



Aviation Human Factors Industry News

January 31, 2007

Vol. III, Issue 04

[FedEx delivers to High Desert](#)

[Boeing 727 donated to train local aircraft mechanics](#)

Although it's known for delivering cargo, Federal Express delivered something else Wednesday morning — the opportunity to train a local workforce — in the form of a donated jumbo jet.

The signature purple, orange and white cargo plane roared onto Victorville's 15,000-foot runway as a **training tool** that officials hope will feed the growing demands of aviation companies at the airport and give workers the opportunity to live locally with high-paying jobs.



“This place is really going to flourish,” said David Sutton, vice president of FedEx, after **donating the Boeing 727 to the Victor Valley College Foundation**. He added: “A trained workforce just makes sense.”

In a partnership with the college, the city of Victorville and the county's Workforce Development Department, the plane will be the centerpiece of a new curriculum designed to **train local aircraft mechanics and eliminate the need to hire out-of-state mechanics**.

“We don't have enough mechanics now, and we're trying to bring them in from Florida, New York and Minnesota,” said Jim Worsham, former president of Boeing



and current business development director at Southern California Logistics Airport. “So we’re on a campaign to grow our own.”

About a year ago, Worsham asked the 18 aviation-related companies at the airport how many mechanics they would need in the future, and they came back with **100 to 300 a year**, he said.

The curriculum, taught in conjunction with Victor Valley College, will certify mechanics in A&P, or airframe and propulsion. The two-year program would have the blessing of the Federal Aviation Administration and can boost the hourly salary of a mechanic by \$4 to \$5 an hour, he said.

Now with the donation of the plane, the training program is well on its way.

“**This airplane is one of the greatest training tools that we need**,” Worsham said.

Instead of working a job in retail or fast food, local high school graduates will have the opportunity to learn a skill without necessarily going to a four-year college, Worsham said.

“**Too many of our kids in the area go to high school, then quit their education**,” said Worsham, who plans to go recruiting at area schools. “If they don’t have the money or the desire to go to a four-year college, this is something in between.”

Although it’s something in between, the program is a sign to many people that skilled jobs are coming to the valley.

“We’re talking about wages that really provide individuals with the opportunity to have a decent quality of life, to be able to support a family, own a home and do the things that really are part of the American Dream,” said Barbara Halsey, director of the Workforce Development Department.

The courses should start anywhere from three to 12 months, Worsham said, depending on how soon the FAA can certify the curriculum. Students will be able to work as trainees for four hours a day, he added.

For Janice Olson, vice president of the Victor Valley College Foundation, FedEx’s donation is the culmination of a rare partnership.

“With enough people pulling, you can move a 727,” she said.

The 727, named “Bahja” after the daughter of a FedEx employee, **is only the second plane that the air cargo giant has donated to a school in California.**

FedEx has a handful of 727-100s left in its fleet and will be retiring almost 100 of the later-model 727-200s in 2008, Sutton said. The company is buying Airbus A300-600s and Boeing 777-200s to boost its fleet in the future.

No Training, No Protection

Passengers were being boarded at Norfolk, Virginia, U.S., on Sept. 12, 2003 when an airline employee drove tractor towards the airplane in preparation to push it back from the gate. The NTSB report said that the employee had been assigned to baggage-room duties that day and **was not qualified or authorized to conduct push-back operations**. She had not received training in push-back operations since 1992.



“Another airline employee on the ramp saw the tug driver maneuver the tug toward the tow-bar connected to the airplane’s nose gear (DC-9), heard a loud noise and saw the towbar buckle and ‘go into the air,’ the report said. “The tug struck the radome of the airplane, and the airline employee who was driving the tug was fatally injured after being trapped between the tug and the airplane.”

NTSB said that the absence of a protective enclosure over the cab of the tug was a factor in the accident.

Controllers and pilots to share Brazil air crash blame

A statement from the federal police said the **air traffic controllers could face up to 12 years for homicide**.

Air traffic controllers as well as two American pilots are likely to share the blame for Brazil's worst aviation disaster when the country's criminal probe of the September collision wraps up in about a month, a spokeswoman for the federal police said Monday.

