

# Aviation Human Factors Industry News

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

Hello all,

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## **Beware of the Invisible Horses**

It happened in England during World War II. British Intelligence had uncovered a plot by the Nazis to invade England by way of the English Channel.

To combat this attack, men who were not actively involved in the war effort were assembled on the cliffs of Dover where they were trained to fire artillery weapons at moving targets in the channel. After months of training, these artillery crews were filmed in action. This film was then sent to the War Department in London, where military leaders were to evaluate their progress.



As they watched the film, these military experts noticed that a few of the gunnery crew-men exhibited a rather **strange, unexplainable behavior**. Just before the artillery guns were fired, a handful of them stood rigidly still for five to ten seconds.

When the film was over, the evaluators began to discuss the possible motivation for such unusual behavior. After a period of unproductive discussion, they decided to watch the film again.

During this second viewing, a general entered the room to observe the film. again, when the film was over, another discussion was begun in an effort to uncover the possible reasons for the men's unusual behavior. It was during this discussion that the newly arrived general stood up and stated that it was obvious to him, that these men were **holding the horses**. This comment was received with laughter by the other officers in the room because there were no horses in the film.

The general was very serious. He went on to point out that since most of England's younger men were already active in the war effort, these men were much older and he suggested that many of them had served during World War I. He reminded the other officers that during World War I, artillery pieces were transported on caissons drawn by horses. Certain men had the **responsibility** of keeping the horses steady before the guns were fired.

The general speculated that the men who were exhibiting this strange behavior must have had that responsibility. He concluded that they were in effect holding invisible horses. They were [carrying a habit](#) which they had developed 25 years ago, and bringing it forward into the future, even though it was no longer effective.

Most of us do the same thing. [We are holding our own invisible horses](#). These are habits of thinking and behaving that were effective for us in the past, but are no longer effective in today's world. And, like those men, we are not aware we are doing it.

You can see this invisible horse effect throughout our society. You can see it in [organizations](#), in politics, in education and in the [personal lives](#) of people everyday.

Fortunately, there are certain key signs that can alert you to the presence of these invisible horses. you will find them present [when you hear phrases like](#): "We have always done it this way," "That's just the way I am, I'll never change," "You can't teach an old dog new tricks," "that won't work, we tried it once," "That's just the way we do things around here," "Sorry, that's our policy," and the list continue.

The bottom line is that you will want to become more aware of the existence of some of your own invisible horses. By becoming aware of their existence, you will be able to challenge them, and at the same time work to eliminate those that are holding you back from what you want to accomplish. [By asking questions like](#); "What if....?" "Is there a better way to do this?" "What would I have to do to make this work?" "Where am I getting my new ideas from?" you will be able to challenge those limiting invisible horses.

## **Blind to the Big Red Flag**

I broke my leg and had been out of the AME shop for the past six months. When I returned to my shop [I was anxious to get back to work](#). The AME shop was scheduled to reinstall four GRUEA-7 ejection seats in an EA-6B Prowler after completing a 364-Day inspection.

A few things remained before we were ready and I was happy to help. [I never expected that I was about to make the biggest mistake of my career](#).

Arming an ejection seat is a two phase process. The first phase is to “Bottom Arm” the seat which is done in the work center. The second phase is “Top Arming” which is completed only after the seats have been installed in the aircraft. The AME shop had finished bottom arming the seats before I came to work. Once at work, one of the PRs asked me to help switch the seat pans between seats. Removing and replacing seat pans is a [routine maintenance](#) function. As long as the seats are not “Armed,” the task does not even require an ordinance qualification. Eager to help, I went over to a seat, [assuming](#) it was “De-Armed.” I failed to notice the “Armed” [warning flag](#) on the upper ejection handle when I removed the Manual Override Release (MOR) handle safety pin and pulled the MOR handle—the same way I had hundreds of times before. However, this time the seat was “Armed!” The guillotine CAD fired off, shooting the guillotine blade into the guillotine body. [To my horror](#), I had just inadvertently discharged a CAD!



