Aviation Human Factors Industry News

Volume X. Issue 07, April 06, 2014

Charles E. Taylor
WRIGHT BROTHERS
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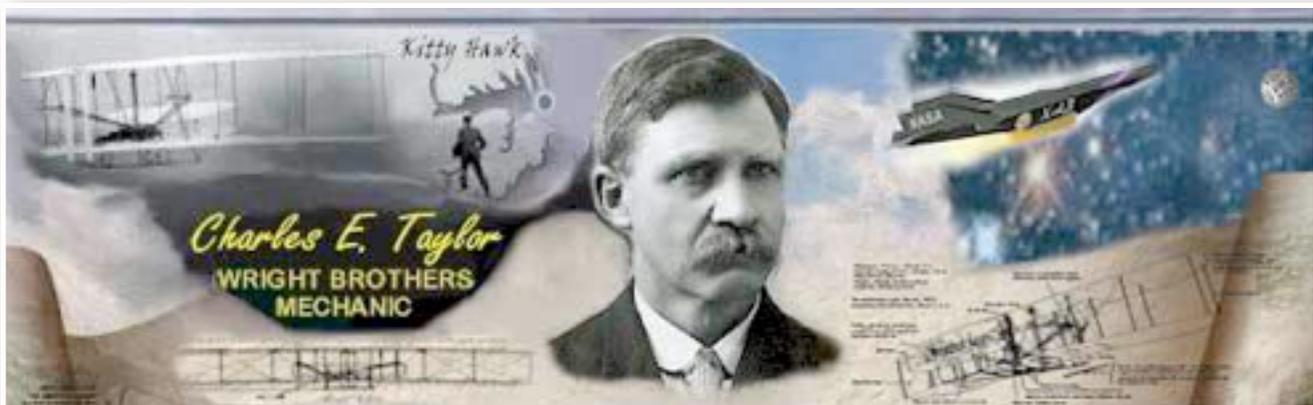
From the sands of Kitty Hawk, the tradition lives on.

Hello all,
To subscribe send an email to: rhughes@humanfactorsedu.com
In this weeks edition of *Aviation Human Factors Industry News* you will read the following stories:

★IATA releases 2013 safety performance - encouraging signs for African safety

★MH370 tragedy shows no lesson learnt after Air France crash, says portal

★Crash of USAir Flight 5050: One Unidentified Passenger's Story

★NTSB issues safety alert for pilots after recent plane landings at wrong Midwest airport

★Southwest Wrong Airport Tower Tapes Released

★FAA introduces new clearance terminology

★FAA raises concerns about safety data sharing, pilot training

★NTSB Training Center Offers New Helicopter Accident Investigation Course

★And Much More

IATA releases 2013 safety performance - encouraging signs for African safety

The International Air Transport Association (IATA) has released its 2013 commercial aviation safety performance report. There were 210 fatalities from commercial aviation accidents in 2013, reduced from 414 in 2012. The 2013 global Western-built jet accident rate (measured in hull losses per million flights of Western-built jets) was 0.41, the equivalent of one accident for every 2.4 million flights. This was a step back from 2012 when the global Western-built jet accident rate stood at 0.21 - the lowest in aviation history.

"Safety is our highest priority. The aviation industry is united in its commitment to ensure continuous safety improvement. Importantly, that commitment has made flying ever safer. Accidents, however rare, do happen. We release this data as the world continues to focus on the search effort for MH370," said Tony Tyler, IATA Director General and CEO.

full analysis

MH370 tragedy shows no lesson learnt after Air France crash, says portal

Lack of public pressure has been cited as one reason why the aviation industry has been reluctant to install additional features in aircraft to supplement the duties of the black box, or flight data recorders, a US news portal reported today.

"There is actually more pressure to equip cabins with entertainment systems and cell phone connections which will generate new profit centers for airlines," said The Daily Beast.

In the aftermath of the Air France crash in the Atlantic Ocean in 2009, French investigators began examining technology.

"The purpose was to allow an aircraft to continually transmit in real time the same data and behavior recorded by the black boxes," The Daily Beast said, adding that accidents were simulated in 597 locations around the world from previously gathered data that represented realistic scenarios.In these simulations, data was streamed from the airplane to satellites and then to ground bases right up to the moment of failure.