The statement by Tamares Carvalho, spokeswoman for lead investigator Renato Sayao, **was the first time anyone connected with the criminal**

investigation has said the controllers would be held responsible for the collision of a Gol airlines Boeing 737 and Embraer Legacy 600 executive jet owned by Ronkonkoma-based ExcelAire and flown by Joseph Lepore, 42, of Bay Shore, and Jan Paladino, 34, of Westhampton Beach. Other Brazilian officials have blamed



the pilots and, more recently, the controllers [as lapses in the air traffic system have come to light](#) since the Sept. 29 crash that killed 154 people when Gol Flight 1907 crashed. None of the seven people aboard the Legacy were injured.

[The controllers could face up to 12 years in prison on homicide charges and exposing an aircraft to danger because they failed to divert the Boeing after the Legacy disappeared from their radar](#), Carvalho said.

Carvalho said she did not know whether authorities would prosecute the American pilots, who were formally accused by police with exposing an aircraft to danger before their passports were returned last month and they were allowed to leave the country after 71 days.

Because the controllers are military personnel, the police can only submit their findings to the Defense Department, which would decide whether to prosecute, Carvalho said.

[Brazilian officials continue to insist that the American pilots should have noticed that their jet's transponder, which transmits the plane's altitude and is a key component of the anti-collision or TCAS system, was not working before the collision.](#)

In a statement released Monday, ExcelAire said it "again affirms that its pilots did not intentionally or inadvertently disengage the Legacy's transponder or TCAS and that [there was no indication](#) in the cockpit at any time during the flight that the transponder or TCAS system were not operational. The accident investigators continue to analyze the Legacy's transponder and other avionics systems to determine whether those units suffered from defects or faults that compromised their operation."

Besides the criminal investigation, a civil investigation is being conducted by the Brazilian government aided by the U.S. National Transportation Board and Federal Aviation Administration. That probe on what caused the collision will be completed in the fall.

[Improve runway info, FAA asks airports](#)

[WANTS DIAGRAMS ON CLOSINGS, CONSTRUCTION](#)

The Federal Aviation Administration is asking [airports to improve how they provide information on runway and taxiway construction and closings](#), which some experts say might have been an issue in the Comair Flight 5191 crash at Blue Grass Airport.





The recommendation, posted last week on the FAA's Web site, asks airports to **provide airlines and pilots with the latest information on runway work in a diagram**. The FAA suggested **distributing it by e-mail, on a Web site or hand-delivering it**.

It would supplement Notices to Airmen, or NOTAMs, which provide information on construction and runway and taxiway closings but do not have maps. NOTAMs are printed out as text or delivered over radio.

"Due to the rapidly changing conditions that can occur on an airport when runways and taxiways are closed for maintenance or construction, **aircrews may have a hard time keeping up with these changes as they occur**," the FAA told airports. **"In many cases, the NOTAM system may be inadequate."**

On Aug. 27, a Bombardier regional jet carrying 50 people took off from the wrong runway at Lexington's Blue Grass Airport, crashing into a nearby field and killing 49 people. **Just a week before, the airport had repaved its runway and closed the taxiway connection that planes normally used to reach the main runway**.

The charts that pilots used that day were out of date, although the airport had issued NOTAMs about the construction.

Charts are published on a regular basis by private vendors, but those companies need advance time before making updates, which can mean a **lag during construction projects**.

In a lawsuit filed after the crash, **Comair says the FAA and the airport share responsibility for the crash, in part because of the inaccurate diagram**. The lawsuit seeks to have the FAA and airport pay part of any verdicts or settlements Comair must pay because of the crash.

FAA spokeswoman Laura Brown said the recommendation issued last week was not directly related to the Lexington crash. **"It is not the impetus for this," she said**.

The recommendation cites a diagram that is produced by another airport daily using a computer program. When the FAA learned of that airport's practice, the agency decided to share it with other airports, Brown said.

Blue Grass Airport officials with knowledge of the recommendation were not available for comment yesterday.

Mike Boyd, a Colorado-based aviation consultant, said the FAA made a common-sense recommendation that will not be burdensome for airports.

[What are the common factors in the Helios and the Everglades Tristar accident?](#)

Minus points for saying pilot error.

In the [Helios accident](#), the crew, suffering with the effects of hypoxia, were convinced an aural warning in the flight deck was a spurious take off configuration signal. With increasing pressure altitudes and impaired cerebral function associated with the symptoms of hypoxia, the crew suffered with an element of cognitive fixation as they tried to troubleshoot the source of the aural warning.