During the investigation, Quality Assurance found that there were [no steps](#) in the publication to remove the seat pan while the seats are out of the jet and mounted on seat dollies. A Technical Publication Discrepancy Report (TPDR) was submitted requesting this addition to hopefully keep this from happening again. It could have been much worse; the guillotine blade could have come all the way out and hit someone, causing a serious injury or possibly killing a fellow Sailor nearby. Before breaking my leg, I had been a CDQAR and had trained and worked on these seats for over six years. [I never imagined that complacency would have led me to make such a dangerous mistake.](#) It's pure luck that no one was hurt and luckily my mistake only caused damage to the seat and wasted man-hours. This all could have been avoided except for [a momentary lapse of situational awareness](#). That is all it takes for something to go wrong...



## Language Plays a Greater Role in Aviation Accidents Than the Industry May Realize

In January 1990, Avianca Flight 52 from Bogota, Colombia, to New York City, ran out of fuel on approach to John F. Kennedy International Airport (JFK), causing the Boeing 707 aircraft to crash in a wooded residential area in Cove Neck,



New York, on the north shore of Long Island. Eight of the nine crew members and 65 of the 149 passengers on board died. The National Transportation Safety Board (NTSB) determined the crash occurred partly from the flight crew's [failure to properly declare a fuel emergency](#). The investigation raised safety issues that included communication concerns between the pilot and air traffic control. Because of poor weather conditions, the aircraft was in a holding pattern and running low on fuel, but the crew did not use the word "[emergency](#)," which resulted in air traffic control underestimating the seriousness of the situation and the need for special handling.

In another accident in October 2001, a small Cessna Citation CJ2 business jet collided with a McDonnell Douglas MD-87 airliner on the runway at Linate Airport in Milan, Italy. All 114 people on both aircraft died, as well as four people on the ground. While many factors were noted, accident investigators also found that the [aviation terms and phrases](#) widely used by the controllers and pilots did not conform to International Civil Aviation Organization (ICAO) recommended practices. Communication also alternated between English and Italian.

Those are two examples of aircraft accidents where inadequate English language proficiency was noted by investigators as playing a role in the [chain of events](#) leading up to the accident. Elizabeth Mathews, former linguistic consultant for ICAO and assistant professor at Embry-Riddle, believes [language](#) has been a factor more often than has been noted. As an expert in language as a factor in aviation safety, Mathews is part of a team at Embry-Riddle's Daytona Beach and Worldwide campuses combing through databases of aircraft accidents globally to determine the role communication deficiencies may have played.

That research is just one part of Embry-Riddle's overall [Language as a Human Factor in Aviation Safety](#) (LHUFT) Initiative to heighten awareness, improve aviation safety and enhance future investigations.

The initiative and LHUFT Center involves partnerships with Georgia State University and Pontifical Catholic *University* of Rio Grande do Sul (*PUCRS*). [The work includes](#) joint research projects; developing curriculum for aviation English; advocating for best practices in aviation language training, teacher training and testing programs, which are currently unregulated; and becoming an industry leader for language in aviation research and expertise.

"While communication is universally acknowledged to be critical to aviation safety, industry understanding of communication and language as fundamental aspects of aviation safety has not kept pace with our understanding of other [human performance factors](#)," Mathews said.

Mathews noted that language issues in aviation [are not](#) investigated with the same degree of systematic and expert thoroughness with which other human and operational factors are considered.

"Embry-Riddle hopes to provide an organizational focus to support [human factors specialists](#), accident investigators and safety experts to better consider communication and language factors and to build a bridge between the field of human factors in aviation and applied linguistics. The goal is to improve aviation safety by heightening industry awareness of the threats posed by language issues in aviation," Mathews said.

One of the first steps of the initiative was the establishment in August of the **first comprehensive bibliography** of published resources on language as a human factor in aviation that is housed in Embry-Riddle's **Scholarly Commons** digital repository. The free bibliography was compiled by Dr. Anne Marie Casey, dean of Embry-Riddle's Scholarly Communication and the Library, and William Condon, research librarian. The bibliography, edited by Jane Deighan, special projects librarian, contains thousands of references to articles, books, reports, dissertations and theses.

