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Plane Crash Report

Self Destructive Behavior

The National Transportation Safety Board is releasing their preliminary report on a fatal plane crash.

The plane crash happened last Thursday afternoon. The plane landed in the Gulf of Mexico off Panama City Beach after a power loss.



The pilot Robert Gans, 57 of Panama City Beach, was killed. The Medical Examiner's Office says he drowned.

The passenger, Jennifer Messer, 21 of Panama City Beach, was transported to the hospital. She was treated and released.

Last Friday the NTSB removed the plane from the water in order to investigate.

According to the report, Gans called his mechanic shortly after Noon to say he wanted to take off at 1:30 p.m. The mechanic informed Gans that the planes' battery was dead and would not properly charge in the short amount of time.

The report goes on to say the mechanic found water in the fuel tanks and had repeated problems starting the plane, having to jump it twice.

According to the mechanic, Gans was aware of the problems and told him to order a new battery and that he and Messer would be back in 30 minutes.



The plane was 13 miles from the airport when Gans radioed they had lost power.

Click the link below to read the NTSB preliminary report.

http://media.mgnetwork.com/mbb/pdf/NTSB_Preliminary_Report.pdf

Etihad says Toulouse crash will not slow route growth

Dubai: Etihad Airways said it would be unaffected by the financial costs associated with last week's mishap in Toulouse, which badly damaged an Airbus aircraft scheduled to join the carrier's fleet.

According to initial reports, engineers from Airbus and Abu Dhabi Aviation Technologies were completing engine tests for the A340-600 when the aircraft struck the wall of a testing pen. Five people were hospitalized and the aircraft, costing \$218 million at list prices, was declared a complete write-off.

The plane carried the Etihad livery and was to be delivered in Abu Dhabi this week. It was the third of four A340-600s ordered by Etihad.

A spokesman for the airline said the aircraft had not been formally

handed over to the airline when the crash occurred.



"The whole aircraft and its contents were insured by Airbus as the aircraft was operating under a temporary French registration [F-WWCJ] until November 21 when Etihad was set to have the aircraft delivered," he said.

"It's too early to discuss matters of compensation," he added. "As you would expect, our priority is the welfare of those involved and injured in the incident."

Negotiations

Once investigations by the French police and BEA, France's civil aviation investigation agency, conclude, Etihad will then begin negotiating with Airbus on a replacement aircraft or other options.



The aircraft had been slotted to work as a replacement plane while other Etihad aircraft underwent heavy maintenance. Because of this, its impact on the airline's route expansion plans was "not expected to be significant," the Etihad spokesman said. In the next month Etihad expects to receive its last A340-600 on order from the Toulouse airframe manufacturer.

Investigations into the accident are ongoing. This week BEA said the latest findings suggest the aircraft suffered no engine or brake malfunction leading up to the crash.

News reports quoted BEA as saying the aircraft was stationary but its wheels were not wedged by chocks while a final test on its brakes and engines was taking place.

Other reports suggested the plane had completed all tests and was in the process of leaving the test pen area when the accident occurred.

"Airbus has told Etihad that the engine test-run had already been completed beforehand, and that the A340 had been making its way out of the pen," reported the UK-based trade magazine Air Transport Intelligence.

Hospital drug errors far from uncommon

The case of actor Dennis Quaid's newborn twins, who were reportedly given 1,000

times the intended dosage of a blood thinner at Cedars-Sinai Medical Center, underscores one of the biggest problems facing the healthcare industry: medication errors.

At least 1.5 million Americans a year are injured after receiving the wrong medication or the incorrect dose, according to the Institute of Medicine, part of the National Academies of Science. Such incidents have more than doubled in the last decade.



The errors are made when pharmacists stock the drugs improperly, nurses don't double-check to make sure they are dispensing the proper medication or doctors' bad handwriting results in the wrong drug being administered, among other causes.



The events over the last few days at Cedars-Sinai, and a case in Indiana last year in which three babies died after receiving an overdose of the same drug, offer a vivid illustration of the problems hospitals face.

In both cases, nurses mistakenly administered a concentration of heparin 1,000 times higher than intended, giving the patients a dose with a concentration of 10,000 units per milliliter instead of the correct dosage of 10 units per milliliter.

The packaging of the 10,000-unit dose of heparin looks very similar to that of the 10-unit dose. In both cases, each hospital received the drug from Illinois-based Baxter Healthcare Corp., one of seven companies that manufacture heparin, a generic drug.