Similarly, in the [Everglades accident](#) in 1972, on approach the nose gear 'down and locked' light failed to illuminate after trying to recycle the gear. The entire flight deck crew became involved, in one way or another, in trying to troubleshoot the problem. During the troubleshooting, the autopilot had inadvertently disconnected and the aircraft ultimately flew into the ground. There were many factors involved in this accident but this was a [case of group cognitive fixation](#).



[FAA: Control tower policy was violated in Lexington](#)

The Federal Aviation Administration violated a federal policy by having only one air traffic controller on duty in Lexington at the time of the Comair jet crash that killed all 49 of 50 people aboard.

Since Nov. 16, 2005, the FAA has required two controllers in all towers on all shifts, agency spokeswoman Laura Brown said Tuesday.



Now two controllers will be required at Blue Grass Airport, she said.

"When air traffic management learned following this accident that this policy had not been strictly followed at Lexington, air traffic control tower, they directed the facility manager to ensure that a minimum of two controllers are on duty at all

times — one for radar operations and one for surface operations," Brown told The Courier-Journal.

She declined to say whether the [staffing shortage](#) had anything to do with Sunday's crash.

The manager wrote that the FAA was ["requiring that facilities separate the radar function from the tower function."](#)

The radar function involves controlling planes departing and approaching the airport out to about 40 miles from the tower.

The tower function focuses on controlling ground traffic at the airport, including airport vehicles, providing clearances to aircraft to taxi, and giving updated weather data to flight crews.

Mike Overly, editor of AVSIG.com, an on-line aviation safety forum hosted by the Aviation Safety Institute, a non-profit research organization based in Worthington, Ohio, [said tower staffing may be a factor in the accident, but not the only one.](#)

Overly agreed that two controllers makes operations safer.

"Two sets of eyes are better than one set," he said. ["A lot of guys have their heads down on their computers ... Having somebody who can look out the window is good."](#)

[Family members tour site of Comair Flight 5191 crash](#)

It was her first view of the place where Marcie Thomason died.

Carol Bryant and other family members of victims of the Comair Flight 5191 crash spent about 90 minutes at the scene of the crash Wednesday. Thomason was Bryant's niece.

She said it was ["just horrible."](#)

"It's about as bad as you can imagine," Bryant said. "I've never seen anything like it. I hope I never see anything like it again."



Thomason's parents and two sisters also went to the crash site but they did not want to comment about it, she said.

Six buses carrying family members and others left the Crowne Plaza Campbell House for the field where the plane came to rest Sunday after disintegrating.

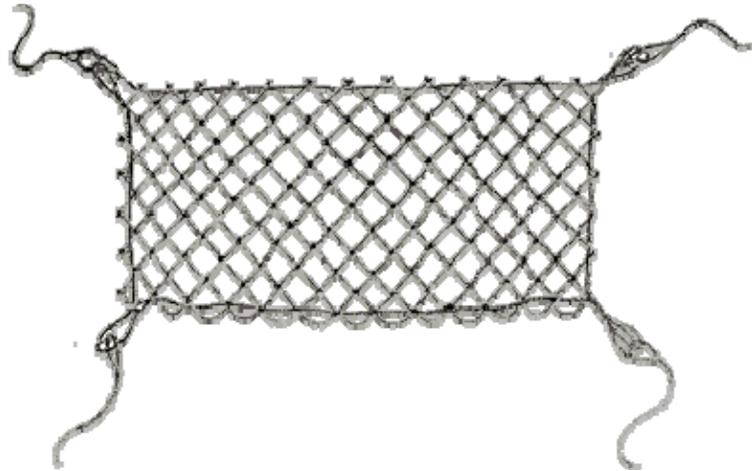
A light rain fell on the caravan.

The families were accompanied by police officers, counselors, Red Cross representatives, federal investigators and Comair officials, said Wah Jones, owner of Blue Grass Tours.

Family members of the victims appreciated some local residents who stood along Versailles Road near the entrance to the crash site and held signs reading, "We love you," and "We're sorry," Bryant said.