Three new courses — Language as a Factor in Aviation Safety, Aviation Topics and English for VFR Flight — are also being offered at Embry-Riddle's Daytona Beach Campus to increase awareness and improve communication with the goal of expanding to Embry-Riddle's Worldwide campuses. More are also planned. English for VFR (Visual Flight Rules) that began in the Spring at Embry-Riddle's Language Institute has interactive classroom sessions teaching flight students listening and speaking strategies, and English language skills to successfully communicate with air traffic controllers.

Jennifer Roberts, Aviation English Specialist for Embry-Riddle's Worldwide Campus in the College of Aeronautics, who developed and continues to develop new curriculum, said as air travel increases around the world, particularly in places where English is not the primary language, so does the need to **ensure a safe and efficient level of English language proficiency** for all aviation personnel.

"Too many aviation personnel are receiving operational training without sufficient English language instruction to reach the level of proficiency that will be needed when mechanics, controllers, or pilots, all with different native languages, are expected to communicate about issues in the hangar, the tower or the flight deck," Roberts said. **"The list of potential opportunities for miscommunication in aviation is endless."**

As a former FAA air traffic controller, Dr. Sid McGuirk, department chair of Applied Aviation Sciences for Embry-Riddle's Daytona Beach Campus, said he knows first-hand the importance of communication to flight safety.

“Language is key not only for pilots and air traffic controllers, but throughout many facets of aviation,” McGuirk said. “Nearly all human factors textbooks and manuals identify communication as a critical element of safe operations, citing both first-language and second-language interactions as contributory factors to numerous accidents and incidents. Embry-Riddle is proud to be supporting this initiative to foster improved understanding of language use in aviation.”

Graduate student Steven Singleton, who is specializing in aviation safety management systems, is part of the team that is reviewing aviation accidents that have occurred during the last 30 years. He is looking for potential evidence of language issues that could have contributed to those accidents.

“Language issues are mostly ignored or not considered in many accidents and those findings could have been used as tools in future risk reduction,” said Singleton, who received a bachelor’s degree in Aerospace and Occupational Safety from Embry-Riddle this past spring. “If I can help find these potential factors in aircraft accidents, it can help Professor Mathews educate the aviation industry on ways to make it safer.”

<http://commons.erau.edu/db-bibliographies-lhuft/>

<http://commons.erau.edu/>

## **IAF lost 37 aircraft, helicopters in 3 years due to 'technical defect' and 'human error'**

**The Indian Air Force (IAF) has lost a total of 37 aircraft and helicopters since May 2014, the government told the Rajya Sabha, adding that 55 people had been killed in these crashes.**

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It added that the crashes claimed the [lives of 55 people](#) in a span of three years.

The defense forces lost 25 aircraft and 12 helicopters during the three year period, the data provided by Minister of State for Defense (MoS) Subhash Bhamre revealed. Out of the total 37 aircraft and helicopters, 24 of them were lost in crashes in 2014-2015 alone.

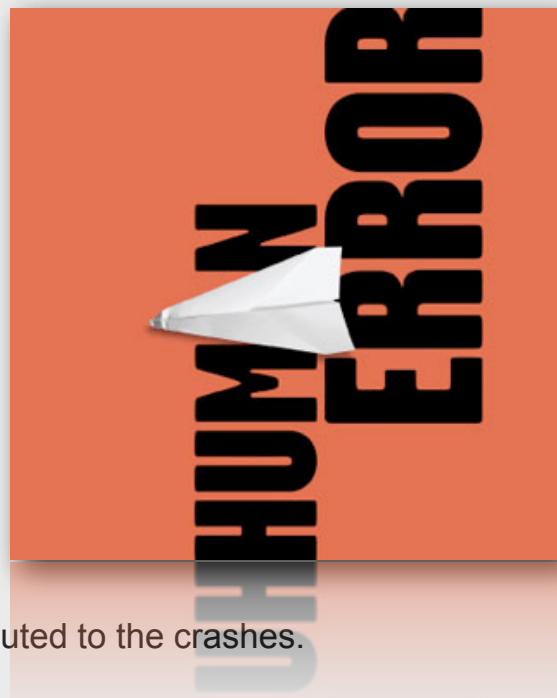
[The main reasons behind the crashes have been identified as](#) "technical defects" and "human error", Bhamre said. The reasons indicate that aging aircraft, poor maintenance and inadequate pilot training might have contributed to the crashes.