Repackaging effort

But last month, in the wake of the Indiana deaths, Baxter began repackaging heparin to make the different doses more distinct, including adding a large "red alert" symbol on the more concentrated dose.

Even with the change, many hospitals are still working through the last of the old vials -- and in some cases have not yet received the new ones. A source close to the matter, who spoke on the condition of anonymity, told The Times on Wednesday that Cedars-Sinai was still using the old vials.

Richard Elbaum, a Cedars-Sinai spokesman, said Wednesday that the hospital had received Baxter's warning about medication errors after the Indiana incident, but he could not confirm whether the hospital had received the newly labeled vials.

"Healthcare is just beginning to realize how big a problem it has with patient safety," said Albert Wu, professor of health policy and management at Johns Hopkins University in Baltimore. "Errors are disturbingly common. The healthcare system has to take a step back and invest more in research and improving patient safety. Until it does, these kinds of incidents will keep happening."

Serious injuries associated with medication errors reported to the U.S. Food and Drug Administration increased from about 35,000 in 1998 to nearly 90,000 in 2005, according to a report published in the Archives of Internal Medicine. Of those cases, more than 5,000 deaths were tallied in 1998, but in 2005 more than 15,000 deaths were reported.

Heparin is one of five drugs most commonly associated with errors in hospitals, along with insulin, morphine, potassium chloride and warfarin, another blood thinner. The five drugs account for 28% of all errors that resulted in extended hospitalizations, according to a 2002 study by United States Pharmacopeia. All carry a high risk of injury if administered incorrectly.



The problem is causing so much concern that the Joint Commission, which accredits 85% of the nation's hospitals, has made the safe use of anticoagulants like heparin one of its top national patient safety goals for next year.

Three Cedars-Sinai patients -- reportedly including the newborn twins of actor Quaid and wife Kimberly -- had their intravenous catheters flushed Sunday with the high dose of heparin.

Hospital staff members identified their error by quickly testing the blood-clotting function of the patients, and two of the patients were given protamine sulfate, a drug that reverses the effects of heparin and helps bring blood-clotting function to normal. The celebrity-news website TMZ.com said the twins were in stable condition in the hospital's neonatal intensive care unit.

There are **parallels** to the problems involving the Quaid twins and a fatal heparin overdose last year at Methodist Hospital in Indianapolis. Officials there said a technician in the pharmacy mistakenly placed the more concentrated dose of the drug in a location designated for the less concentrated dose. The nurse was accustomed to only one dose being available in the neonatal intensive care unit and administered the incorrect dose.

Erin Gardiner, a Baxter spokeswoman, said that at both hospitals, "it appears that our product was misadministered."

After the Indiana deaths, Baxter and the FDA issued a statement warning "of the potential for life-threatening medication errors involving two heparin products," according to the agency's website. The statement said both concentrations came in similar-size vials that "use shades of blue as the prominent background color on the label."

Last month, the company altered the label on its dose with a concentration of 10,000 units per milliliter, changing the background color from blue to black, increasing the font size by 20% and adding a large "red alert" symbol on the vial, Gardiner said. Such changes, however, don't "replace the value of clinicians carefully reviewing and reading a drug name and dose," she said.

Since the accidents occurred, Cedars-Sinai has taken several immediate steps to ensure they do not reoccur, Elbaum said.

The hospital has removed all heparin used for peripheral IV flushes from the pediatric unit and will instead use only a saline solution for flushes for both pediatric and adult units, he said.

In addition, all heparin with the higher concentrations of 10,000 units per milliliter has been placed in a separate location in the pharmacy from the lower concentrations.



The hospital is continuing to retrain its 1,800 nurses and 200 pharmacy staff members in medication administration, requiring the refresher course before any of them treat patients, he said.

Cedars-Sinai has long used a "double-check system" requiring two licensed healthcare professionals to verify independently any medication before administering it, Elbaum said.

Wu of Johns Hopkins said medication errors are common because the United States is a "medication society," where four of five Americans take a medication at least once a week. Overall, more than 6 billion prescriptions are written in the U.S. annually, the highest number in the world, said Wu, who also serves as a senior advisor in patient safety to the World Health Organization.

Hospital administrators and healthcare officials have been talking in recent years about different ways of improving the situation.

Navigator dies as ejector seat activates in upside-down jet

A crewman was thrown from an RAF Tornado and killed after his ejector seat activated while the aircraft was flying upside down.

