

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

★Death of LAX Airport Worker
Leads to Cal/OSHA Citations

★UPS Pilots Fight FAA Regulations
After Fatigue Crash

★A "Manifesto" For Aircraft
Maintenance

★Report Issued on Indonesian
Runway Incursion

★Probe faults pilots and controller
for 2013 Alaska crash

★IG report on F-22 pilots expected
soon

★No Unemployment Pay For Gear-
Up Copilot

★Eyes Inside

★The Human Relay: Fully
Energized

★And Much More

Death of LAX Airport Worker Leads to Cal/OSHA Citations

Cal/OSHA's investigation determined that Menzies Aviation's safety policy on the operation of tow tractors in and around LAX discouraged the use of safety belts.

Cal/OSHA has fined Menzies Aviation \$77,250 for alleged safety violations after an investigation into the February death of a worker at Los Angeles International Airport. The worker was thrown from the vehicle he was operating without a seatbelt. Cal/OSHA's investigation determined that Menzies Aviation's [safety policy on the operation of tow tractors](#) in and around LAX did not require, and [in fact discouraged](#), the use of safety belts in certain areas of the airport, according to the agency. Tow tractors are used to pull luggage and cargo trailers throughout the airport.



Menzies was issued citations for one regulatory, one serious and three serious-accident-related violations of state safety standards.

"This fatality could have been prevented with [a well-thought-out and implemented safety plan](#), as is required for all worksites in California," said Christine Baker, director of the Department of Industrial Relations, which oversees Cal/OSHA.

On Feb. 21, Cesar Valenzuela, a 51-year-old ramp agent employed by Menzies, was driving a tow tractor to pick up cargo at the airport. He later was found with his head pinned underneath one of the tires.

Cal/OSHA's investigation found that [a portion of the vehicle's seatbelt was missing](#) on the tow tractor. State safety regulations require the use of a restraint system such as seatbelts when originally installed on tow tractors and industrial trucks. The employer's [vehicle inspection procedures also were inadequate](#), according to the agency.

"Employers must follow and adhere to applicable safety regulations, especially when workers are operating equipment such as tow tractors," said Acting Cal/OSHA Chief Juliann Sum.

The Cal/OSHA safety inspector investigating the accident at LAX noted that [numerous employees were observed](#) operating tow tractors without using seatbelts or other restraints. Menzies Aviation's written safety program only required workers to use seatbelts when traveling on marked roadways or vehicle service roads, not when traveling to adjacent airport gates or aircraft parking areas.

Menzies Aviation, which has its headquarters in Scotland and operates in more than 30 countries, [also inaccurately reported the fatal accident to Cal/OSHA as a heart attack](#), according to Cal/OSHA. Regulations require employers to accurately report work-related fatalities within eight hours to Cal/OSHA.

UPS Pilots Fight FAA Regulations After Fatigue Crash

One year after the fatal crash of United Parcel Service (UPS) flight 1354, UPS pilots are calling for an end to the exclusion of all-cargo airline operators from FAR Part 117 — [the new pilot rest and operating rules](#) Congress enacted to mitigate pilot fatigue. While Part 117, which became effective for cargo carriers on Jan. 4, protects commercial pilots from fatigue, all-cargo airlines are “carved-out” of the duty limits and rest requirements, leaving them susceptible to exhaustion.

UPS flight 1354 drew attention to the exclusion of all-cargo pilots when cockpit voice recorder transcripts revealed [pilot fatigue played a large role](#) in the August 14 crash. The crash occurred on approach at the Birmingham-Shuttlesworth International Airport, killing Captain Cerea Beal, Jr. and First Officer Shanda Fanning. The Independent Pilot Association (IPA) is bringing a lawsuit against the FAA in an attempt to fight the all-cargo exclusion.

"This carve-out puts our nation's entire aviation system at risk," said Jim Hall, former chairman of the National Transportation Safety Board. "A tired pilot is a tired pilot, [regardless](#) of the plane he or she may be flying.



By excluding cargo pilots from Part 117, the [FAA](#) is failing to adhere to its mission of making safety the first priority in aviation. If the FAA believes even one life lost in an accident is too many, the principle should also apply to cargo pilots."