"The results were astonishing as in 85% of the cases, the streamed information would have provided investigators with as much knowledge as was stored in the black box," the report said.

The Daily Beast pointed out that the Air France crash of 2009 should have been a wake-up call for the aviation industry, yet no action was taken to equip aircraft with the technology developed in its wake.

It said the aviation industry either relied on the fact that concerns over flight 447 began to slowly fade away, or argued that the technology was not ready or too costly.

"Aviation safety experts are in no doubt that eventually every aircraft should have this system, but how long is 'eventually', given the reluctance of manufacturers, airlines and regulators?" asked the portal

In the wake of the saga of the missing Malaysia Airlines flight MH370, it was reported that the airline opted out of a simple computer upgrade that costs RM33 per flight, which would have provided critical information to help find the flight.

The Daily Beast said that flight MH370 did not go missing, but what did was the ability to see it.

"Every airplane crash is a teachable moment," The Daily Beast said.

It said aviation safety is built on a process, carried out over many decades, of detecting, understanding, and learning from the causes of accidents.

This way, investigators in the US and Europe succeeded in eliminating many serious flaws, mechanical and human.

"And so now we need to remember a very wise maxim: A teachable moment only has value if you are willing to be taught," The Daily Beast said.

Crash of USAir Flight 5050: One Unidentified Passenger's Story by John Goglia

I was recently reminded of the USAir 5050 accident at La Guardia Airport back on September 20, 1989 by all the coverage of the Malaysia Air Flight 370. As many of you probably remember, the Boeing 737 ran off the runway at LGA, impaling itself on pilings in Flushing Bay after an aborted take-off on a rain-slicked runway. Two passengers were killed and dozens injured. What reminded me of this accident was all the media attention focused on two passengers traveling with stolen passports on the ill-fated Malaysia Air Flight 370. Many have raised concerns about how this could happen in a post-9/11 world. When Interpol checked the flight's passenger manifest against its database, it knew in mere seconds that two of the passports had been reported stolen – one a year before and the other more than two years. Even the head of Interpol was at a loss to explain why most countries are not taking advantage of this database to check for stolen passports before allowing passengers to board, since it takes seconds and the costs are minimal.

I don't understand why this isn't routinely done outside the US but I do know that even in the US, back before 9/11 made checking passenger identities much more critical, it was not unusual for crash investigators to come up with passenger lists that contained one or more passengers that could not be identified by the names they used to purchase tickets. The USAir 5050 stands out in my mind because of my personal involvement with the accident investigation. At the time, I led the IAM's accident investigation team on that crash. The IAM represented – and still represents – USAir's mechanics.

One of the first things that is done after a crash, especially a survivable one, is to immediately attempt to account for all the passengers to ensure that none are trapped in the wreckage or, in this case, in the water. Almost immediately, we learned that one passenger was unaccounted for and we feared he might still be in the wreckage or somewhere in Flushing Bay.

With the Port Authority police's help, a cab driver was tracked down who stated that he had picked up a soaking wet passenger at La Guardia's Marine Air terminal and driven him a short distance where the passenger had gotten out and hailed another cab.

The passenger's behavior certainly raised some eyebrows but the effects of shock are often unpredictable so it wasn't until we were able to go through the carry-on bags that his disappearance from the scene began to make more sense. Normally, the passenger cabin bags are gone through as soon as possible after a crash but with USAir Flight 5050 perched precariously on pilings, we had to wait a couple of days for the aircraft to be moved.

Once the aircraft was removed from the pilings and placed on terra firma, investigators were finally able to go through the bags. One particular bag – a rather large duffel bag – suddenly clarified the mysterious disappearance of the sopping wet passenger. Mixed in with clothing and toiletries, investigators found large plastic bags containing a white powdery substance. Suddenly, the passenger's rush to get away, soaking wet made a lot of sense.

Moral of the Story: Terrorists are not the only criminals who travel when they can on passenger airlines.

NTSB issues safety alert for pilots after recent plane landings at wrong Midwest airports

A federal agency overseeing transportation safety is warning pilots to take extra precautions after a pair of recent plane landings at the wrong Midwest airports.