The Tornado was being given a test flight and both crew members were civilians working for BAE Systems. The pilot reported that he had not seen a parachute open. It is not known at what speed the aircraft was flying, but its maximum speed is 1,500mph.



After the accident, at 4pm, the pilot made an emergency radio call to report that the crewman, described by the RAF as a navigator, was missing before returning to base 30 miles away at RAF Marham in Norfolk. His shocked message was picked up by an amateur radio enthusiast.

The incident happened near Wells, in Norfolk. An RAF source said: "It appears there may have been something wrong with the ejector mechanism in the rear seat. The plane had just been serviced. When the jet went upside down, it was enough to set it off."



The crewman's body was found by the crew of an RAF Sea King rescue helicopter in a field at South Creake, Norfolk, 45 minutes after the incident. RAF rescue teams set up arc lights and tents in the North Creake business park as an investigation into the incident began.

Last night a resident of South Creake said: "We've had helicopters circling around. The police spoke to my husband and said that they were looking for bits and pieces from the aircraft. They were also looking for the navigator but they found him soon after. It's absolutely horrendous."

RAF fighter jets are all fitted with ejectors designed by the Martin-Baker company, the world's longest established and most experienced manufacturer of ejection seats.

BAE has the contract to carry out maintenance on the RAF's fighter jets. Ejection systems in Tornado fighter planes are extremely reliable, according to aviation experts.

Kieran Daly, a journalist with the magazine *Flight International*, said that the systems that take a pilot out of the plane at speeds of about 600mph malfunction "extremely rarely". To start the ejection requires some physical strength and an accidental ejection was "close to impossible", he said.

Rem Merrick, a spokesman for RAF Marham, said: "It's with deepest sadness that the MoD has learnt that the British Aerospace navigator who was involved in today's incident has died. Our thoughts are with his family and friends at this difficult time.

"The aircraft was crewed by British Aerospace. They were carrying out a test flight. The aircraft went into an inverted roll. The navigator exited the aircraft. We cannot speculate on the cause. It's being investigated by the board of inquiry."

Mr Merrick said that it was not known whether a parachute had been found with the man's body.

NTSB: Near-collision videos show runway dangers

Story Highlights

NTSB shows dramatic animations of two recent near-collisions on runways In a Florida incident, planes came within 35 feet of colliding





NTSB wants FAA to improve systems to alert pilots to runway danger

The National Transportation Safety Board has released dramatic animation of two runway near-collisions this year to illustrate what the agency says is the need for improvements in runway safety.

The first animation shows a Delta Air Lines Boeing 757 and a United Airlines Airbus A320 coming within 230 feet of colliding on the runway at the Fort Lauderdale-Hollywood International Airport in Florida in July.

The re-creation was based on radar and flight data recorder information from the planes involved.

The animation includes audio from the air traffic controller, who can be heard yelling, "Stop, stop, stop!" to the United plane as the Delta aircraft attempts to land. Indicate the animation, hear controller's pleas »

The second animation shows a May incident at San Francisco International Airport in California in which a Republic Airlines jet takes off, coming within 35 feet of a SkyWest Airlines commuter turboprop that has just landed.

There were no injuries in either situation.

The videos were shown Thursday during the NTSB's annual <mark>"most wanted transportation safety improvements"</mark> board meeting, where the agency reviews its greatest concerns in transportation safety.

The Federal Aviation Administration reported that serious runway incursions were reduced by 25 percent in 2007, but the NTSB said much work remains on runway safety and systems to notify pilots when they are about to collide with another plane or vehicle.

NTSB Chairman Mark Rosenker expressed frustration with the slow progress of implementing new technology, such as the use of a global positioning system-type procedure in cockpits that would help warn pilots of dangers on the runway.

Rosenker told the NTSB-only panel, <mark>"It is time to do something before we have to</mark> investigate an accident that is catastrophic."



Among the most wanted transportation safety improvements cited on the NTSB's Web site are items to "stop runway incursions/ground collisions of aircraft" with the notations "action needed by Federal Aviation Administration" and "unacceptable response."

The site says systems the FAA has added to airports to warn air traffic controllers of potential collisions aren't "sufficient."

"In recent incidents, [one system] did not alert controllers in time to be effective, and the situations were instead resolved by flight crew actions that sometimes bordered on heroics or just plain luck," the NTSB site says.

"Until there is a system in place to positively control ground movements of all aircraft, with direct warning to pilots, the potential for this type of disaster will continue to be high."

Rosenker told Thursday's board gathering that "this must be resolved."

"We've had this recommendation for a number of years -- too many number of years," he said.