A "Manifesto" For Aircraft Maintenance

Mike Busch, master aircraft mechanic and CEO of Savvy Aircraft Maintenance Management, introduced his first book during a forum at EAA AirVenture recently. "[Manifesto: A Revolutionary Approach to General Aviation Maintenance](#)" sets forth Busch's minimalist, reliability-centered, cost-efficient philosophy of aircraft maintenance and ownership honed over 40 years of experience as an aircraft owner, maintenance consultant and owner advocate. "Maintenance of owner-flown GA aircraft is still done largely the same as it was done in the 1950s and 1960s," writes Busch in the book's prologue. "My goal is to help drag it -- kicking and screaming -- [into the 21st century](#)." The book is for sale on Amazon. Busch also said he is working on ways to use the data aggregated over the last two years from more than 600,000 flights by more than 4,500 aircraft enrolled in his [Savvy Analysis](#) program. "We have created a 'skunk works' team to research and exploit the many ways this information can be used to provide useful guidance to pilots, aircraft owners, mechanics, manufacturers, aviation safety agencies and the GA community," he said at the forum. "Never in the history of GA has this much real-world operating data been aggregated in one place. Just imagine the possibilities of how this data could be used! That's exactly what our skunk works team is doing! [Stay tuned](#)."



Report Issued on Indonesian Runway Incursion

The pilots of an Air Asia Airbus A320 and air traffic controllers at Yogyakarta Adisutjipto Airport in south central Indonesia [apparently became confused](#) about what was expected of them on November 20 last year.

The confusion began when the Air Asia crew called for taxi instructions at 00:36 local. “The aircraft was cleared to taxi to the Runway 27 holding area via November Two (N2) by an Adi Tower controller. The pilot confirmed the instructions via N2, but asked to use taxiway November Three (N3),” said Indonesia’s National Transportation Safety Committee in a final report published last week. The Adi Tower controller reconfirmed N2, **but for some reason** the pilot thought that they were approved to use taxiway N3, which brought them close to the Runway 27 threshold. Just before entering the active runway, the PIC noticed an aircraft on final approach and immediately stopped the aircraft. The tower controller tried to halt the aircraft at about the same time, but the nose of the Airbus still ended up **53 feet past the hold-short lines**.



The aircraft on final was a PT-Batik Boeing 737 still talking to the approach controller, who for reasons not specified cleared the aircraft to land instead of handing the flight to the tower frequency for that approval. **This made it impossible** for the tower controller to order the Boeing crew to execute a go-around.

The Boeing pilot landed and applied maximum braking and full reverse thrust when he apparently saw the Airbus. The aircraft came to a stop 300 feet short of the Airbus.

http://asndata.aviation-safety.net/reports/Indonesia/20131120_A320_PK-AXG_B739_PK-LBH.pdf

Probe faults pilots and controller for 2013 Alaska crash

A cargo plane's crash into a mountainside in southwest Alaska last year was caused by **failure to maintain a safe altitude**, which was the fault of an air traffic controller and the two pilots who died in the accident, federal regulators said on Monday.

The Alaska Central Express Air Cargo crashed on March 8, 2013, after striking a "rock outcrop protruding from the snow" outside Dillingham, the plane's destination, according to the National Transportation Safety Board.

The crash took the lives of pilot Jeff Day, 38, and his co-pilot, 21-year-old Neil Jensen. During stormy weather near Dillingham, Day asked to enter a holding pattern so he could switch to another radio channel and check on runway conditions.



The plane, however, held at an altitude of 2,000 feet, rather than the required 5,400 feet, [something the crew should have known](#), the report said.

"Such a lack of awareness is inconsistent with pilot-in-command responsibilities and company procedures ... during the descent and approach phases of flight," the NTSB report said.

Meanwhile, the air traffic controller's instructions were ["ambiguous,"](#) the report said, and failed to specify what segment of the approach could be done at 2,000 feet.

"(The controller) [did not appropriately monitor](#) the flight's progress and intervene when the airplane descended to 2,000 feet," the report said.

"As a result, the airplane was permitted to descend below the minimum instrument altitudes applicable to the route of flight and enter the holding pattern well below the published minimum holding altitude."

The report notes that the aircraft, a Beech 1900C, had several pieces of navigation equipment that can produce visual and aural terrain warnings. Damage from the crash, however, prevented NTSB inspectors from testing the equipment or determining its settings prior to the crash, it added.