[Small gaps doomed Flight 5191](#) 'Every basic safety net blown through'

Five months after the crash of Comair Flight 5191, new details are emerging about the disaster that killed 49 in Lexington. And questions linger about how regulators should - or will - respond in tightening airline-safety standards.



National Transportation Safety Board investigators made no conclusions this month when they released nearly 650 pages of information gathered in their probe of the Aug. 27 crash.

[Yet a fuller picture of the disaster is emerging from the new data.](#) The pilots made critical errors, [but the investigation also revealed several small gaps in safety systems that aligned to prevent the disaster from being detected and averted.](#)

["Every basic safety net was blown through,"](#) said Jim Hall, a former chairman of the safety board.

The new data raise safety concerns in several areas, leaving this question: How far will regulators go in addressing them?

The crash has already spurred one suggestion by the Federal Aviation Administration.

[This month, it asked airports to provide diagrams of ongoing construction projects instead of just text descriptions of them.](#) The FAA acknowledged the current notification system ["may be inadequate."](#)



The nation's largest pilots union, the Air Line Pilots Association, applauded the move but said it didn't go far enough. It noted the current notification system was developed in the Teletype era and [hasn't been significantly improved since](#).

"We're really glad they've done this," said Capt. Terry McVenes, chairman of the union's safety efforts. "It falls short, however, because it's not getting directly into pilots' hands."

McVenes noted that the information would still be distributed via airlines and vendors - a network that broke down and did not provide full and accurate information to the Comair pilots, investigators have found. McVenes said all cockpits should be equipped with a moving map display similar to global positions systems available in some cars.

"The technology is already there - newer airplanes already come equipped," he said.

[Lighting was a key](#)

Documents point to [two areas where safety rules](#) could be clarified and toughened at U.S. airlines.

[The first is cockpit procedures.](#)

[Investigators recommended the FAA require airlines to implement rules making pilots confirm their aircraft's location at its assigned runway before takeoff.](#) Pre-flight check lists at Comair and many other carriers don't include this.

The investigators also recommended the FAA [require airlines to provide specific guidance on runway lighting requirements for nighttime takeoffs](#). A series of Comair pilots and first officers gave conflicting testimony to the safety board about whether such takeoffs were allowed. Investigators said vague policies at Comair and other airlines create vulnerabilities.

But one unresolved question for investigators and experts alike is: [Why would two seasoned pilots begin takeoff from a narrow, unlit runway half an hour before sunrise?](#)

[Experts say the lack of runway lights should have been an unmistakable signal that Runway 26 was not meant for a commercial jet. The runway's edge lights have been shut off for years; it's designated for daytime use only by small planes.](#)

In the cockpit, First Officer James Polehinke described the lack of lights as ["weird,"](#) but neither pilot realized the danger in time.



New material from the investigation also shows the pilots were informed that lighting was out at parts of the airport. But Comair, like other airlines, had a vague policy on when it was permissible to take off from an unlit runway.

Records show Capt. Jeffrey Clay and Polehinke had at least four dispatches saying lights were not functioning at different parts of the airport: part of the main runway lights were out; the center lights on the main runway were out; touchdown zone lights on the main runway were out; and distance remaining signs on the main runway were unlit. The day of the crash, there were also recently canceled warnings about edge lights on the main runway being dim or out of service.

Pilots and airport officials interviewed by investigators also disclosed that the first portion of Runway 26 was better lit because of light from a nearby parking garage.

Bill Waldock, a safety science professor at Embry-Riddle Aeronautical University in Prescott, Ariz., said construction added to the number of the safety notices. He said a bunch of warnings about lights could be interpreted differently. "It may have taken them off guard, and it also could mean they weren't reading the notices very carefully," he said.

Construction confusion

The second area where rules could be tightened is getting safety notices to pilots.

The vendor supplying Comair with airport maps didn't know about the construction in Lexington. Comair pilots had maps that still showed the pre-construction.

Map company Jeppesen Sanderson said a computer error caused it to not receive the notice of construction, which in turn prevented it from providing up-to-date information. Jeppesen flight safety manager "Rich Fosnot stated that Jeppesen staff had 'no idea there was ongoing construction' at LEX at the time of the accident," investigators said. "Jeppesen discovered that a software error was responsible for the data not being reported out."