Since 2011, the IAF has recorded crashes of 65 aircraft and helicopters that have claimed the lives of more than 80 people. The crash figures feature 30 fighter jets, including five twin-engine Sukhoi-30 MKIs - India's latest and most potent fighter jets.

Bhamre said that a court of inquiry investigates every accident following which its recommendations are implemented. He added that accident prevention programs were being given an added push to [identify risk-prone areas](#) particularly for aircraft fleet and operational environment.

The MoS said that measures were being taken to prevent accidents. "These include invigoration of the Aviation Safety Organization, streamlining of the accident reporting procedure, analytical studies and [quality audits](#) of the aircraft fleets to identify vulnerable areas to avoid accidents," Bhamre said in a written response to the House on Tuesday.

"Accident prevention programs have been given an added thrust to identify risk prone or hazardous areas specific to the aircraft fleets and operational environment [to ensure safe practices and procedures](#)," he added.



Bhamre also said that the IAF had upgraded its MiG-21 and MiG-27 fighter jets as part of an obsolescence management program so that they do not lose their relevance. The MiG-29 fighter jets are also being upgraded in phases. "These mid-life upgrades enable the aircraft to improve the combat potential and operational capability," Bhamre told the Rajya Sabha.

Training of IAF pilots is also reviewed on a regular basis to stay abreast of the latest teaching techniques utilizing state-of-art training aids.

## **Court Nixes Airline Evacuation Procedure charged as unsafe**

Transport Canada agreed to reduce flight attendant staffing requirements provided that the airline seeking the exemption could demonstrate that the reduced crew carry out the necessary evacuation within 15 seconds. **After 3 failed simulation** attempts, the crew pulled it off—but only after the airline had shaved time by making a previously mandatory step voluntary. The union objected, claiming that the change in procedure threatened the safety of the crew and passengers.

**The appeals court agreed and ordered the airline to scrap the change** and Transport Canada to pay the union's \$3K legal bill [Canada (Transport) v. Canadian Union of Public Employees, 2017 FCA 164 (CanLII), Aug. 4, 2017].



## **AIN's The Human Factor, Episode 05: Engine Fire Forces Water Landing, Part 2**

After Dennis Murphy delivered five charter passengers to Havana, Cuba, on February 20, 2003, during the return trip one of the engines on his Cessna 402B burst into flames while he was flying over the ocean, far from land over the Straits of Florida, forcing him to make an emergency water landing. In this second part of his recounting of the harrowing flight in **AIN's *The Human Factor* podcast**, we return to the tale as Dennis Murphy ditches his airplane in the ocean and follow with what happens next.



[Listen here.](#)

## **AIN's The Human Factor, Episode 06: The Perils of Hypoxia**

Pilot George Braly recalls a flight in which his portable oxygen line becomes kinked and he ultimately loses consciousness. Braly is **awakened** by ATC and is able to increase the oxygen flow and safely descend from the high-altitude flight.

In this episode **AIN** delves into the issue of hypoxia by examining both portable and built-in oxygen systems. Additionally we discuss the FAA regulations that require one pilot when flying in a pressurized aircraft above 41,000 to use an oxygen mask at all times. Studies have shown that **82 percent** of business aircraft pilots **openly disregard this rule**, and this episode discusses the **human factors** involved in oxygen mask use on long flights and possible solutions to this problem.

[Listen here.](#)

## Hartzell creates composite blade pre-flight video for pilots

Hartzell Propeller has added to its series of [how-to videos](#) for pilots and mechanics. The newest video covers the evaluation of structural composite propeller blades by describing the ins and outs of composite prop pre-flight checks for pilots. "Pre-flight checks for structural composite propellers are

very similar to metal props with some subtle differences," said Hartzell Propeller Executive Vice President **JJ Frigge**. "Hartzell's composite expert **Kevin Ryan** walks pilots through the pre-flight step by step, including a discussion of nicks, gouges and paint erosion caused by runway debris."

In the video, Ryan also addresses trailing edge impact damage from tow bars or other ground handling equipment. He describes [airworthy damage limits](#) and how to properly "coin tap" the blade to detect evidence of possible delamination.

