giving airline pilots longer rest periods. Sadly, these rules don't apply to every flight department. For instance, many charter and cargo pilots have less stringent rest requirements.

## 10) Carbon Monoxide

The fumes produced by the combustion your engine can leak into the fresh air supply for the cabin or cockpit, leading to carbon monoxide poisoning. Silent and extremely deadly, carbon monoxide builds up in the blood, causing nausea, weakness, confusion and later total impairment.

Left unaddressed, pilots have frequently lost consciousness during flight from failing to notice symptoms. **If a carbon monoxide leak is suspected, follow your checklist or get as much fresh air into the cabin as possible, landing as soon as practical.** Read more about how to detect carbon monoxide and what to expect.

## 11) Time Pressure

It's one of the worst invisible threats. Time pressure kills more pilots yearly than measurable. Get-there-itis, VFR into IMC, or simply failing to calculate performance before flying is a great way to put yourself into life-threatening situations quickly. Relax and take your time. If the weather isn't looking the best, don't go.

**It's much better to be on the ground wishing you were in the air, than in the air wishing you were on the ground.**

[Learn more about hypoxia and why your knowledge of it is so crucial.](#)

[spatial disorientation](#)

[Read more about how to detect carbon monoxide and what to expect.](#)

## **U.S. Helo Accident Rate Down for Third Straight Year**

The U.S. helicopter accident and fatal accident rates have fallen for the third consecutive year, according to data released today by the FAA. In fact, the overall accident rate fell to 3.19 accidents per 100,000 flight hours in 2016, compared with 3.67 in 2015. The fatal accident rate fell slightly to 0.51 accidents per 100,000 flight hours in 2016 compared with a 0.52 rate in 2015. The rate is down from 0.65 in 2014 and 1.02 in 2013.

There were 106 helicopter accidents in 2016, including 17 fatal accidents. That is a 12 percent decrease year-over-year and a 27 percent decrease compared with 2013.

“The FAA and the helicopter industry have worked together to educate the civil helicopter community about safe practices, to drive these improved results,” said FAA Administrator Michael Huerta.



“The FAA and the industry also are taking an active role in advancing safety through new technology, collaborative policy changes and proactive outreach.” In recent years the FAA has worked closely with the U.S. Helicopter Safety Team to promote various related initiatives.

## **ROD MACHADO'S PLANE TALK (BOOK OR EBOOK)**

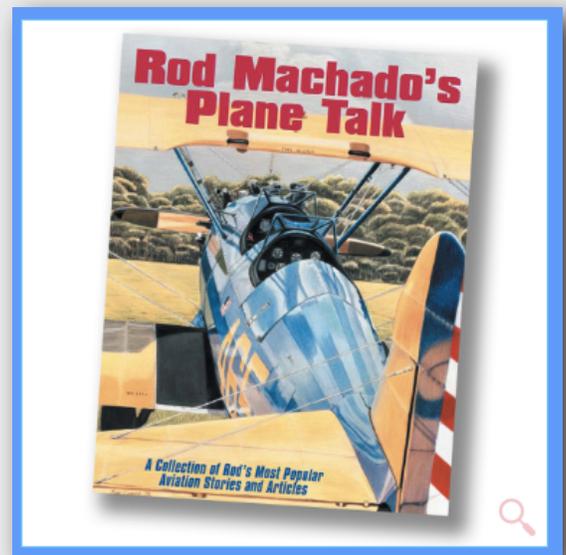
***Rod Machado's Plane Talk (The Mental Art of Flying an Airplane)*** – First Edition, 455 pages

Plane Talk covers aviation's **most critical human factor issues**. Since about 85% of all accidents are due to pilot error, this book is important to anyone who flies an aircraft. These 442 pages contain some of the most important skills you absolutely must learn to become a safe, capable pilot. Machado makes these skills easy to learn and easy to recall by using his trademark humor throughout this thought-provoking book. (Downloads are non-refundable.)

**In this book you'll discover...**

➤ **How to Assess and Manage Aviation Risks** - Learn how safe pilots think, how to apply the safety strategy used by General Jimmy Doolittle (known as the master of the calculated risk), how famed gunfighter Wyatt Earp can help you cope with aviation's risks, how misleading aviation statistics can be and why flying isn't as dangerous as some folks say it is.

➤ **Several Techniques for Making Better Cockpit Decisions** - Discover how to use your inner copilot in the cockpit and the value of one good question asked upside down.



➤ [New Ways to Help You Cope With Temptation](#) - Fly safer by developing an aviation code of ethics, understand how human nature can trick you into flying beyond your limits, why good pilots are prejudiced and how a concept like honor will protect you while aloft.