The National Transportation Safety Board issued the alert Wednesday, about months after a Southwest Airlines Boeing 737 jet with 124 passengers mistakenly landed at a small airport in southwest Missouri intended for light jets and private planes, rather than at the commercial airport several miles away in Branson.

The Southwest pilots, who remain on paid leave, landed at night by sight instead of using instruments to guide their approach. No was injured, but passengers smelled burning rubber as the pilots braked hard to stop near the end of the shorter runway, just before a steep drop into a ravine.

In November 2013, an Atlas Air cargo plane headed from New York for a U.S. Air Force base near Wichita, Kansas, instead landed 12 miles away at an airstrip with a runway half the size. That wrong landing also took place at night — a particular risk factor cited by the safety alert, as pilots react to the runway lights of the first airport they see during descent.

Government safety data and news reports reviewed by The Associated Press shows that at least 150 flights made such mistakes over the past two decades. Thirty-five of those cases involved wrong landings, with the other 115 cases consisting of aborted landing attempts or erroneous approaches. The actual number of wrong landings is likely higher.

"It's a reminder about how important it is to be vigilant about these procedures," said NTSB spokesman Peter Knudson. "They could have had far worse outcomes."

The safety board has issued 22 aviation safety alerts since 2006 on topics ranging from child passenger safety to handling icy wings before takeoff.

"They needed to do something," said Michael Barr, a former Air Force pilot who teaches aviation safety at the University of Southern California. "It looks like a very diplomatic way for them to put pilots on notice to do the job they were trained for."

In addition to possibly having to land on shorter runways, pilots in such instances risk collisions with construction vehicles or midair collisions with departing planes that don't expect the airspace intrusion, Barr said.

Southwest Wrong Airport Tower Tapes Released

After an open records request by NBC5 in Dallas, the FAA released recordings of the radio exchange after a Southwest Airlines 737 landed at the wrong Missouri airport last Jan. 12. As might be expected there was initial confusion on both ends of the conversation between a pilot sitting near the end of a runway at Graham Clark Downtown Airport in Hollister, Mo., about seven miles from his destination of Branson, and the tower controller there.

"I assume I'm not at your airport," the pilot said to the controller after stopping a few hundred feet from the end of the shorter, narrower runway (3738 X 100 ft.) at Graham Clark. "Southwest 4013, have you landed?" the controller then asked and the reply from the pilot, after a slight delay was: "Yeah."

The controller then called Springfield Approach, which was handling the aircraft at the time, and reported the incident. "Are you kidding?" the Springfield controller asked. Branson was an intermediate stop for the flight that originated at Chicago Midway and was to carry on to Dallas's Love Field. Instead, the Branson-bound passengers went the final seven miles by bus and Southwest had to send another plane to pick up those headed to Dallas. Another crew took off the empty 737 from Graham Clark the next day. Both pilots of the ill-fated flight remain on paid leave while the investigation continues.

http://www.nbcdfw.com/news/local/Recordings-Show-Confusion-As-Southwest-Jet-Lands-at-Wrong-Airport-251609951.html

FAA introduces new clearance terminology

New IFR communication for instrument procedures.The FAA is notifying pilots of new and modified phraseology to be used by controllers and pilots for standard terminal arrivals (STARs) and standard instrument departures (SIDs) starting April 3, including a requirement for pilots to read back the specified clearances verbatim. In an Information for Operators (InFo) message posted on its website, the FAA introduced the abbreviated-clearance phrase "climb via" for departure procedures and operations. The new phraseology is "consistent with existing 'descend via' phraseology and procedures in FAA Order 7110.65U," it said.

The phrase "climb via" is "an abbreviated ATC clearance that requires compliance with the procedure lateral path, associated speed restrictions, and altitude restrictions along the cleared route or procedure." Both terms have been added to the Pilot/Controller Glossary, effective April 3, along with related phraseology concerning speed adjustments.

Pilots should respond to the clearances "by repeating the clearance verbatim." Other responses "are not acceptable and can create miscommunication and additional workload with unnecessary controller queries," the FAA said.