Other areas of NTSB concern include fuel tanks on airplanes, pilot and air traffic controller <mark>fatigue</mark>, and technologies that could help prevent automobile collisions.

'Metal fatigue' caused loss of engine?

The starboard <mark>engine that fell</mark> from the Nationwide Airlines flight just after take-off from Cape Town was the result of undetected metal fatigue.

A strut that held the engine in place sheared clean through, according to an experienced and respected industry source who inspected the wing closely shortly after the damaged Boeing 737-200 landed safely on last Wednesday morning.

But Nationwide Airlines technical manager Robert van Putten - who also inspected the wing and engine while working alongside the Civil Aviation Authority to establish what went wrong - flatly denied this, saying the damage to the strut had been caused by severed hydraulic pipes when the engine fell off.





As with all modern airliners, Boeing 737-200 engines are designed to be shed - if extreme stresses threaten the structural integrity of the wing - and the jet can be flown on only one engine, as last Wednesday's drama proved.

This safety feature is designed to protect the wing from being damaged in the event of a catastrophic engine failure, as happened with the Nationwide plane.

The jet's engine is connected to the wing by a triangular pylon consisting of several struts. This pylon is connected to the engine at each of three points by a single tough bolt slightly thicker than a man's thumb; two bolts in front and one at the rear.

Nationwide Airlines said after the incident that "during the take-off roll, an object - which is yet to be defined, was ingested into the engine - which caused a catastrophic engine failure".

Typically, such failure is caused by flying debris or a bird breaking the blades of the turbine or its compressor, creating shrapnel which ricochets around the engine, which is turning exceptionally fast at takeoff speed.

This in turn causes dangerous wobble in the engine, undetectable to the human eye at such high speed, but potentially disastrous to the wing because the vibrations can damage it's integrity.

And so, at an engineer-determined level of extreme stress, the three bolts are designed to shear, allowing the engine to fall away in order to save the wing.

But that's not what happened, according to the source who examined the damaged wing on Thursday.

"I'm not a structural engineer, but I examined the damaged wing up close and it was very clear that one of the pylon's struts - about the thickness of your arm had sheared clean through, as if cleft with an axe," said the source.

"It appears as if once the strut had sheared, it tore the right-hand side bolt clean out of the wing, then the whole engine detached itself.

"The strut that sheared was the one closest to the fuselage.

"I don't know if there was a latent crack there or something (else) that had not been picked up during inspection."

Nationwide obtained its registration under the exceptionally stringent International Airline Transport Association operational safety audit shortly before the incident - remaining one of only four African airlines, including SAA, to qualify.



Van Putten cautioned that he was "not a specialist" on the jet's design, but said it was clear from the severe internal damage to the fallen engine that it had swallowed a foreign object.

Mental Fatigue Accidents

EL AL Boeing 747 Crash

On October 4, 1992 an EL AL 747 freighter crashed in Amsterdam, killing all four people on board and over 50 people on the ground. The cause of the crash was the number 3 and 4 engines separated from the wing, causing a loss of control.

The reason for the number 3 engine separation was a breakage of the fuse pin. The pin was designed to break when an engine seizes in flight, producing a large amount of torque. Both of the engines were stripped off the right wing causing the Boeing 747-200 Freighter to crash as it maneuvered towards the airport.



Unfortunately this was not the first Boeing 747 to crash in this way. In December 1991 a China Airlines Boeing 747-200F freighter crashed shortly after takeoff. A possible reason for the shearing away of the two right engines is that corrosion pits and fatigue weakened the fuse pins that hold the strut to the wings. Pits cause a breakdown in the structural integrity and their formation and growth rate is unpredictable. These pits usually form via a lack of passivity, surface discontinuities, or insufficient inhibitor coverage. Fatigue also weakens structures; in this case, by the cyclic loading and unloading of pressure brought on by the day to day routine of a plane. Constant pressure variance coupled with the corrosion may cause the pits to expand into a 14 mm crack such as the one found in one of the fuse pins from the El Al 747.

In both the El Al crash and the China Airlines crash the No.3 and No.4 engines on the right side of the plane ripped away from the fuselage. It is believed that in the El Al crash the inboard fuse pin failed due to corrosion cracking and fatigue which caused the outboard fuse pin, already weakened by a crack, to fail. With these two pins malfunctioning the No.3 engine tore off the plane in such a way that it may have taken the No.4 engine with it.