Finally, the pilots of Flight 5191 also weren't given another critical dispatch. The airport warned pilots ongoing construction had closed the second half of an old taxiway. The information was not provided on the call-in advisory system that the pilots listen to prior to taxi.

**[BP flaws unattended for years, report says](#)
[Baker panel says safety lapses found at all five U.S. refineries – A look at another high risk high consequence industry failure.](#)**

Near catastrophes went uninvestigated.

And known equipment problems such as thinning pipes and vessels went unrepaired for up to 10 years.

These are just some of the **bleak discoveries** detailed in a highly critical report released Tuesday on BP's five U.S. refineries.

Although some of the plants had more woes than others, a Houston company specializing in so-called "process safety" — which concerns equipment and operations — found what it called **serious lapses at all of the refineries, not just in Texas City where 15 people were killed in a March 2005 explosion.**



The findings by ABS Consulting are the backbone of Tuesday's report made public by the BP U.S.

Refineries Independent Safety Review Panel, chaired by former Secretary of State James A. Baker III and charged with evaluating the oil giant's commitment to safety.

The panel was formed by BP last year at the urging of federal investigators looking into the **root cause** of the Texas City blast, the worst in the U.S. in more than a decade.

In unveiling the panel's findings and recommendations, Baker said the panel found that **BP focused more on personal safety issues, such as slips and falls and vehicle accidents, rather than process safety. Because the company's personal safety record improved in time, management had a "false sense of confidence that it was properly addressing process safety,"** Baker said.

In addition, the panel found a general **lack of emphasis on process safety** on the part of BP's London-based senior management — including outgoing Chief Executive John Browne.



"Browne is generally noted for his leadership in various areas, including reducing carbon dioxide emissions and developing the use of alternative fuels," the 300-page report states. "In hindsight the panel believes that if Browne had demonstrated comparable leadership on and commitment to process safety, that leadership and commitment would likely have resulted in a higher level of process safety performance in BP's U.S. refineries."

Safety underfunded

Baker and other panel members also said at a morning news conference held at the downtown Hyatt Regency that while **they found no evidence BP executives intentionally underfunded safety improvements, they nonetheless failed to dedicate enough of the company's vast profits through the years in that area.**

BP "did not always ensure that adequate resources were effectively allocated to support or sustain a high level of process safety performance," the report states.

That should change, Baker said.

"We believe that if BP implements these recommendations fully that they could become a leader in the industry," Baker said.

In a video news conference at the nearby Hilton Americas shortly after the panel released its report, Browne said he took responsibility for the company's oversights and had already begun to implement changes.

"If I had to say one thing which I hope you will all hear today it is this: **BP gets it. And I get it too. This happened on my watch, and as chief executive, I have a responsibility to learn from what has occurred,**" he said.

Under pointed questioning by reporters, Browne denied that he or any official put production and profits above personal safety, or that he or any senior manager rejected any specific request for funding of process safety. He also said that his decision to move up his retirement from 2008 to this summer had nothing to do with the Baker report.

He vowed that BP would implement all of the panel's 10 recommendations, including the most strict — that the oil giant appoint an independent monitor to report back to the board on the status of the its implementation of the panel's recommendations.

He noted that the **company has committed an average \$1.7 billion a year for the next four years to improve safety at its U.S. refineries.**

"As the report acknowledges, BP has made significant changes to its **process safety systems and culture** since the accident at Texas City," Browne said. "But we can do more. And we will do more."



Indeed, "there is still much work for BP to do in order to achieve process safety excellence," said the report filed by ABS, which was hired by the Baker panel as its technical consultant.

In addition to Texas City, BP's U.S. refineries are located in Carson, Calif.; Whiting, Ind.; Toledo, Ohio, and Cherry Point, Wash., and when fully operating they process roughly 1.3 million barrels of crude oil a day.

ABS teams visited each of the refineries except Texas City.

In that case, the consultants reviewed another company's outside review of the plant conducted as part of the BP's settlement with the U.S. Occupational Safety & Health Administration.