AOPA recommends that pilots become familiar with the terms and procedures before the effective date by reviewing the FAA's InFo message, which gives examples of clearances and responses, and by familiarizing themselves with additional guidance provided in a video.

http://www.aopa.org/News-and-Video/All-News/2014/March/26/FAA-introduces-new-clearance-terminology.aspx

view video:

http://r20.rs6.net/tn.jsp?f=001bfniAlNCnfDfmpf6lMZ1rzx2hWLSeSKVLZIRxQ8-GKKnMTknaAc8YagrqM1SXYhiSlFA027uYzuDV8__xrjhjGlR3PAo5jUiaR-8MQ3uHf0uQReU_bgINXIQKY-1uYCloWDT8ptBzet7-i-vOJacA3EuzSDzGfxQCu02SXGreVvXwmrbYUTsx_Bzw8XmFuwe&c=0GE8G2_dY5-byMGRd2UZskhX8s_k56yk4SViHZELNf1KN2KAKlzvgw==&ch=mUA5PozNoXKBAl2JTbefBwbVywVefBhOmF6pMU9xyehE4Jqd6XlvGw==

FAA raises concerns about safety data sharing, pilot training

The US Federal Aviation Administration says great strides have been made in improving safety, but continued improvements are contingent on further data sharing by the industry and more relevant pilot training.

"I can't over-emphasize enough the importance of what data sharing does," says John Hickey, deputy associate administrator for aviation safety at the FAA.

"Data sharing allows data-driven decision making…when an airline, aircraft manufacturer, and a government regulator come together and look at the data together, they cannot but make the right decision."

Hickey was speaking at the IATA Ops conference in Kuala Lampur. He said data sharing by carriers helped reduce the USA's fatal accident rate by 70% from the 1990s to the 2000s.

He says airlines were initially wary of sharing safety related dated with government regulators, fearing punitive action. Without naming countries or regions, Hickey indicated that data sharing internationally still has some way to go.

"Data sharing is the number one way to reduce fatal accidents around the world," he said.

Hickey also expressed a concern that pilot training is divorced from the reality of operating modern commercial aircraft.

"An evolution has occurred in that pilots, with their training, have become somewhat incompatible with the way airplanes are built and designed today. When we look at accidents over the last ten years there is a common theme in the US and globally. There is a fundamental misunderstanding going on between man and machine. We have to fix that."

He noted that the US has mandated rules that pilot training increasingly focus on areas such as stall recognition, avoidance and recovery, and aircraft upset modes.

He also said hand flying skills are of concern. "There is too much reliance on automation, there needs to be a balance," said Hickey.

Another emerging problem area is the USA's requirement that pilots need 1,500 hours before gaining eligibility to become a first officer, up from 250 hours previously.

"This is creating a potential challenge to airlines in the US. The business model is fundamentally upset. It will be a challenge to see how pilots will pay for, on their own, 1,500 flight hours, and then start at $26,000 a year. It will be a very difficult environment and we don't have answers."

NTSB Training Center Offers New Helicopter Accident Investigation Course

NTSB, Army National Guard To Provide Instruction In Various Aspects Of Helicopter Flight

The NTSB is pleased to announce a new Helicopter

Accident Investigation Course, to be held August 18-22, 2014, at the NTSB's Training Center in Ashburn, VA.The course will provide participants with a comprehensive overview of the procedures and methods used and the skills required for all aspects of helicopter accident investigation. NTSB investigators will present examples from recent investigations to demonstrate particular aspects of the investigative process.

In addition, instructors from the US Army National Guard will provide instruction in helicopter aerodynamics, operations and investigations. Attendees will also have the opportunity to practice their investigative skills through a hands-on helicopter wreckage examination and examination of an intact UH-1 Iroquois (HUEY).

Registration is now open for the course, and tuition rates increase after July 18, 2014.

www.ntsb.gov/trainingcenter/CourseInfo/2014/AS103.html

A Just Culture

A healthy safety culture must include a Hazard/Error Reporting System (HERS). And the key to a successful HERS is a Just Culture. A Just Culture is a culture that acknowledges that well-intentioned people still make mistakes and they should not be punished for slips, lapses, mistakes, and other common everyday UNINTENDED errors.