Hartzell uses aerospace grade composite construction materials that are incredibly durable, but they are not entirely immune to damage. Unlike aluminum or wooden blades, Hartzell's composite propeller blades can be restored to their original dimensions over and over again, providing excellent life-cycle costs.



[http://www.blueskynews.aero/issue\\_429/Hartzell\\_creates\\_composite\\_blade\\_pre-flight\\_check\\_video\\_for\\_pilots.htm](http://www.blueskynews.aero/issue_429/Hartzell_creates_composite_blade_pre-flight_check_video_for_pilots.htm)

## How An Abnormal Preflight Led To A Cessna 172 Taking Off With The Tow Bar Still Attached

It's fall. And every morning, *it's getting colder and darker.*

We'd all like to think that we spend as much time thoroughly pre-flighting on a frosty morning, as we do in the middle of a beautiful July day. But when the cold wind is whipping through your checklist (and your jacket), you tend to move a little bit faster around the plane.



*Add in a change* to your normal preflight routine, and you increase the chance of something getting skipped or forgotten. That's exactly what happened to this Cessna 172 student and instructor.

### **Running Behind Schedule: The Preflight**

*I had a student meeting me for a lesson [early in the morning]. My student was running late, so I performed the preflight and got the aircraft ready to fly. It was cold out, so once I pulled the aircraft out I hopped into the aircraft to stay warm and let my student know where I was (*newer student*) and that the aircraft was ready to fly.*

*He showed up shortly after, and we got ready to go and started up and went on with the lesson. I had left the tow bar on the front of the aircraft nose wheel. *I did not notice it or remember it at the time.* The tow bar didn't make any noise I could hear as it scraped across the ground, but looking back it did seem a little more difficult to steer than usual, but not enough to raise a flag. Not outside of the realm of possibility for a Cessna in my experience.*



*On takeoff I heard a bump that sounded like a door opening. I looked around, didn't see anything unusual and continued with the lesson. We landed, and as soon as I looked in the back of the aircraft for the bar I immediately knew what happened. I called the Tower, they sent Operations to find the tow bar (it was on the runway), and then I went and told my Chief Pilot. I ordered a new tow bar for the aircraft and maintenance took a look to make sure nothing was damaged. No damage occurred.*

***Factors that I believe led to this:***

- 1 not getting a great nights rest beforehand*
- 2 I have a new job as a first officer, so flight instruction is now a side job, lack of consistency in instruction*
- 3 it was cold, so I rushed my preflight and hopped inside the aircraft to wait for student*
- 4 inconsistent chain of events (normally my student is with me for preflight)*
- 5 it was dark, sun was just starting to rise*

***Analyzing the event:***

- 1 steering was slightly abnormal, but still maneuverable with nose steering*
- 2 takeoff I heard an unusual bump*

*Had I correlated these at the time it would have been evident what had occurred.*

**Rushing Leads To Mistakes**

A cold morning, a behind-schedule pilot, and an abnormal preflight were the recipe for forgetting the tow bar. Fortunately, the plane wasn't damaged, and it was nothing more than a lesson learned.

I've been in a similar situation myself - preflighting on a cold morning, and hopping in the plane, waiting for another pilot or passenger.

I spent 6 years pre-flighting airplanes in North Dakota. And in the winter months, **it's a real challenge to take your time**, when the below-zero wind chill is driving through your hat, gloves and jacket.

When you're in a hurry, or if you're not preparing for your flight the way you normally do - **that's when you need to pay extra attention to what you're doing.**

I've started a plane with the chocks still in. And it was a direct result from rushing my preflight. While it didn't cause a problem (aside from some deflated pride) it's an eye-opening experience of how quickly you **can make a mistake** that can have a negative outcome.

If you need to, run through your exterior preflight checklist one more time in the cockpit, to make sure you didn't forget anything. Dress warm, so you don't feel like you're taking a polar plunge while you're preflighting.

**And most importantly**, when you feel like you're rushing, take a second to think things through before you turn the prop. It's just the thing that might keep you from turning your prop through the middle of a tow bar.