➤ [How to Use Your Brain for a Change](#) - You can learn faster by understanding how the learning curve—the brain's performance chart—is affected by the little lies we tell ourselves, the mistakes we need to make, our need to please our instructors, and simulator and memory training.

➤ [The Truth About Flying, Anxiety and Fear](#) - Learn why it's often the safest of pilots that make excuses instead of flights, why anxiety should be treated as a normal part of flying, and a three-step process to avoiding panic in the cockpit.

➤ [How to Handle First Time Flyers and Anxious Passengers](#) - Discover how to behave around new passengers, how to avoid most common mistakes that scare passengers in airplanes and how to reduce the cockpit stress between pilot and spouse.

➤ [Favorite Skills Used By Good Pilots](#) - Learn why good pilots scan behind an airplane as well as ahead of it, are sometimes rough and bully-like on the flight controls, occasionally fly without using any of the airplane's electronic navigation equipment, don't worry about turbulence breaking their airplanes, master airspeed control as a means of making better landings and much more.

<https://rodmachado.com/products/rod-machado-s-plane-talk-book-ebook?aff=142>

## **EASA Publishes Safety Promotion Program for 2017**

The European Aviation Safety Agency's (EASA) approach to safety promotion was fully revamped in 2015. For every year since the agency has reviewed and improved its strategic plan.

With the release of the Rulemaking and Safety Promotion Program 2017, for the first time, efficiency is made measurable in comparison to the baseline of 2015.

Where the average time for rulemaking used to be 3.6 years, it has now already been brought back to 3.1 years, and new tasks are **further reduced to 2.2 years**. In April and May of 2016, EASA consulted its stakeholders and determined their safety risk management approach. Together they built the basis for what has become the **main drivers of the program**, which are safety, environment, efficiency, and a level playing field. Every rule or safety promotion has to be reviewed under those aspects.



While the core for all safety programs is ICAO Annex 19 (Safety Management), proactive systematic safety management allows companies and organizations to prevent accidents before they occur. The goal of the rulemaking and safety promotion program is to aid in this. In regard to commercial air transport aircraft, the highest risks were found in **'loss of control' incidents, runway excursions and incursions and terrain and obstacle conflicts**.

EASA commented by saying, "Accidents involving recreational airplanes have led to an average of nearly 80 fatalities per year in Europe, which makes it one of the sectors of aviation **with the highest yearly number of fatalities**." Following this, EASA decided to organize a workshop on GA safety to share knowledge and improve safety in this domain. The 'General Aviation Road Map' is key to EASA's strategy here.

A lack of harmonized rules considering drones, or unmanned aircraft systems, results in a burdensome administrative process which prevents businesses from developing. Uniformity is required to mitigate associated risks and simplify advancement.

According to EASA, "A performance-based approach is intended to make aviation safer, more efficient and flexible. Performance-based regulations have been in existence for decades; however, no consistent and systematic approach to implementing performance based principles has been so, so far.

To this end, the rule making process contains identifiers for actions with a particular focus on performance based regulations.”

Other risks and developments discussed in the program consist of cybersecurity, CO2 targets, the SESAR project, all weather operations, new technologies, and harmonization of flight rule

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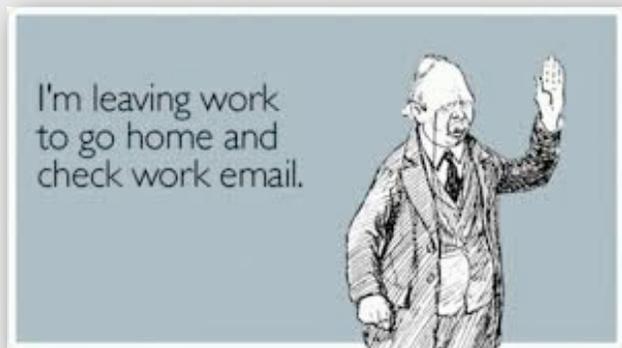
## **After-Hours Email Can Make You Sick, Science Warns**

Constant connectivity isn't just bad for burnout and work-life balance.

Recently France approved a proposed law which gives employees a "right to disconnect." The legislation obliges companies to shield their people from the kind of after hours work email barrage that's pretty much standard practice over here in the U.S.

Which, if you're regularly up late at night fielding meeting requests and [anxiety-laden missives](#) from your boss, probably sounds pretty good. But then again the French are, well, French. They're known for their fierce commitment to the good life, fine wine, and plenty of leisure. In that light, this new law could also appear to be just another unaffordable continental luxury for overworked Americans to dream about while they try to dig out of their never ending inbox avalanche.