Day had been captain of the Beech 1900 for nearly 18 months, having been with the company for nearly five years, accumulating more than 5,400 hours in the aircraft. Jensen had been with the company four months, racking up 250 hours in that plane.

IG report on F-22 pilots expected soon

The Defense Department inspector general is set to complete its report on two F-22 pilots [who spoke out more than two years ago](#) about oxygen problems with the jet.

Following pressure from Rep. Adam Kinzinger, R-Ill., and Sen. Mark Warner, D-Va., the Pentagon told the lawmakers the report should be finished this month, though Kinzinger told Air Force Times he wants it sooner.



The Virginia Air National Guard pilots, Capt. Joshua Wilson and Maj. Jeremy Gordon, lost flight pay and have been assigned to desk jobs since they appeared on ["60 Minutes"](#) in May 2012. They said they were afraid to fly the F-22 because of concerns that something in the plane was causing pilots to become disoriented or nauseous during flight.

The Air Force grounded the F-22 from May 2011 to September 2011 because of pilots' complaints of hypoxia during flight. Since the grounding, [11 pilots and five maintainers have complained of similar symptoms](#). Wilson and Gordon complained after the Air Force returned the F-22 to flight. They said at the time that pilots remained concerned for their safety.

In July 2012, the Air Force said it had identified the cause of the problem: a malfunctioning valve on the pilot's Combat Edge life support vest, which was [improperly tightening and constricting breathing](#). The problem has been fixed, and the Air Force is also on track to install an automatic backup oxygen system by April 2015.

In May, Kinzinger and Warner called on the Pentagon to finish the report on the two pilots, and reminded the Defense Department that the pilots are protected from retaliation by the Military Whistleblower Protection Act. Kinzinger said he and Warner will take action if there is evidence that the pilots were reprimanded.

No Unemployment Pay For Gear-Up Copilot

Is a copilot who failed to catch the fact that the captain forgot to lower the landing gear deserving of unemployment benefits? One Iowa judge said yes, but the state's Employment Appeal Board said no. Donald G. Scarsella "knew what to do, was trained on what to do, was able to do it, was required by policy and safety to do it every time, and still did not do it," the Board ruled last week, according to the [Des Moines Register](#). On Feb. 14, Scarsella, 49, was the second in command of a SeaPort Airlines Pilatus PC-12 on a flight from Kansas City, Missouri to Salina, Kansas. The crew did not extend the gear prior to and the airplane slid to a stop. No one was injured—which is typical of inadvertent gear-up landings in civilian airplanes. However, the Appeal Board's opinion was that ["This is more than merely making some mistakes."](#)



It was claimed that the incident (a gear-up landing is generally not considered an accident under the definition of an accident in the National Transportation Safety Board Regulations, 49 CFR 830) cost Scarsella's employer \$1.2 million. There were no passengers aboard. Both pilots were immediately fired by SeaPort Airlines. Scarsella filed for unemployment benefits with the Iowa Workforce Development. A fact-finder at the agency initially awarded him benefits, but SeaPort challenged that decision, which led to a formal hearing in June. Administrative Law Judge Susan Ackerman heard testimony in the case and ultimately ruled in Scarsella's favor, [noting that a single act of negligence is not enough to disqualify](#) a person from receiving unemployment benefits unless there is a deliberate disregard for the employer's interests. On appeal, the three-member Employment Appeal Board of Iowa reversed the finding, ruling two to one in favor of the airline.

Eyes Inside

Looking at a panel full of instruments is like looking at the heartbeat of your aircraft. Thinking back to primary flight training brings up basic images of how they work, such as the altimeter with its expandable bellows that moves a dial;

systems that monitor and report its condition. Designing the indicating systems of today's airplanes and helicopters is a challenge to a host of engineering disciplines. Pilots are only as good as the decisions they make. Since many of those decisions are based on information presented, it must be accurately gathered, presented in a clear and timely manner, and readily accessible. Too much information will overload our own CPU, and too little deprives us of critical information. **Either way, errors follow.** Although the vast majority of cockpit indicators are digital electronics working at the speed of light, there still exists a measurable amount of time that passes before signals are processed and displays present their information. This is called latency, and is a very important aspect of system design. This delay in signal processing must be taken into account. Add this to the time it takes for a pilot to perceive, process, and react to the info presented, and the total delay grows. This is especially critical when designing an IFR-certified aircraft, since there will often be a lack of outside visual information to provide the aircraft's state to the pilot. The delay in receiving and reacting to an indication **has the potential to cause issues** with handling qualities such as a pilot-induced oscillation.