## **NTSB: Poor Pilot Decisions Led To Fatal Balloon Crash**

A commercial balloon pilot's **"pattern of poor decision-making"** led to his balloon striking power lines and then crashing to the ground in Texas last July, killing all 16 on board, the NTSB concluded in its final report, issued recently. It was the deadliest balloon crash in U.S. history. Contributing to the accident were the pilot's **medical conditions and medications** that likely affected his decision-making, the board said. Alfred "Skip" Nichols, 49, the owner of Heart of Texas Balloons and the pilot on the day of the accident, had Valium, oxycodone and the antihistamine Benadryl in his system on the day of the crash, the board said. The combined effect was enough to mimic **"the impairing effect of a blood-alcohol level"** of a drunk driver, said Dr. Nicholas Webster, a medical officer with the NTSB.



“The pilot’s poor decisions were his and his alone,” said Robert Sumwalt, NTSB chairman. “But other decisions within government, dating back decades, enabled his poor decision to fly with impairing medical conditions, while using medications that should have grounded him.” The board said the FAA should require commercial balloon operators to carry an aviation medical certificate. Had a medical certificate been required, the board said, the FAA also would have had an opportunity to identify Nichols’ history of [drug- and alcohol-related traffic offenses](#). Nichols was being treated by a psychiatrist for depression and attention deficit hyperactivity disorder, and had been prescribed 13 medications.

The NTSB also concluded Nichols [should have](#) cancelled the sightseeing flight because of deteriorating weather conditions and, once in the air, should not have climbed above the clouds. His decision to then attempt to land in reduced visibility conditions diminished his ability to see and avoid obstacles. The board also called on the FAA to find better ways to provide oversight of balloon operators. “Today’s recommendations, if acted on, will help to bring the safety standards closer to those that apply to powered flight,” Sumwalt said. “Balloon pilots, their passengers, and their passengers’ loved ones deserve no less.” The abstract of the NTSB’s final report (PDF) is posted online. The complete text of the final report will be released publicly later this week. The webcast of the board meeting will be available online for 90 days.

<https://www.avweb.com/avwebflash/news/Hot-Air-Balloon-Crash-Kills-16-226723-1.html>

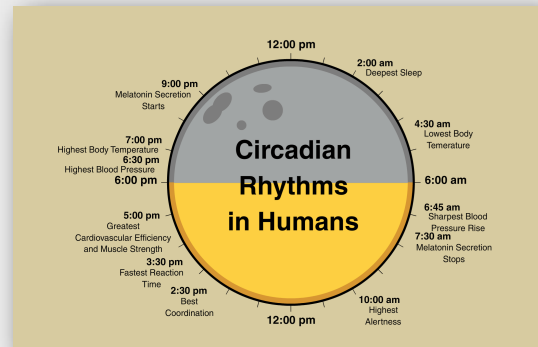
<https://www.nts.gov/news/events/Documents/2017-DCA16MA204-BMG-abstract.pdf>

<http://nts.capitolconnection.org/>

## Fruit Flies, Circadian Rhythms, and Fatigue Risk Management

Recently, it was announced that this year's Nobel Prize for Medicine was awarded to three scientists for their research on biological clocks and 24-hour circadian rhythms. Although their experiments were done on fruit flies, their discoveries are directly applicable to our understanding of how humans are affected by fatigue.

Our circadian rhythms ensure that everything in our bodies happens in a coordinated manner at just the right time. They up-regulate us during the day and make us sleepy at night. They are what make us a daytime species. Nocturnal species like bats also have circadian rhythms but they work in the opposite way. Humans are not nocturnal. It is a biological fact.



Working at night is challenging because our circadian rhythms can make us sleepy when we are on duty and need to be alert, and then promote alertness when we try to get our sleep during the day.

However, our circadian rhythms are only half the story, the other factor that contributes to fatigue is related to how much sleep we get. We all need around eight hours of sleep each day to be fully rested. Some need a little more and some a little less. Each day that we do not get the sleep that we need we build a sleep debt. When we have a sleep debt, we experience elevated fatigue and when we work at night with a sleep debt, that fatigue gets amplified by our circadian rhythm. When we are fatigued we are impaired. The more fatigue the worse the impairment. Our reactions are slowed, we experience lapses of attention, we become impulsive, we lose situational awareness, and become prone to distraction.