Among the consultants specific findings:

- In the Texas City, Carson and Whiting plants, **known equipment problems such as thinning pipes and vessels went unrepaired for months, even years.** In Texas City, **nearly 200 thickness defects were unaddressed for up to eight years, for example.**
- In all refineries except Texas City, the consultants **found that BP's tests of critical alarms and "emergency shutdown devices" were either improperly conducted or overdue.**
- "Action items" resulting from audits or near-miss investigations intended to improve safety often went uncompleted for months or even years, or were overlooked altogether at all five refineries.** For example, in Carson about half of the **action items generated between 2001 and 2004 remained open** at the time of the team's visit last spring. At Toledo and Whiting, **some items were left uncorrected for more than a year.**
- At all refineries, **BP did not adequately inspect important refinery process equipment,** resulting in extensive backlogs. "Some of these backlogs included hundreds of items overdue for long periods (i.e years)," the report said. In Texas City, **nearly 400 pressure vessels, piping, relief valves, storage tanks and other pieces of equipment were overdue, for example.**
- After discovering dangerous problems in the pressure relief systems in Whiting, the team found similar problems in Carson, Texas City and Toledo, as well as a lack of understanding of the risks involved.**
- Near misses at all five refineries were not properly investigated, and in some cases not even reported. The team found that "BP was systematically missing opportunities to learn from near misses."**

Report draws praise

BP's failure to learn from near misses in Texas City has been a concern of federal investigators at the U.S. Chemical Safety and Hazard Investigation Board, which urged creation of the Baker panel.

Investigators have said that the equipment that exploded there had had previous upsets in the months and years before the blast.

CSB Chairman Carolyn Merritt applauded the Baker panel's report. "Safety culture is created at the top, and when it fails there, it fails workers far down the line," she said. "That is what happened at BP."

Workplace Stress Management Reduces Heart Attack Risk: Study

Workers who experience minimal job-related stress may have difficulty relating to its symptoms – depression on the day before returning to work, a feeling of dread upon entering the workplace, vacations where relaxation is impossible and relentless insomnia as one's mind churns and worries.



It's not surprising that something's got to give health-wise, in the form of a heart attack, stroke or other life-altering event. On a more positive note, a new study shows that a simple workplace stress-reduction intervention can reverse some of the warning signs of cardiovascular disease.

The American Heart Association recruited 91 office workers, 59 of them men, who were facing layoffs at a DuPont subsidiary in Italy. All of the volunteers reported experiencing work-related stress. Their average age was 40 and they were generally not overweight.

The volunteers were compared to a control group of 79 healthy volunteers of a similar age who worked outside the company and reported little workplace stress.

Both groups underwent baseline psychological and medical assessments. These included questionnaires on overall stress, tiredness perception and stress-related symptoms affecting the body, along with blood pressure and heart rhythm testing.

The workers facing layoffs showed signs of stress in their heart rhythms. Those workers were offered the chance to participate in weekly one-hour stress management sessions or to receive stress-reduction tips and articles that they could read on their own time. Twenty-six of the group of 91 signed up for the weekly classes, while 25 elected to receive stress-reduction articles and emails.

The sessions focused on mental relaxation techniques, exercises for restructuring their thinking in response to stress, and coping skills.

After one year, those in both groups showed **small but significant reductions in blood pressure, along with healthier heart rhythms.** They also reported **feeling less tired** after receiving stress management training.

Managing Stress

Mini-Relaxations

The busy times are often the most stressful. See some of our mini - relaxations below.

Glance at the most recent National Vital Statistics Report listing the 10 leading causes of death in America, and you won't find the word "**stress**" anywhere. **Yet many well-respected studies link stress to heart disease and stroke – two of the top 10 killers. Stress** may also **influence cancer and chronic lower respiratory diseases,** which rank as numbers two and four, respectively, in the top 10.



Stress has implications for many other ailments as well. Depression and anxiety, which afflict millions of Americans, can be caused or exacerbated by **stress**. It also triggers flare-ups of asthma, rheumatoid arthritis, and gastrointestinal problems. And illness is just the tip of the iceberg. **Stress** affects you emotionally as well, marring the joy you draw from life and loved ones.

In the course of a lifetime, odds are good that you'll experience some very **stressful** events. You'll also face a gamut of far smaller, day-to-day **stressors**.

How you deal with these **stressful** events, big and small, will determine the impact on your physical health and emotional well-being.