Yet, a line is still drawn where willful violations and purposeful unsafe acts must be dealt with in punitive form. The general indications are that only around 10 percent of actions contributing to bad events are judged as culpable (Reason, 2004). The bottom line of a Just Culture is trust. Employees must know that they can report hazards and errors without sanction. Once this trust is established an organization can have a reporting culture, something that provides the system with an accessible memory, which, in turn, is the essential underpinning to a learning culture (Reason, 2004). Along the same lines, Eiff (1999) suggests that, "An effective and systematic reporting system is the keystone to identifying the weakness and vulnerability of safety management before an accident occurs. The willingness and ability of an organization to proactively learn and adapt its operations based on incidents and near misses before an accident occurs is critical to improving safety."

Participation in hazard reporting is relatively easy because employees objectively report the things they "see." On the other hand, errors are much more challenging because employees may be reluctant to report the erroneous things they "do." Is there enough trust in your company culture so that employees feel comfortable reporting errors that they personally commit, even if the report is anonymous? Think about it.

A blog about current aviation safety issues. Brought to you by Dr. Bob Baron and The Aviation Consulting Group

http://www.tacgworldwide.com/

7 Behavioral Warning Signs of a Poor Safety Culture

The Warning Signs

You rely on your employer to keep you safe on the job, and they boast a top notch workplace with a strong commitment to safety. You generally follow the rules, wear the required PPE and take the necessary training. So why would an accident happen to you?

Consider this: maybe everyone in your workplace doesn't share the same enthusiasm for safety that you have. Can you do anything about it? Can your employer?

Employers bear a huge responsibility to protect their workers from injury. The regulations they must abide by are very demanding, to say the least. If you suspect a poor safety culture at your workplace may be developing, keep a keen eye out for these 7 behavioral warning signs.These behaviors indicate warning signs that persons in your workplace may display when not taking responsibility for their own safety, and thus are the tell-tale signs of a deteriorating safety culture.

- Being too tired for the job;
- Consuming drugs or alcohol at work;
- Ignoring written safety procedures;
- Skipping safety meetings;
- Refusing to wear PPE;
- Operating equipment without training; or,
- Working too quickly.

If you see one or more of these behaviors in your organization on a regular basis from one or more of your coworkers, say something to your supervisor or manager. There's one thing your employer can't do – control your actions and your attitude or the actions and attitudes of your coworkers. If you're caught in a workplace with a deteriorating safety culture, as an employee, you must also take charge of your own safety. Remember, you have the most to gain… and the most to lose.

Checklist Checkup

Checklists are used by pilots to assure that the aircraft is properly configured for each phase of flight. Checklists are also used to provide appropriate response to abnormal or emergency situations. While checklists do provide a means of guiding a pilot or flight crew through complex procedures, they are not impervious to human error. Reports submitted to ASRS indicate that errors related to checklist usage generally fall into one of these five categories:

1. Checklist interrupted
2. Checklist item overlooked
3. Use of the wrong checklist
4. Failure to use a checklist
5. Checklist confusion

Examples of these errors are found in the following ASRS reports.

Checklist Interrupted

Distractions and interruptions are the factors most often cited in ASRS reports involving checklist errors. This B737-300 Captain's report shows that the distractions inherent in last minute preparations prior to pushback can easily lead to checklist omissions.

■ During the accomplishment of the Before Pushback checklist, the Flight Attendant brought in the passenger count documentation at exactly the moment the First Officer read the "Takeoff Trim" item. I responded to the Flight Attendant interruption and subsequent verbal exchange and then the First Officer and I proceeded to the next item, "Cockpit Door," without actually having reset the takeoff trim to the correct setting. During the takeoff, we received a Takeoff Warning horn as I advanced the throttles for takeoff. At approximately 10 knots, I rejected the takeoff and accomplished the immediate action items while the First Officer notified the Tower of the rejected takeoff. After clearing the runway and finishing the checklist items, I discovered the takeoff trim was not set in the proper position and was out of the green band area.

This event reminded me to be extra vigilant of the impact of distractions during checklist accomplishment. In fact, it took several errors in procedure to arrive at the runway without the trim set properly.

Accident Investigation – Is there a Daytime Bias in your Operation?