Fatigue is a dangerous condition in the workplace and on the commute. Fatigue has been identified as a contributing factor for accidents in transportation, industrial operations, and many other occupational settings that involve shift work, night work, crossing time zones, and restricted sleep opportunities.

[The good news](#) is that fatigue is a solvable problem. As a community we understand the biology of fatigue and its causes in occupational settings. We have developed practical approaches to monitor for and [mitigate fatigue risk](#) in the workplace. We have demonstrated that adopting fatigue risk management procedures results in fewer accidents, healthier workers, and cost savings.

We have come a long way since the first experiments were done on fruit flies to understand how our body systems maintain perfect timing. We have technologies like Fatigue Meter™ to quantify fatigue risk associated with our work schedules and tools like PVT WorkFit™ to measure the stability of our alertness and assess fitness for work.

Given that we now know where fatigue comes from, how to measure it, and how to mitigate it, [it behooves us to become proactive and manage it](#). If you are considering when is the best time for your organization to embrace fatigue risk management, sleep on it, and you will likely find that now is just the right time.

If you're having a hard time focusing on the job, the solution might be simpler than you think. Researchers have long known the negative effects of [physical clutter](#). It makes sense, when you think about it. If you have a messy desk with papers and paraphernalia strewn all over it, these distractions in your visual field can hijack you from the task at hand. A [study](#) from the Princeton Neuroscience Institute at Princeton University found that physical clutter (like desk disorganization) limits how well your brain processes information by wearing down your mental resources.

Perhaps you're leaving things out on your desk or scattered around your office because you think you'll forget about them if you file them away. There's a problem with this clutter-as-reminder strategy, though. If your mind is [pulled into thinking](#) about the various tasks symbolized by each piece of paper surrounding you, then [you're sacrificing](#) the opportunity to direct your brain's full processing power toward your most important projects.

Don't waste any more time trying to decide whether or not you should clear your office clutter – if you're reading this article, then you already know you have a clutter problem. Here are some clutter-clearing steps that can help quickly restore the [mental clarity](#) that you need to do your best work:



<https://www.ncbi.nlm.nih.gov/pubmed/21228167>

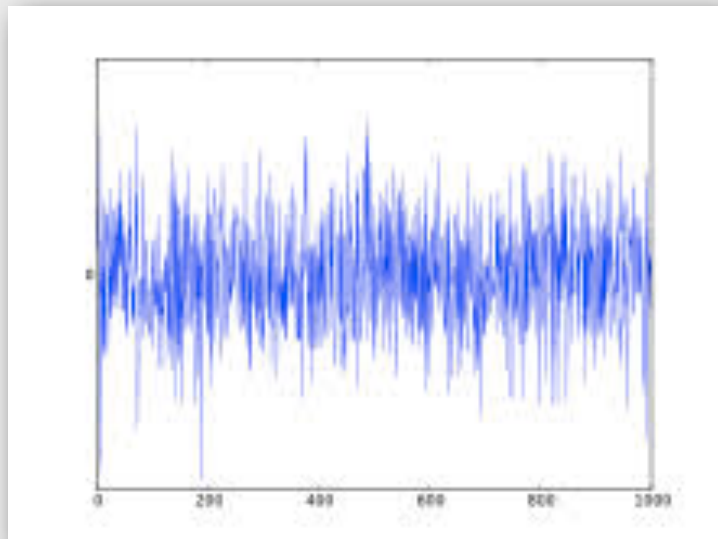
<https://money.usnews.com/money/blogs/outside-voices-careers/articles/2017-03-06/feeling-distracted-heres-how-to-stay-focused-at-work>

<https://money.usnews.com/money/blogs/outside-voices-careers/articles/2017-07-24/is-your-mindset-toxic-at-work>

## **The Best White Noise Machines to Help You Sleep Through Anything**

*Women's Health* discusses how white noise machines can help you get a proper night's sleep.