Quantifying stress

Several decades ago, two psychiatrists at the University of Washington devised a scale for researchers that weighed the **stress** of major life events. The death of a spouse – which ranks highest – was later shown to have a serious impact on the health of the surviving spouse. Although most of the events on the scale would be considered traumatic, many of the life events aren't obviously negative. An outstanding personal achievement, a new baby, or a marriage may seem like cause for celebration. But even these life events can cause **stress**.

While most symptoms of **stress** may be obvious, many symptoms are more subtle. The first line of defense is to recognize that certain physical and emotional changes may indeed be caused by **stress** itself. Although most people might attribute headache, sleep disturbances, or irritability to **stress**, less obvious symptoms can include ringing in the ears, a frequent and urgent need to urinate,

and difficulty swallowing. Understanding the many ways that **stress** can manifest itself in physical and behavioral symptoms, and identifying the triggers for **stress**, is the first step toward achieving relief.

Achieving relaxation

There are almost as many techniques, practices, and treatments for dealing with **stress** as there are causes of it. From ancient relaxation techniques to the latest thinking on proper nutrition, from breathing exercises to repetitive prayer, there are numerous tools to help people cope. Some techniques can be especially beneficial under certain circumstances, but not as helpful under others. Understanding what works for us as individuals, and for the **stressful** circumstances at hand, can require an exploration of a number of **stress**-reduction methods. And as always, it is important to know when to seek professional help. These efforts can reward you richly with better health, greater peace of mind, and a smoother course through life.

Mini-relaxations

Mini-relaxations can help allay fear and reduce pain while you sit in the dentist's chair or lie on an examining table. They're equally helpful in thwarting **stress** before an important meeting, while stuck in traffic, or when faced with people or situations that annoy you. Here are a few quick relaxation techniques to try.

When you've got 1 minute. Place your hand just beneath your navel so you can feel the gentle rise and fall of your belly as you breathe. Breathe in slowly. Pause for a count of three. Breathe out. Pause for a count of three. Continue to breathe deeply for one minute, pausing for a count of three after each inhalation and exhalation.

Or alternatively, while sitting comfortably, take a few slow deep breaths and quietly repeat to yourself "I am" as you breathe in and "at peace" as you breathe out. Repeat slowly two or three times. Then feel your entire body relax into the support of the chair.

When you've got 2 minutes. Count down slowly from 10 to zero. With each number, take one complete breath, inhaling and exhaling. For example, breathe in deeply saying "10" to yourself. Breathe out slowly. On your next breath, say "nine," and so on. If you feel lightheaded, count down more slowly to space your breaths further apart. When you reach zero, you should feel more relaxed. If not, go through the exercise again.

When you've got 3 minutes. While sitting down, take a break from whatever you're doing and check your body for tension. Relax your facial muscles and allow your jaw to fall open slightly. Let your shoulders drop. Let your arms fall to your sides. Allow your hands to loosen so that there are spaces between your fingers. Uncross your legs or ankles. Feel your thighs sink into your chair, letting your legs fall comfortably apart. Feel your shins and calves become heavier and your feet grow roots into the floor. Now breathe in slowly and breathe out slowly. Each time you breathe out, try to relax even more.

Monthly Inventory on
how true you have
been to your New
Year's Resolution.

Truly make it a year to
remember! It's never
too late to commit to
these nine wellness
initiatives.

2007 HEALTHY RESOLUTIONS



MAKE IT A YEAR TO REMEMBER

© 2007 JetBlue Airways Corporation. All rights reserved. Safety. Smart.

SMOKING FACTS OF THE DAY

The Body Count

Each year, tobacco use accounts for approximately 438,000 deaths in the U.S. That's more than deaths from HIV, illegal drug use, alcohol use, motor vehicle injuries, suicides and murders combined.

Source: [CDC Smoking and Health website](http://www.cdc.gov/tobacco)



The Dangers of Secondhand Smoke

Workers who are exposed to secondhand smoke in the workplace are 17% more likely to develop lung cancer than workers who are not so exposed.

Source: Boffetta, Agudo, Ahrens, et al., "Multicenter Case-Control Study of Exposure to Environmental Tobacco Smoke and Lung Cancer in Europe," *Journal of the National Cancer Institute*, 1998, 90: 1440-1445.



Not such a crazy idea

Picture This!



This scaffold and I use the term loosely, almost defies logic, and test the laws of both gravity and common sense!

END