Boeing had just begun distributing a safety bulletin pertaining to the inspection of all fuse pins on their 747- 100/200/300 that used Pratt & Whitney and Rolls-Royce engines. Both the El Al and China Airlines planes were Boeing 747-200 s with Pratt & Whitney engines. This design of the fuse pin has been used since 1982 and in a seven year period there have been fifteen reports of cracked pins.

It was discovered that these pin failures resulted from the absence of primer, cadmium plating, and a corrosion preventative.

Since the El Al 747 crash, Boeing has begun designs to upgrade the 747. Specific targets on this model include fabricating new parts for the pylon-to-wing attachment for the Pratt & Whitney engines. Boeing also has plans to make inspecting the planes as cost and time efficient as possible.

1988 - The Aloha Incident

The structural failure on April 28, 1988 of a 19 year old Boeing 737, operated by Aloha airlines, was a defining event in creating awareness of aging aircraft in both the public domain and in the aviation community. This aircraft lost a major portion of the upper fuselage in full flight at 24,000 feet, near the front of the plane. Miraculously, the pilot managed



to land the plane on the island of Maui, Hawaii. One flight attendant was swept to her death. Multiple fatigue cracks were detected in the remaining aircraft structure, in the holes of the upper row of rivets in several fuselage skin lap joints.

In the Aloha Boeing 737 aircraft, evidence was found of multiple site fatigue damage leading to structural failure. The resulting National Transportation Safety Board investigation report issued in 1989 attributed the incident to the failure of the operator's maintenance program to detect corrosion damage. Earlier, in 1981, a similar aircraft had suffered an in-flight break-up with more than one hundred fatalities. Investigations pointed to corrosion accelerated fatigue of the fuselage skin panels as the failure mechanism.

Lap joints join large panels of skin together and run longitudinally along the fuselage. Fatigue cracking was not anticipated to be a problem, provided the overlapping panels remained strongly bonded together. Inspection of other similar aircraft revealed disbonding, corrosion and cracking problems_in the lap joints.





Corrosion processes and the subsequent build-up of voluminous corrosion products inside the lap joints lead to so-called "pillowing", whereby the faying surfaces are separated. Special instrumentation has been developed to detect this dangerous condition [3]. The aging aircraft "problem" will not "go away", even if airlines were to order unprecedented numbers of new aircraft. Older planes are seldom scrapped, and will probably end up in service with another operator. Therefore, safety issues regarding aging aircraft need to be well understood and safety programs need to be applied on a consistent and rigorous basis.

Local aviation pioneer inducted into Portland museum

Young Lawrence Campbell Jr. stands on the wing of an aircraft during his early days as a member of the Tuskegee Airmen of the Army Air Corps. Shortly after this photo, Campbell became the first black man to fly a jet in the military. *Photo courtesy of the Campbell family*

McMINNVILLE, Ore. - Col. Lawrence Campbell Jr. was one of five aviation pioneers to be inducted into the Oregon Aviation Hall of Honor Oct. 21.

An Anchorage resident, Campbell died March 30, 1992.

Campbell was inducted along with Brig. Gen. Staryl Austin, Col. James Church, the late Maj. Gen. Chester McCarty and the late Nevilles "Jim" Walker.





Each of these men had roots in Oregon. Each made a significant contribution to the aviation industry.

Campbell was my father-in-law, and though I never met him, sitting in this vast building under the tail of the gigantic Spruce Goose, I was impressed by the visions of his career, and the family bonds that still run strong more than a decade after his death.

As a young boy in Oklahoma, Campbell fell in love with airplanes. He built models and studied pictures of various flyers of the day.

But he never really dreamed of being a pilot. That happened on a fluke.

During the early days of World War II, his family moved to Oregon. He graduated high school and entered college at the University of Oregon, studying electrical engineering.

In 1944, Campbell had a friend who took the test to enter flight school. Campbell went along for fun. He passed; his friend didn't.

Lt. Col. Campbell later became the first black man in the nation to command a National Guard base. A longtime Alaskan, Campbell was inducted into the Oregon Aviation Hall of Honor Oct. 21. *Photo courtesy of the Campbell* family

Campbell entered into the Army Air Corps, and during the World War II years learned to fly a variety of planes. He was a Tuskegee airman, a member of a group of the military's first black airmen. At the time, many people thought that black men lacked the intelligence, skill, courage and patriotism to fly in the military.

Campbell learned to fly the AT-6 prop planes at the Tuskegee Institute in Alabama. He attended



advanced flight training at Randolph Air Field, learning to fly the famed P-47 Thunderbolts. He transferred to Williams Air Field in Arizona to pilot the P-51 Mustang.