[illegible]

Human factors exist in every aspect of aviation, and instrument design is no different. Digital electronics allow infinite ways to display information. With this in mind, it is important for displays to be intuitive and clear. An increasing value displayed on a gauge that moves in a decreasing fashion is counter-intuitive and can lead to confusion.

The ability of modern electronics to be able to display hundreds of parameters creates a dilemma when deciding what is important enough to show the pilot. Sometimes the system allows the pilot to choose what is displayed on the panel. This can help to reduce clutter, but has the potential to increase workload, since the pilot must now remember what is not displayed and how to obtain it if needed. Getting “cognitively lost” in a computerized menu system while trying to maintain situational awareness has caused accidents. Some indicators incorporate a “display by exception,” where a minimum amount of info is displayed when conditions are in a normal range, but when conditions are exceeded, the display will then present the information that is out of limits.

Having one indicator that monitors many parameters and concisely presents the info greatly reduces pilot workload. But when needles start splitting and lights start flashing, the info being displayed must be quickly interpreted. Size, color, symbology, location, and trending must be thought out so pilots can make well-informed decisions. Although the robustness of today’s digital equipment has greatly improved, the idea of redundancy cannot be overlooked. No critical display should ever provide a single point of failure in the system. The displays must serve the pilot, not the other way around.

Take the time to truly understand the information that is presented to you by your instruments, in both normal and failure modes. An emergency is no time to start digging through a manual.

The Human Relay: Fully Energized

It seemed like just another routine U.S. Navy avionics-maintenance task: Aircraft 501, an EA-6B Prowler, required a new left DC hold-relay. The old one had been cannibalized from another aircraft. An AE2 and an AE3 checked out their tools and manuals, placed a MAF in work, and proceeded to the hangar to install the new relay.

They ensured power was secured and then completed the installation in

accordance with the MIM. With the hard part out of the way, it was time to ensure everything was operational. The MIM calls for an electrical power test-set (AN/ASM-439). This, however, requires a low-power turn, which wasn't feasible because 501 was in the hangar for a special inspection. Instead, the two AEs opted to manually energize the relay and check the connections.

[This procedure isn't in the manual](#), and therefore is not an authorized method of testing the relay.

They applied ground power to the jet. Then, with meter in hand, the AE3 began reading for power at all the relay terminals. Unfortunately for him, this meant sticking his hand next to [a nest of wires and terminal lugs](#). As he reached into the panel to read for power, he brushed up against a live wire, which jolted him immediately with a painful shock. The two secured power quickly and went back to the shop.



He felt okay at first, but after a mere ten minutes, his arms felt numb and he developed a severe headache. He was taken to medical and given an EKG, medication, and a day of SIQ.

This incident was minor, but the consequences easily could have been far worse: he could have been knocked unconscious by the shock and thrown from the top of the aircraft. Since the incident, [the AE3 has educated the squadron on electrical safety](#), ORM, and the importance of strict adherence to maintenance procedures. As a result of this incident, the squadron implemented [an additional control](#), wearing insulated gloves, when working around power.

33 Men: Inside the Miraculous Survival and Dramatic Rescue of the Chilean Miners

The dramatic story of 33 trapped Chilean miners captivated the world for more than two months in the summer of 2010,

but Dante himself could not have conjured a ring of hell like the one British journalist Franklin describes in his fascinating account of the miners' ordeal.

Sealed a half-mile underground after a 700,000-ton piece of earth collapsed at notoriously unsafe San Jose mine in Copiapo, Chile, the miners endured 17 days in darkness, 90 degree heat and 95% humidity, ingesting just a single spoonful of rationed tuna every two days, and metallic, oil-laden water from an underground tank before rescue workers miraculously made contact. With a narrow shoot in place, through which supplies could be delivered, the next 50 days became a test of human endurance unparalleled in modern history. Physically, the men endured only minor ailments: an infected tooth, fungal infections caused by the subterranean environment, but, overall, they stayed remarkably healthy in a situation where even a mild case of diarrhea could have proven fatal. Their psychological health, however, was more tenuous.



