Aviation Human Factors Industry News

December 18, 2007

Vol. III. Issue 46

Canada says Air France crash jet came in high,fast

Canada's TSB Issues Report On 2005 Air France A340 Overrun

Recommends Lengthening Runways, New Severe WX Rules

A call to lengthen runways and new rules governing landing procedures during thunderstorms are just two of the recommendations from Canada's Transportation Safety Board, following the August 2005 runway overrun accident involving an Airbus A340 operating for Air France.

As ANN reported, Air France Flight 348 skidded off the runway at Toronto's Pearson International Airport as it landed during a fierce thunderstorm. Amazingly, all 309 passengers and crew were able to escape the burning wreckage, though 10 were seriously injured in the August 2, 2005 accident.

In its final report issued Wednesday, the TSB recommended Transport Canada mandate 300-meter overrun areas be added to each end of all Canadian runways. TSB chair Wendy Tadros noted that's already an international standard.

jetBlue AIRWAYS

"We think more needs to be done to make sure aircraft will always touch down safely," Tadros said. If insufficient space is available for such overrun areas, alternate methods to stop a runaway aircraft must be devised.

Other recommendations include new rules about landing in thunderstorms, as well as increased training for pilots and flight crews. Suggested measures include a requirement compute required landing distances ahead of touchdown, taking weather conditions into account -- something many crews don't do, reports CBC News.

The report also recommends cabin crews instruct passengers to leave their carry-on baggage behind during an evacuation; apparently, a few persons tried to take their bags with them while escaping Flight 348.

As for the cause of the accident, it isn't difficult to see what went wrong. TSB Lead Investigator Réal Levasseur said the pilot continued his approach despite heavy rain and wind shear, that created a strong tailwind as the A340 approached.

"The pilot committed to landing, as he believed that this action was safer than conducting a missed approach into the storm," Levasseur said.

Despite evidence of judgment errors in its report, TSB investigations director Nick Stoss took steps to assert the agency does not blame the pilot for the accident.

"After we release our reports, the headlines will sometimes read: 'TSB blames the pilot.' Nothing can be further from the truth," he said. "I can tell you this... crew was not the first one to make the same decisions in much of the same conditions.

"In fact, the accident record shows the potential for landing accidents in bad weather remains today," Stoss added, noting another 10 large airliners have departed runways on landing since the Air France accident.

"At the TSB, we believe that accidents speak to a failure in the system," Stoss said. "If we don't do something to change the system, accidents such as this runway overrun will needlessly happen again."

Transport Minister Lawrence Canon said he takes the TSB recommendations seriously, and plans to act on them.

"Transport Canada fully supports the intent of the recommendations made today and departmental officials are currently reviewing the contents of the report," Canon Wednesday in a press release. "Our government's priority is to help ensure the safety and security of the transportation system."

jetBlue AIRWAYS

Learning from the Air France Crash at Pearson

Just over two years ago, I returned home to the smell of burning metal and rubber permeating the neighborhood, and a cloud of smoke surrounding the airport a few blocks away. And while all 297 passengers and 12 crew members survived the crash, that cloud of smoke caused by Air France Flight 358 was still classified as one of the biggest crises to hit Toronto's Pearson International Airport in its seventy year history.

Last week the Canadian Transportation Safety Board's probe into the two-year-old crash — a probe that was predicted to take years — reiterated what has been said since that miraculous August day: pilots need clear rules and better training on how to properly handle a landing in severe weather.

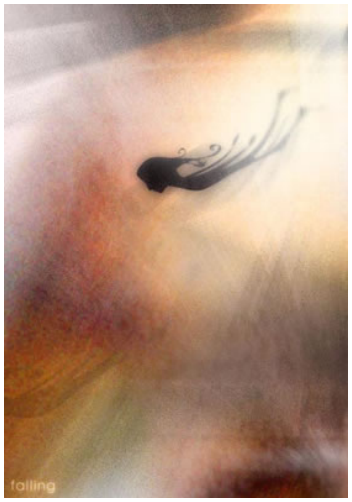
The board released seven recommendations as a result of their two-year investigation, most of them focusing on worldwide standards for pilot training and severe weather landing recommendations. Only one of the recommendations, however, addressed structural issues at airports themselves: a 300 meter safety area at the end of major Canadian runways.

While I applaud the efforts of the TSB, I wonder if Pearson Airport can do more to try and mitigate such events in the future. It's no surprise that Toronto gets its fair share of "severe weather," so perhaps the GTAA can look at some of the best practices from other airports in similar environmental situations — in Canada and abroad — in order to reduce the risk of weather-related incidents.

jetBlue AIRWAYS

This might be happening already, so I'd love for someone involved in airline safety to give me some insight as to what other precautions are being taken to avoid incidents like the Air France Flight 358 crisis in the future. And of course, I'm no aviation expert, just someone that flies a lot, so if there's anyone out there with more expertise in airport and airplane design standards, I'd love to hear your thoughts on the recommendations.

Flight Attendant Ejected From Galley



Bombardier CRJ200. No Damage. One Serious Injury.

The flight attendant said that before the passenger were boarded for departure from Chicago on May 31, 2005, the captain told her to keep at least one door open because an external air conditioning cart was being use to cool the cabin. 'The captain did not specify that the reason the flight attendant needed to keep a door open was because the air conditioning cart (also) pressurized the cabin if all the doors were closed,' the NTSB report said.