Companies collect reams of data about accidents, incidents and injuries, partly in order to meet regulatory requirements. While data collection is a good practice, it's important to recognize that proper analysis of that data is the only way to expose problem areas. Does your 24-hour operation know what to look for?

Frequently, data on injuries to shiftworkers are combined with data from who work only the day shift. Even traditional 24/7 operations, such as steel mills and power stations, have employees and parts of the business that do not run into the evening and night hours. Failure to separate these groups can lead to a dilution effect that can hide an increased accident/ injury risk among a certain employee population. Likewise, if accidents aren't filtered by time of day, the resulting data can mask peak accident risk times.

Analyzing Accidents by Time of Day

At first glance, analyzing injuries by time of day may seem straightforward: group injury data into one-hour time blocks and produce a bar chart of accident frequency. Unfortunately, it's not usually that simple, as day and night work are often different.

For example, fewer employees may be working at night; there may be fewer supervisors or some areas of the operation may shut down (in a steel mill, all but the furnaces and one or two lines may cease production; in a hospital, the operations suites may shut down, but there may be an increase in the accident and emergency workload). To calculate injury risk (not frequency), the number of injuries per hour must be divided by the number of people working in that hour.

Accident Investigation: Day-Centric?

Unfortunately, as it is likely that most health, safety, and environment managers work during the day, the injuries that are most frequent in daytime hours may be the ones that receive the most attention.

Furthermore, even when the same type of injuries occur both during the day and night shift, such as falls-on-the-same-level, conducting the investigation only during the day can lead to inaccurate findings. After all, there can be causal factors that led to the fall on the night shift that are not present during the day shift.

For example, an investigation on nighttime falls-on-the-same-level injuries might uncover that poor lighting levels and increased employee fatigue played a much larger in causing the nighttime incidents than they did for daytime incidents. Managers that oversee accidents and injuries in 24-hour operations need to be very careful with their methodology to ensure there is not a daytime bias.

How Much Are Fatigue-Related Accidents Costing Your Company

Fatigue is one the most pervasive causes of human error related accidents, incidents and injuries. Yet:

- **Fatigue is under-reported and under-investigated** during accident/ incident investigations.
- **Companies rely excessively on subjective evaluations**. With no simple test (e.g. blood, urine, breathalyzer) to determine fatigue, the data is often inaccurate.

To help companies have a reliable and objective tool to determine the true cost of fatigue, CIRCADIAN has developed FACTS™ - **F**atigue **A**ccident/Incident **C**ausation **T**esting **S**ystem. This web-based system will let you know the probability of whether a person was or was not impaired by fatigue at the time of an accident or incident.

FACTS is:

- **Objective** - Creates a standard for investigating all incidents, accidents and near misses.
- **Scientifically validated** - FACTS probability judgments correlate 86% with the judgments of expert human panels.

- **Easy to use** – No training required. Features a simple drop-down menu for collecting the incident data as part of the normal accident reporting process
- **Fatigue Risk Management System Tool** - In a data-driven FRMS, FACTS allows an organization to assess, benchmark and measure the impact of their FRMS initiatives in terms of reduced costs, risks and liabilities.

http://facts.circadian.com/

Sign-up for a free trial and learn more about FACTS at: http://facts.circadian.com

37 Fewer Sleep Minutes for Those with Laptop in Bedroom

Consumer actigraphy device maker Jawbone recently analyzed the data of more than 1,600 wearers of its UP system. (The UP system is a wristband, app, and data service that strives to track sleep, movement, and eating habits of the wearer.)

Here are some of the findings:On average, members of the UP community who got at least 7 hours of sleep were 30% more likely to report feeling rested the next day. Those UP wearers were also significantly more likely to report feeling optimistic, patient, focused, productive, and attractive the next day.