Toxic Talent Management Habits

All organizations have problems, **and they always involve people**. Indeed, talent management issues are a major cause of organizational underperformance. For example, a recent report by Deloitte, based on data from over 2,500 business and HR leaders from 90+ countries, shows that employers around the world are **poorly prepared to tackle key human capital challenges**, such as “leadership, retention and engagement, the re-skilling of HR, and talent acquisition.” There are five specific bad talent habits seen over and over again. They all threaten the effectiveness of the modern organization. 1) **Being unaware of one’s actual company culture**: Senior managers, executives and founders often agree in their evaluations of the organizational culture. Unfortunately, these views bear little resemblance to how most employees see the culture.



Viewed from the top, culture looks a lot like the PR blurbs found in company websites: “We are passionate believers in diversity, innovation, and corporate social responsibility.” Viewed from the bottom – when the values of an organization are crowd sourced by surveying most employees – organizations look rather different; that is, not so great. Open-source websites, such as Glassdoor, which record employees’ experience of their working environment, provide a much needed reality check for self-deceived leaders.

2) Confusing employee engagement with happiness: Although employee engagement deserves all the attention in the world, the concept has been hijacked by the self-help industry, who equate it with happiness. However, the main purpose of work is not to make people happy, but productive. And engagement matters precisely because of its connections with productivity, which are twofold: first, engaged employees feel more energized and see work in a more meaningful manner, which makes them more productive; second, when employees are given the opportunity to be productive, they are proud of their achievements, which, in turn, boosts their engagement levels. Notice that happiness can be left out of the equation here. In fact, many employees are engaged and productive without being happy; and it is equally feasible for employees to be happy without being engaged or productive. In short, managers should try to create meaningful challenges for their employees, instead of worrying about their happiness levels.

3) Ignoring the toxic effect of office politics: All organizations are political, but most underestimate (a) just how political they are, and (b) the degree to which politics eclipses smart and rational decisions. For decades, psychologists have been studying office politics – defined as those informal, illegitimate, and largely invisible forces of influence intended to maximize the self-interest of certain individuals at the expense of the organization’s interest. These studies provide compelling evidence for the adverse effects of politics on employees’ productivity and wellbeing. Most notably, perceptions of office politics have been linked to higher levels of stress, turnover intentions, and burnout, as well as lower levels of job satisfaction and employee engagement. Most of these associations are found across different job sectors, age groups and cultures, which makes organizational politics a global epidemic.

4) Misunderstanding leadership: Few topics are more widely discussed (and researched!) than leadership. However, popular views on leadership are out-of-sync with the science of leadership, and HR professionals are much more influenced by the former than the latter. As a result, there is a big difference between what organizations actually do about leadership, and what they should do. For instance, most managers – and this is also true for senior leaders – are selected for either technical expertise or personal charisma, when the quality that really matters most is their ability to build and engage teams.

To make matters worse, charismatic leaders are often too narcissistic to put the interests of their teams and the organization above their own interests.

[As a result](#), good leadership is rare; and managerial incompetence is the norm. Consider the following facts: (a) the average CEO is on the job for only 18 months; (b) disengagement is a global epidemic (with as many as 70% of employees reportedly not engaged); (c) the top causes of disengagement and most widely-cited reasons underlying turnover intentions all have to do with people's direct manager; (d) self-employment rates have been rising steadily, mostly because people are fed up with poor management. As a Harvard University poll recently demonstrated, 70% of Americans believe there is a national crisis in leadership, and yet spending on leadership development programs has doubled in the past two decades (to \$14 billion). It is time for organizations to select and develop people with actual leadership potential, as opposed to picking individuals who are good at navigating the corporate landscape, advancing their own career and self-interests, or fitting the popular stereotype of charismatic and Machiavellian leaders.

[5\) Relying on intuition instead of data](#): This is arguably the deadliest of all talent management sins, because it underlies the previous four points. How can you properly manage talent if you don't know how talented your employees are? Despite the wealth of data and evidence available on leadership, management, and organizational effectiveness, most organizations play it by ear, and make promotion and hiring decisions based solely on the intuition of their leaders, board members, and managers. Although reasoning biases are universal to all human beings, they are particularly pronounced in managers, not least because they tend to be more overconfident than the average person. Allowing intuition to proliferate unchecked by metrics allows prejudices of all types to flourish while undermining true talent.