But it turns out, curbing the boss's ability to pester his or her people in the evenings isn't just about enjoying the finer things in life.



Constant connectivity doesn't just potentially burn you out and burden your family, [it can also make you physically sick](#), research suggests.

### **The more you check email the more likely you are to get sick.**

That's the bottom line takeaway of a recent post on the Association for Psychological Science blog, highlighting a handful of new studies on the effects of after hours email. Predictably this research shows that being [electronically tethered](#) to your job 24/7 is stressful, and can lead to burnout and exhaustion. You probably didn't need a massive German study with some 24,000 participants to tell you that, but if you did, it exists. So do a number of other studies linking after hours email with general stress.

Perhaps more surprising for some will be a previous study drawing on data from the 4th European Survey on Working Conditions that shows constant connectivity doesn't just lead to burnout, but to an increase in the likelihood of a coming down with a variety of physical ailments.

Here's the money sentence from the APS post: "[The results revealed that people who reported more after hours contact from work also reported higher rates of health issues, such as musculoskeletal pain and cardiovascular conditions.](#)" Or to put it even more bluntly, the more you check email after hours, the more likely you are to end up sick.

### **The takeaway for bosses and employees.**

Given the well known link between psychological stress and physical symptoms, that's hardly the shock of the century, but as you're madly trying to clean out your inbox at 9pm it's easy to lose sight of the connection between this sort of behavior and your aches and pains come morning.

But even if you've got this connection clear in your mind, what's to be done? America is obviously not France, and especially given the current administration, it's highly unlikely we'll see a big surge in legislation to protect workers' anytime soon. But that doesn't mean that bosses and employees can't take [rational steps](#) to minimize the harm of after hours email themselves.

There's plenty of advice for leaders on how to set healthy boundaries and help your people avoid tech-related burnout. Even companies like Google are experimenting with programs that ask employees to hand over their work gadgets before leaving for the night. If fast-moving tech giants can manage to give their people a break, surely plenty of other businesses can too.

<http://time.com/money/4429350/after-hours-email-bad-for-you/>

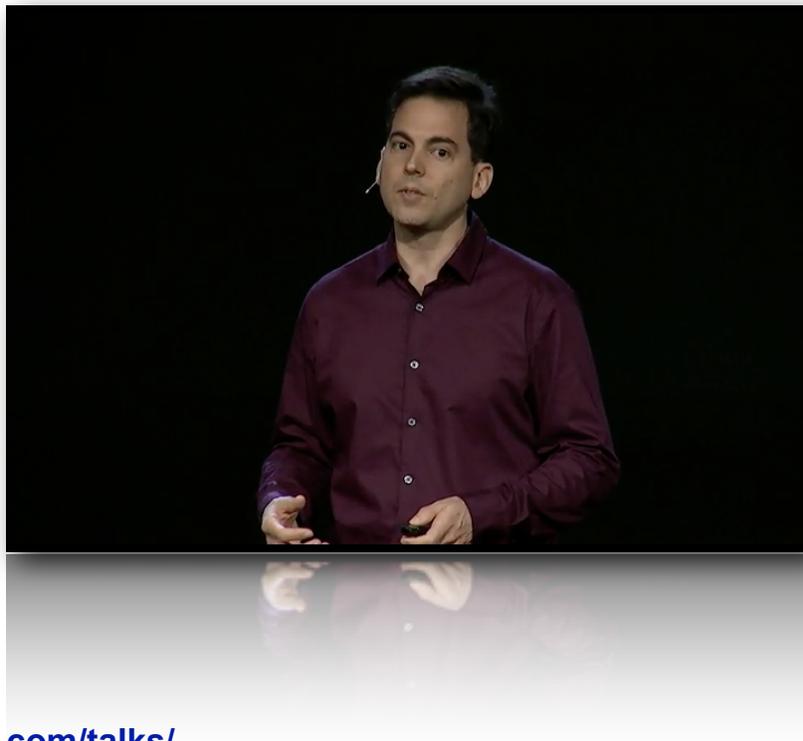
<http://www.inc.com/jessica-stillman/how-to-not-be-a-burnout-boss-work-life-balance.html>

<http://www.inc.com/jessica-stillman/your-employees-tech-addiction-is-your-problem.html>

## **TED Talk: Ideas Worth Sharing**

### **How to get better at the things you care about**

Working hard but not improving? You're not alone. Eduardo Briceño reveals a simple way to think about getting better at the things you do, [whether that's work, parenting or creative hobbies](#). And he shares some useful techniques so you can keep learning and always feel like you're moving forward.



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