- Sound sleep (defined by Jawbone as "the moments of sleep when your body is particularly still") had a greater impact above and beyond total time spent sleeping.
- The study also asked subjects about the causes of sleeplessness, with a quarter of UP wearers in the study reporting difficulty falling asleep. Of those, nearly half attribute their sleep issues to stress, 20% to room temperature, and 18% to simply not feeling tired.
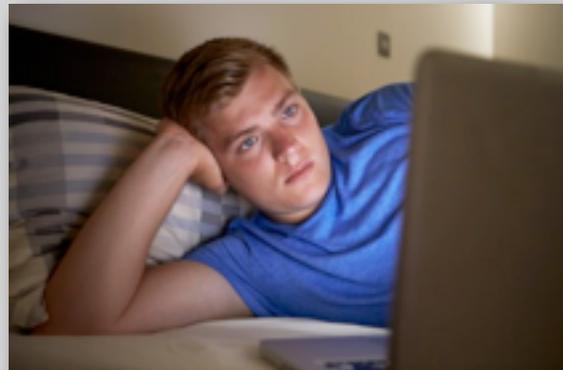
- Only 3% of those who reported difficulty falling asleep attribute their sleep issues to noisiness or to children.

- The data from Jawbone also showed the effects of lifestyle habits and gadgetry on our sleep. UP wearers who reported having a laptop in their bedroom logged 37 minutes less sound sleep per night on average.

- UP wearers who slept with a mobile phone had 13 minutes less sound sleep on average.

As a result of this study, Jawbone introduced the UP 3.1 App for iOS, which the company says analyzes data from the UP and UP24 bands to provide wearers with tailored insights on how sleep and activity interrelate. It also introduced the UP Coffee app for iOS 7 that can be used by both UP owners and non-owners alike to track caffeine.

Drowsy Driving App Released

Wellington, New Zealand-based Akilla has launched a Drowsy driving educational app. Available for free in both the iTunes and Google Play stores, Akilla tells users the subtle warning signs of drowsy driving, how drowsy driving impacts them, and what action steps must be taken to avoid a serious or even fatal crash.The app includes a 15-minute "PowernAP timer," which Akilla says will help users overcome the worst symptoms and gain a sufficient energy and attention boost.

Akilla also sells a Drowsy Driving Handbook and DVD.

http://www.akilla.us/

http://www.sleepreviewmag.com/2013/11/alert-alive/

 http://www.sleepreviewmag.com/2014/03/drowsy-driving-app-released/
#sthash.W2ZSeKjc.dpuf

Five Steps for Preventing Kidney Stones

An ounce of precaution keeps a lot of ouch at bay

Chances are, you've either had a kidney stone or know someone who has. According to the National Kidney Foundation, one out of 10 people develops a kidney stone in his lifetime. That's a lot of excruciating pain — and doctors say they're seeing more kidney stones all of the time, thanks to rising obesity rates.

An estimated 10% of people in the US will have a kidney stone at some point in their lives.

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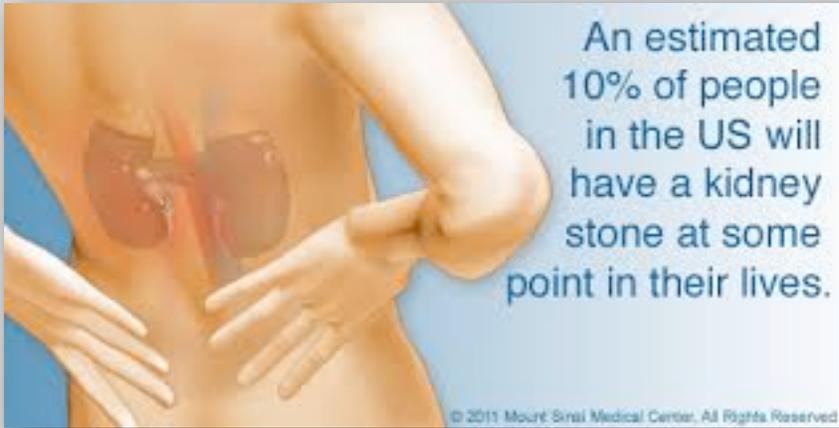
A kidney stone forms when your urine contains too much chemical waste and not enough liquid. If urine doesn't flush chemicals out of your body, then they will join together until they form a stone, which either stays in the kidney or moves into the urinary tract. Many stones are tiny and pass out of the body easily — but some are large enough to cause a backup of urine in the body and quite a bit of pain. The most common types of stones are calcium oxalate and uric acid stones.