To be sure, intuition does sometimes work, but only when it is grounded in expertise. The issue, then, is not to completely eliminate intuition, but to align it with facts and reason in order to make intuitive decisions more effective than they are for the average novice.

In short, to the extent that organizations are able to accurately evaluate their culture, energize their staff, minimize the influence of office politics, and properly assess leadership potential, they will be more likely to outperform their competitors. And the best way to achieve that is not by trusting their leaders' gut feeling, [but by following a rational, data-driven, and scientifically informed approach](#). The good news? All of these bad habits are self-inflicted wounds.

http://www.deloitte.com/view/en_US/us/Services/consulting/human-capital/human-capital-trends/index.htm

<http://connection.ebscohost.com/c/articles/31206899/perceptions-organizational-politics-meta-analysis-outcomes>

<http://www.clomedia.com/articles/5650-the-problem-with-leadership-development>

Culture Change: Aviation Safety in Healthcare Across Air Force

The Air Combat Command Surgeon General's office pioneered a program bringing **operational risk management and flightline safety procedures** into hospitals and dental squadrons across the Air Force.

Brig. Gen. Daniel Wyman, the Air Combat Command Surgeon General and a team of ACC aerospace physiologists, well-versed in operational risk management and medical risks of flight procedures, have introduced flightline processes that will unify procedures inside Air Force operating rooms across the globe. "We are setting up our operating rooms to a single standard," Wyman said. "In hospitals, you might go to two different operating rooms and experience two different ways of doing things. Our goal is for any doctor, or any surgical technician, to PCS from one base to another and be able to jump right in."

The program focuses on **several key concepts of aviation safety** including standardization, team-based accountability, and mishap investigations. The concepts are being adapted from the principles of operational risk management. This enables Air Force members in the medical field to determine the best course of action for any given situation.

The goals of the enhancements are to preserve patient health and enhance mission effectiveness at all levels while preserving assets.

The procedures also aim to minimize the risks that come with working in medical facilities that judiciously use the best current evidence in making decisions about the care of individual patients **to prevent mistakes or infections**.



"There is always a risk for infection, whether it be after surgery or something as simple as placing an IV," Wyman said. "By providing step-by-step standards on how to perform a task, we can be sure it is being done in a way that prevents infection."

Another aspect of the program is team-based accountability. At any time during a procedure, team members are [encouraged and expected to speak up](#) if something is wrong. TeamSTEPPS, which stands for Team Strategies and Tools to Enhance Performance and Patient Safety, enhances attitudes toward teamwork, develops participant knowledge about effective team practice, and improves team skills within the unit.

"By utilizing programs like TeamSTEPPS, we are [slowly building a culture](#) to change behavior with a new emphasis on team dynamics," said Lt. Col. Thomas Massa, the Headquarters ACC Surgeon General aerospace physiologist. "Every member of the team [is empowered](#) to speak up and say 'Hold on, we are doing this wrong.'"

Communication is encouraged among the team so Airmen know their roles and the roles of others going into a procedure. If everybody knows the plan, Massa said, "Everyone will know if it goes awry."

Medical investigations will now focus on [a lessons learned approach](#) for correcting future mistakes instead of levying punishments for human errors.

"We don't want our Airmen to be afraid to tell us what went wrong," Wyman said. "At the end of the day, we just want to know what happened so we can fix it."

Joint Base Langley-Eustis, Virginia, was the test bed for the programs, which all fall under the umbrella of a culture change, Wyman said. The results were briefed to Air Force Medical Operations Agency, which then set the procedures in place Air Force-wide.

Alcohol and fatigue

Many people think that a little nightcap will help them sleep soundly through the night. Although alcohol's sedative effects can make you drowsy, they also have other effects that can interfere with quality sleep.

Several hours after that nightcap, the alcohol [raises the body's level of epinephrine](#), a stress hormone that increases the heart rate and generally stimulates the body, which can result in nighttime awakenings. Indeed, alcohol may account for 10% of cases of persistent insomnia.

Alcohol also relaxes throat muscles, and this relaxation can worsen sleep-related breathing problems and contribute to sleep apnea. What's more, alcohol may increase the need to urinate during the night — just another way in which it can disrupt sleep. Alcohol's sedative quality can rob you of energy in another way. Drinking wine, beer, or hard liquor during the day can make you feel drowsy or lethargic. If you didn't sleep well the night before, even one drink can make you drowsy, especially if you drink during one of your usual low-energy times — for example, mid-afternoon or late evening.