Campbell was selected to join a unique unit of Tuskegee men to see if they could fly jets. He graduated from the U.S. Air Force Fighter Pilot School at Williams Air Force Base in 1948. The man with the highest score was to be the first black man to fly a fighter jet in the military.



At the end of the course, Campbell's score tied with another. The right call of a coin toss awarded Campbell the honor.

After the war, then-1st Lt. Campbell left the military, returning to school at the University of Portland in Oregon. He joined the Air National Guard, becoming the flying safety officer for the 403rd Troop Carrier Wing at Portland Air Base.

He married Dolores in 1952. Campbell briefly worked as an analyst for Boeing in Seattle before taking a job with the Civil Aeronautics Board, which later became the National Transportation Safety Board, the federal organization that investigates airplane accidents.

It was 1953, and while his job was to investigate plane crashes, Campbell was mostly assigned to fill out paperwork. When a position came open in Alaska, he applied. He moved his family to Anchorage in January 1963.

In Alaska, Campbell was rarely in the office. He investigated some of the state's most public air disasters, including the Alaska Air crash in Juneau in 1971.

Campbell joined the Alaska Air National Guard, working his way up to chief pilot and colonel. He organized and led relief missions after the 1967 flood in Fairbanks. He flew the governor to see the vast earthquake and tsunami damage that riddled the state in 1964.

In 1967, Campbell was offered a job with NTSB in Washington, D.C. He declined. He felt he and his family wouldn't have had the opportunities they had here.

A colonel in the early 1970s, Campbell became the first black man in the nation to assume command of a National Guard unit.

I never met my father-in-law. All that I know of him are the stories told around the dinner table or while his sons are grappling over a mechanical problem. One laughs and says, "You remember that time when dad É"

There are other stories; the not-so-happy ones.

Campbell overcame the culture of the time. He was a part of a test group to see if blacks had enough sense to fly, let alone have the gumption to keep up with a jet.

Even dressed in his crisp uniform, officers' bars on his shoulders, a lot of restaurants wouldn't serve him in the main seating area. The generous ones told him to go around back, they'd serve him in the kitchen.

In Seattle, with the NTSB, he was the only black man on staff, and often the only man in the office and not in the field. And that job offer in the nation's capital?



He knew what that was about. He was one of only a handful of blacks in the Civil Aeronautics Board, and likely had the most experience after years of working in Alaska.

In Anchorage, Campbell filed \tilde{N} and won \tilde{N} an anti-discrimination complaint against a supervisor who transferred here from the Lower 48. Campbell quit soon after.

Even today, in the display of past commanders that line the wall of the Kulis headquarters building, Campbell's photo is the only one that doesn't represent an older white man.

He was honored locally. In 1992, just weeks before he died, he received the Alaska Legion of Merit Medal, the state's highest military honor.

Campbell didn't modernize Oregon airports, fly combat missions or create those toy balsa wood planes like the others inducted that day.

Still, with all his accomplishments and contributions, you won't find Lawrence Campbell Jr. in any of a dozen variations in a Google search.

He's not listed in the online rolls of Tuskegee airmen, not mentioned in the Smithsonian Museum or Boeing's Museum of Flight.

He didn't do it for the recognition. I believe he did it because it's what he loved to do. I believe he did whatever he thought was best for his family.

I see the pride in his children and his widow. They know what he did. One of his nieces nominated him for the Hall of Honor. She knows. The tables were filled with family members.

I saw on the day of the induction how much they all still miss him.

Energy Drinks Linked with Increase in Heart Rate, Blood Pressure

Energy drinks have become popular in recent years, especially among teenagers and young adults. Now, a new study finds that in addition to providing a boost, energy drinks may also cause an increase in heart rate and blood pressure. Researchers in Michigan conducted a study in which 15 healthy adults were asked to drink two cans of a popular energy drink containing about as much caffeine as a cup of coffee every day for a week.





Afterwards, the subjects sat and watched movies while the researchers monitored their heart rate and blood pressure. The researchers found that the subjects' blood pressure increased by an average of 7.9% on the first day and by an average of 9.6% by the seventh day. Similarly, there was an increase in the subjects' heart rate by 7.8% on day one and by 11% on day seven.

The authors point out that these results may vary under different conditions and caution that the effects of energy drinks on people with hypertension or on healthy adults who subsequently exercise may be more severe.