Signs of kidney stones include severe lower back pain, blood in the urine, and nausea or vomiting. Once you've had a kidney stone, you're more likely to get another one. That's why it's important to take dietary precautions to decrease the likelihood of stone formation.

Stay hydrated
First and foremost, make sure you're drinking plenty of water, especially if you're sweating a lot. Sweat decreases the amount that you urinate, thus increasing your chances of forming a stone. Make sure that your urine stays clear or light-colored; if it's dark, you are not drinking enough water.

Drink lemonade
Some studies suggest that the citrate found in lemonade, limeade and other citrus drinks might keep crystals in the kidneys from binding together and forming stones. Just be sure to drink sugar-free lemonade; sugar can increase your risk of forming a kidney stone.

Reduce your sodium intake

When your sodium intake increases, so does the amount of calcium your kidneys excrete. That calcium is attracted to stone-forming chemicals such as oxalate and phosphorus. Fast food and processed foods, including frozen dinners, are generally high in sodium.

Cut back on high-purine foods

Purine is a natural chemical compound, and high-purine foods—which include meat, particularly organ meats, bacon and beef, and seafood, such as lobster and shrimp — introduce extra uric acid into your system. (High-protein weight-loss diets are frequently associated with kidney stones.) When your urine is more acidic, you're more likely to develop uric acid stones.

Limit high-oxalate foods

Oxalate is a waste compound formed by the body, and it's also found in certain foods, including some that are healthy (think dark leafy vegetables) and some that aren't (cola). Oxalate combines with calcium to form stones. Your body needs adequate calcium, however, so you don't want to cut back on calcium; in fact, some studies show that kidney stone sufferers frequently have low calcium levels. Instead, watch your oxalate intake.

Kidney stones have plagued humankind throughout history; in fact, scientists found signs of a kidney stone in a 7,000-year-old Egyptian mummy. However, with a careful diet, you can prevent kidney stones from being a part of your personal history.

Trapped Under the Sea: One Engineering Marvel, Five Men, and a Disaster Ten Miles Into the Darkness

The harrowing story of five men who were sent into a dark, airless tunnel hundreds of feet under Massachusetts Bay to do a nearly impossible job-with deadly results
In the 1990s, Boston built a sophisticated waste treatment plant on Deer Island that was poised to show the country how to deal with environmental catastrophe. The city had been dumping barely treated sewage into its harbor, coating the seafloor with a layer of "black mayonnaise." Fisheries collapsed, wildlife fled, and locals referred to floating tampon applicators as "beach whistles.
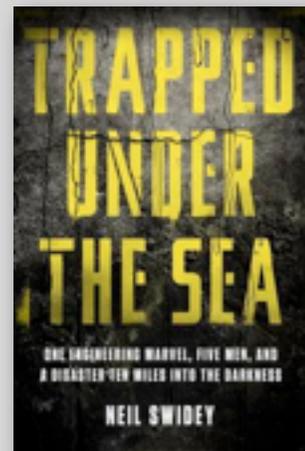
" But before the plant could start operating, a team of divers had to make a perilous journey to the end of a 10-mile tunnel-devoid of light and air-to complete the construction. Five went in; two never came out. Drawing on hundreds of interviews and thousands of documents, award-winning reporter Neil Swidey re-creates the tragedy and its aftermath in an action-packed narrative. The climax comes when the hard-partying DJ Gillis and his friend Billy Juse trade jobs at a pivotal moment in the mission, sentencing one diver to death and the other to a trauma-induced heroin addiction that eventually lands him in prison. Trapped Under the Sea reminds us that behind every bridge, highway, dam, and tunnel-behind the infrastructure that makes modern life possible-lies unsung bravery and extraordinary sacrifice.

Inspiration:

'Dying was easy: It's the living that's hard'

In the Human Factor, we profile survivors who have overcome the odds. a life obstacle -- injury, illness or other hardship -- they tapped their inner strength and found resilience they didn't know they possessed. This week we introduce you to 92-year-old Lester Tenney, a survivor of the Bataan Death March during World War II. Tenney went on to become a college professor, write a book and found Care Packages from Home, a nonprofit, volunteer group that sends care packages to U.S. troops.

http://www.cnn.com/2013/04/09/health/human-factor-lester-tenney/index.html?iref=allsearch