"White noise is basically a constant noise that **covers all hearable frequencies**," says Rajkumar (Raj) Dasgupta, M.D., assistant professor of clinical medicine at Keck School of Medicine at the University of Southern California. "We [often] use the terminology of 'white noise' wrong. Not everything that is labeled 'white noise' is truly white noise. People love the sound of rainfall in the background and find it soothing and peaceful—but that's not meeting the definition of white noise." Josna Adusumilli, M.D., a neurologist and sleep disorders physician at Massachusetts General Hospital, breaks it down further by explaining that white noise is random noise that's generated with snips from all frequencies (hence why that babbling brook or crackling fire doesn't count).



[Get the full story at www.womenshealthmag.com](http://www.womenshealthmag.com)

## Ergonomics and the Mature Worker

Older workers are dying on the job at a higher rate than workers overall, even though the overall rate of workplace fatalities has been decreasing.

## What's the Danger?

While many people are quite capable of working well into their 60's or longer. They are at greater risk for injury and job related illnesses **because of** reduced strength, balance, hearing, vision, and slower reaction time.



## How to Protect Yourself

Following these seven ergonomic-based tips can help mature workers stay safe and be more comfortable on the job:

1. **Arrange your workstation** to minimize the distance you need to reach for equipment or materials.
2. **Shed some light on the situation** - low lighting can lead to trips, slips and falls.
3. Reduce lifting demands on your body - use lifting devices such as carts whenever possible.
4. **Listen up** - if you have difficulty hearing what others are saying, have your hearing checked.
5. **Make a move** - if your job involves long periods of sitting, get up and stand and stretch or take a short walk at least hourly.

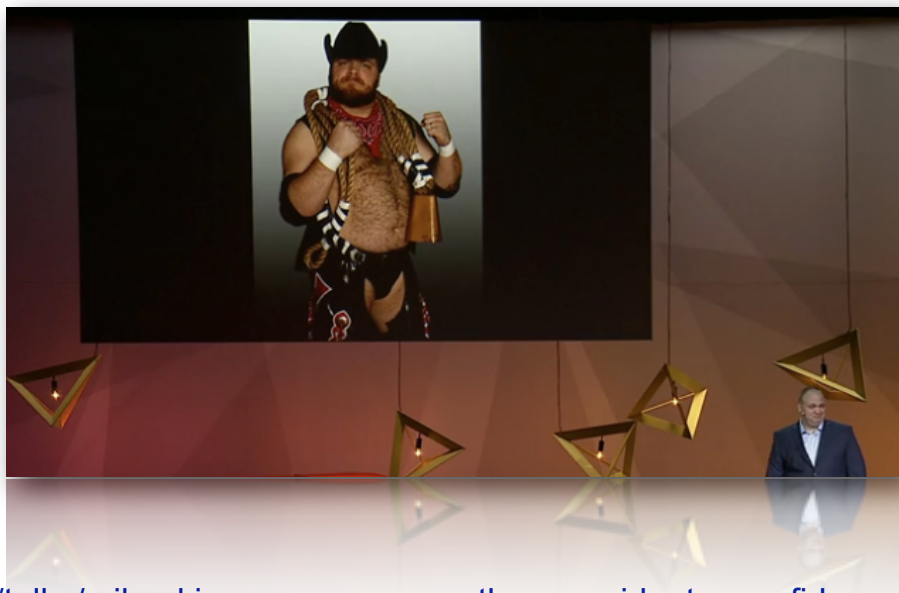
6. **Watch out** - take extra care when walking on slippery surfaces, particularly elevated slippery surfaces.
7. **Work it out** - try to get regular exercise to keep your body limber and heart strong.

### **Final Word**

Mature workers bring invaluable knowledge and experience to their jobs. Following **a few ergonomic work practices** can keep these workers safe and productive so they can continue to share that knowledge and experience.

## **TED: Ideas Worth Sharing**

You are more than you think you are, says former pro wrestler Mike Kinney -- you just have to find **what makes you unique and use it to your advantage**. For years Kinney **"turned up"** the parts of himself that made him special as he invented and perfected his wrestling persona, Cowboy Gator Magraw. In a talk equal parts funny and smart, he brings his wisdom from the ring to everyday life, sharing how we can all live more confidently and reach our full potential.



[https://  
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