Test your knowledge of caffeine with NSF's Caffeine IQ Quiz.

GO FIGURE

Stress and Anxiety

What does this number represent? 40 million

Answer: It's the number of American adults affected by anxiety disorders.

Here are some other stress and anxiety statistics:

- \$42 billion is the estimated annual cost to the United States of anxiety disorders.
- \$3.5 billion is the estimated annual cost of stressrelated absences to Canadian employers.
- 50% (nearly) of all Americans report that stress has a negative impact on both their personal and professional lives.
- 73% of Americans report experiencing psychological symptoms related to stress in the past month, including irritability or anger, nervousness and lack of energy.
- 85% of Americans report that, on a daily basis, stress significantly interferes with relationships with family and friends.

"We know that stress is a fact of life and some stress can have a positive impact," says psychologist Russ Newman, PhD, JD, and executive director of the American Psychological Association (APA) for professional practice. "However, the high stress levels that many Americans report experiencing can have long-term health consequences, ranging from fatigue to obesity and heart disease."





Results of an APA study found that these health consequences are most serious when stress is managed poorly. Some of the unhealthy stress management practices include:

- Overeating or eating unhealthy foods 43%
- Skipping a meal 36%
- Drinking alcohol 39%
- Smoking cigarettes 19%
- Watching TV for more than two hours a day 43%

Study participants also reported managing stress with healthier practices, including:

- Listening to music 54%
- Reading 52%
- Exercising or walking 50%
- Spending time with family or friends 40%
- Praying 34%

(Sources: Statistics Canada, Anxiety Disorders Association of America and American Psychological Association

The Raw Truth about Stress and Anxiety

Seven out of ten adults in the United States say they experience stress or anxiety

daily, and most say it interferes at least moderately with their lives. About one-third report persistent stress or excessive anxiety daily or that they have had an anxiety or panic attack. Seven out of ten of those adults say they have trouble sleeping.

Stress often affects sleep, and sleep problems can add to a person's stress. But sleep may also become a coping mechanism for stress or anxiety.

These are among the findings of the 2007

Stress & Anxiety Disorders Study, a report examining the effects of anxiety disorders and everyday stress and anxiety on sleep.



Although relatively few U.S. adults have actually been diagnosed with an anxiety disorder, the survey shows a significant increase in such a diagnosis in 2007 (14 percent), compared to results of a similar survey in 2005 (7 percent).



Stress and anxiety are a normal part of life, but anxiety disorders, which affect 40 million adults, are the most common psychiatric illnesses in the U.S.—and they are on the increase. Read on for more key findings of the study.

General Stress or Anxiety Interferes With Lives

Adults most likely to report daily stress or anxiety are under age 55, especially between the ages of 18 and 24 (91 percent), and those who have children (81 percent) and who are employed (73 percent).

Of those who experience stress or anxiety, 48 percent say it interferes every day (up from 39 percent in 2005), and women are much more likely than men (56 percent vs. 39 percent). Nearly 72 percent say it interferes at least moderately with their lives, which is up from 67 percent in 2005.

Stress interferes in a variety of areas on a daily basis:

- > relationships with family and friends (85 percent)
- > sleep (76 percent)
- > leisure activities (50 percent)
- > performance at work (44 percent)
- > relationships with peers (38 percent)
- > quality of work (36 percent)
- > performance at school (12 percent)

Physical Effects of Stress or Anxiety

Those who experience daily stress or anxiety are significantly more likely to physical ailments, especially in relation to poor sleep:

> sleep problems (68 percent): waking during the night and difficulty falling asleep again (48 percent) and waking after too little sleep (45 percent)

- > headaches (58 percent)
- > upset stomach or nausea (49 percent)
- > pounding heartbeat (40 percent)
- > back pain (35 percent)



> dizziness or faintness (34 percent)

Nearly three-quarters of women with daily stress or anxiety are more likely to experience sleep-related physical problems, including headaches (66 percent), upset stomach or nausea (55 percent), diarrhea (32 percent), trembling or shaking (27 percent), and hot or cold flashes (29 percent).

Easing Stress or Anxiety

Sleeping and exercising are top among a wide range of stress-relieving activities, but men and women show some differences.

Behavior	Women	Men
Sleep more	32 percent	25 percent
Eat more	36 percent	25 percent
Eat less	15 percent	7 percent
Talk to family and friends	39 percent	19 percent
Take medication (over- the-counter or prescription)	20 percent	14 percent
Talk to a health professional	13 percent	7 percent
Get a massage	10 percent	7 percent
Do yoga	5 percent	3 percent
Have more frequent sex	10 percent	16 percent

Stress and Sleep Problems

The majority of adults with a stress-induced sleep problem experience it at least weekly, and more than half experience it at least several times a week.