[One beverage that can boost your energy](#) is plain old water. One of the first signs of being short on fluids is a feeling of fatigue and weakness. Approximately 50% to 60% of your body weight is water, and you are constantly losing water through urine, sweat, and breathing. This water needs to be replenished. Consuming a sufficient amount of fluids in beverages and water-filled foods (such as fruits, vegetables, and soup) will help you maintain your energy.

To learn more about an energy-boosting lifestyle, buy [Boosting Your Energy](#), a Special Health Report from Harvard Medical School.

Do Tell the Boss: Japanese Workers Encouraged to Sleep on the Job

Inemuri - or 'sleeping while present' - seen as sign of hard work rather than indolence

"If I use a calculator when I'm sleepy, I have [to double-check my work](#) for fear of making mistakes, so it takes longer," Ikuko Yamada, who works in accounts, told the Yomiuri Shimbun newspaper. "[I think my work performance has improved since I started taking naps.](#)"

Hugo Inc, an internet consulting company based in Osaka, has a more flexible approach: employees can take a 30-minute siesta any time between 1pm and 4pm.



It's a daily struggle known to office workers the world over: a productive morning rewarded with a decent lunch, and then, [at about 3pm, the leaden eyelids and urge to snatch 40 winks](#). In Japan, where workers [get less sleep on work nights than those in other countries](#), more and more companies are encouraging employees to sleep on the job, [convinced](#) that it leads to better work performance.

,Okuta, a home renovation firm near Tokyo, allows its employees to take a 20-minute power nap at their desks or in the staff lounge. Introduced two years ago on the orders of the firm's chairman, Isamu Okuta, it has proved a huge hit.

Japan's legions of salaried workers have more reason than most to give in to the urge for an afternoon nap. According to the US National Sleep Foundation's poll of sleeping habits around the world, Japanese workers sleep, on average, for just [six hours 22 minutes on work nights](#) - less than those in any other country.

Not surprisingly, only 54 per cent of Japanese respondents to the "bedroom poll" felt they got a good night's sleep every or almost every night. Only 8 per cent managed more than eight hours. Workers in the UK get only 27 minutes more, at six hours 49 minutes, but Canadians, Mexicans and Germans all regularly achieve more than seven hours sleep, according to the poll.

In Japan *inemuri* - or ["sleeping while present"](#) - is considered the preserve of employees exhausted by their commitment to hard work, [rather than a sign of indolence](#). Exponents of *inemuri*, however, generally have to remain upright to avoid appearing slovenly.

Japan's new approach is less about saving face than burying it in a plump pillow. The sanctioned siesta has [spawned an industry](#) in daytime sleep services.

At Gmo Internet, an IT firm in Tokyo, employees have sofas to curl up on, while workers in the Umeda business district of Osaka can go off-site to a nearby public napping facility with beds.

Tokyo's Ohirune Cafe Corne has eight beds for working women who want to sleep in partitioned comfort, soothed by the scent of essential oils. It charges 160 yen for every 10 minutes - and a pair of pajamas for 100 yen - and clients stay for almost an hour on average, according to the Asahi Shimbun.

Japan's growing tolerance for undisguised dozing during office hours comes after the government issued [new guidelines on the importance of sleep](#), with the health ministry recommending that all working-age people take a nap of up to 30 minutes in the early afternoon.

Canopy for Aircraft Maintenance

The CAM is All Metal's innovative approach to providing a solution for aircraft and mechanic [protection in adverse weather](#). It is a multi-sectional cover that utilizes the main rotor system of a helicopter to secure protection from the elements providing a shaded environment for maintenance to be performed on the aircraft. The CAM is easily installed and removed [by one mechanic](#) and provides protection from inclement weather conditions to allow for maintenance to be performed safely and efficiently in a field or flight line environment.



For more information visit www.allmetalms.com.

Daredevil couple cheats death together

A life of love, trust and risk...

When it comes to heart-stopping stunts, few people can top what Rex and Melissa Pemberton do for a living. Rex jumps out of airplanes and "flies" in a wingsuit at speeds of up to 130 mph, while Melissa, an acrobatic pilot, flies a plane in circles around him. Serena Altschul profiles their death-defying love affair.



<http://www.cbsnews.com/videos/daredevil-couple-cheats-death-together/>