Three-fourths of adults whose sleep is affected by stress or anxiety say that their sleep problems have also increased their stress and anxiety: 54 percent say that stress or anxiety increased their anxiety about falling asleep at night, and 52 percent of men and 42 percent of women reported it affected their ability to remain focused the next day.

In addition, 57 percent of women and 49 percent of men report that anxietyinduced sleep problems affect their relationships. Of those adults experiencing such sleep difficulties, only half consulted a professional (54 percent women vs. 46 percent men).



Persistent Stress or Excessive Anxiety Impairs Daily Functioning More than one-fourth of adults reported that persistent stress or excessive anxiety has impaired their ability to function in the past six months, a figure that's jumped 7 percent since a similar survey in 2005. Eight out of ten say those feelings last several days or more.

About three-quarters say they have difficulty sleeping and they avoid people. Close to half said they overeat and refuse to leave home; one-third have avoided work, and about one-quarter have avoided driving. Women are more likely than men to shop compulsively (34 percent vs. 15 percent); to overeat (54 percent vs. 40 percent); or to stop eating (33 percent vs. 21 percent). Men are more likely than women to abuse alcohol or drugs (28 percent vs. 24 percent).

Anxiety Disorders Affect Sleep

Nearly one-third of adults in the study feel their anxiety is irrational, persistent, or excessive, up from 22 percent in 2005, primarily women and those ages 18 to 24 who are not employed.

Respondents report a wide range of behaviors due to their anxiety:

- > sleep less (45 percent)
- > sleep more (36 percent)
- > avoid social activities (71 percent; up from 62 percent in 2005)
- > become short-tempered (70 percent)
- > have trouble concentrating (66 percent)
- > avoid going places with others (62 percent)

More than half report they get physical ailments, don't answer the phone or return calls, avoid communicating with others, don't feel they're productive, and cry.

Men are more likely than women to engage in sex and seek repeated or excessive medical attention.

Six of ten adults say they know the difference between everyday anxiety and an anxiety disorder (down from 67 percent in 2005), and 57 percent identified difficulty sleeping as a symptom of an anxiety disorder.

The percentage of people who have been diagnosed with an anxiety disorder has doubled: 14 percent vs. 7 percent total in 2005.

More adults are under treatment for anxiety disorders; 8 percent in 2007, up from 5 percent in 2005.



Sleep Habits of Adults

Sixty-one percent of adults report getting seven hours of sleep at least four nights a week, which is down from the 67 percent reported in 2005. Among other findings:

On average, adults sleep 6.6 hours each night.

Eight out of ten adults have experienced some type of sleep-related difficulty; women are significantly more likely than men to experience problems, particularly not feeling rested after sleep; having trouble falling asleep; and trouble staying asleep.

About half wake up feeling unrefreshed or not rested: 61 percent women, 45 percent men.

Nearly half have trouble falling asleep: 57 percent women, 38 percent men.

About four in ten have trouble staying asleep: 50 percent women, 38 percent men.

Sleep problems affect adults during the daytime, primarily sleepiness, fatigue, and irritability. They other issues, too, including poor concentration, headaches, and memory difficulties.

Most adults have not missed work or school because of sleep-related problems, but the average number of days missed is 4.9 in a year. But people who have sought professional help for persistent stress or excessive anxiety have missed significantly more days: 12 percent have missed more than 8 days, and 8 percent report missing 4 to 7 days in a year.

Two-thirds of adults who missed work due to sleep-related difficulties have not told their employer the real reason they missed work. Only 10 percent who experience sleep problems are currently under treatment for a sleep disorder. But nearly one-fourth of those who seek help for persistent stress or excessive anxiety are also more likely to seek help for a sleep disorder.



Picture This!

A contributor was on vacation last Christmas in the old city of Jerusalem and caught sight of this innovative new style of hard-hat. "I was especially impressed by the coworkers who seemed to be mocking this ambitious employee and his adaptive use of the bucket," our contributor wrote.

"The Western Wall is only 100 yards away so the worker may be relying more on the divine presence" to provide for the safety of his noggin.

Maybe they were just goofing around. But I know one thing—if



this bucket doesn't have eye holes cut in it, I wouldn't want to be the guy in front of him when he gets down to business with that hoe.