'The flight attendant stated that after the (24) passengers had boarded the airplane…the captain asked her to shut the (galley) service door and the main cabin door,' the report said. She shut the doors, and the cabin began to pressurize. 'The captain felt the pressure rise in his ears and yelled, 'Get the door open.'

The flight attendant said that she bent over, held the service door assist handle with her left hand and opened the service door with her right hand. 'As she lifted the handle upward, the door exploded open, and she was blown out of the airplane and onto the ground," the report said. 'The flight attendant sustained a fractured left shoulder.'

The air-conditioning cart is powered by a diesel engine and provides 1,500 cu ft per minute of cooled or heated air to the cabin.

With only an on/off switch, 'the cart has no means of regulating the amount of pressurized, conditioned air that it feeds to the cabin,' the report said.

The operator's pilots and ramp personnel – but not its flight attendants – receive training on the operation of the air conditioning cart. 'The airplane has two placards warning to keep a door open when the air conditioning cart is hooked up to the airplane,' the report said. 'One placard is on the overhead console in the cockpit and the other is outside of the cabin on the fuselage skin directly above the connections for the external air conditioning cart.'

jetBlue AIRWAYS

'These are safety issues'

De-icer falsified key documents, DIA official says

A major contractor at Denver International Airport has committed "alarming" safety violations by apparently falsifying critical safety documents, according to the airport's deputy manager of aviation.

John Kinney, who oversees airport operations, viewed the results of a three-month CBS 4 News investigation into the conduct of Servisair, the largest de-icing contractor at DIA.

"What we saw on the video was very concerning," Kinney said.

Servisair de-ices planes for 22 airlines at DIA. It hired nearly 500 de-icers, or "icemen" as they are known, to work this winter.

Each is supposed to receive about two hours of training by Servisair in driving around the airfield.

After that, the employees are sent to receive a security badge from DIA, a badge that indicates the employees have been properly trained.

When a CBS 4 producer applied for a de-icing job with Servisair, he never received any driving training. Even so, Servisair sent him to get an airport security badge, with a driving endorsement.

An undercover camera was rolling as a female Servisair administrator filled out an official DIA form for the CBS 4 employee so he could get a driving endorsement.

"So, if they ask you if you did your driving training, yeah," she says. "You will do it when you do OJT (on the job training)."

She then fills out a form for the employee indicating he had already received comprehensive training in driving around DIA's restricted areas.

She signed it "Eric Hanson," the name of the man who provides driving training for Servisair.

The CBS 4 employee never met Eric Hanson. But armed with the form, DIA personnel provided him with a security badge clearing him to drive around the airfield.

'Not the way'

The transaction was "totally inappropriate," said Larry Alfs, Servisair's director of de-icing operations.

"We're very surprised. This is not the way we do things," Alfs said.

The CBS 4 investigation found this wasn't an isolated case.

A Servisair de-icer who was hired earlier this fall said he never received driving training and was given a falsified form by the company allowing him to obtain a security badge from DIA with a driving endorsement. The man spoke on the condition his name not be used.

"It was a total lie," he said. "He (a Servisair manager) said if I was asked by DIA security if I received the training, tell them 'Yes, I got it already,' and then he signed the form off.

Hasn't received training

"That's a real safety issue," the de-icer said. "Some of these people are going to drive their equipment with no idea where to go or how to do it. As far as I'm concerned, they could run into a plane or go into a runway."

The Servisair employee showed CBS 4 his security badge, with its driving endorsement.

"To this day I haven't received that training," he said.

The licensing of unqualified employees comes even as DIA has implemented rigorous new rules for anyone who drives around the airfield.

Those changes were prompted by a series of incursions involving planes and vehicles. On Feb. 2, a DIA snowplow driver drove onto an active runway in front of a United Airlines jet that had just landed. The plane's pilots used emergency braking to avoid colliding with the plow.

All of which makes the actions of Servisair even more egregious to DIA administrators.

"There's no excuse," said Kinney. "These are safety issues."

Kinney said he was notifying the FAA of the infractions.

Additionally, he said, Servisair managers were being ordered to attend a hearing this week to explain what the CBS 4 investigation uncovered.

Kinney said DIA also was undertaking its own investigation of Servisair's driver training.

Late last week, under pressure from DIA administrators, Servisair ordered all its de-icers back for two hours of "additional mandatory driver training."

CAA UK issues Aircraft Maintenance Incident Analysis Paper

The U.K. CAA released the results of an analyses of a selection of maintenance related events on jet aircraft above 5,700kg MTOW, captured and stored under the requirements of the CAA's Mandatory Occurrence Reporting (MOR).

The data showed that the vast majority of MORs were related to Equipment and Furnishings, escape slides in particular. The study concludes that the number of maintenance related MORs as a percentage of the total number of MORs submitted to the CAA appears to decrease steadily from 2000 to 2005.

This reduction may, in part, be attributable to the extensive efforts of the CAA to promote human factors awareness training, guidance and policy within the industry. Recommendations include improving the consistency and comprehensiveness of data captured to facilitate future trend analysis, and identification of the underlying causes of maintenance error. (CAA)

CAA Paper 2007/04:
http://www.caa.co.uk/application.aspx?catid=33&pagetype=65&appid=11&mode=detail&id=2971

Fatalities Drop

FAA said the number of fatal general aviation accidents in fiscal 2007 – 314 – was less then the goal of no more than 331 fatal accidents the agency had established. Fatalities in GA accidents declined from 676 in FY2006 to 564 in FY2007.

“This record is due to dedicated commitment to safety by everyone in general aviation,” said FAA Associate Administrator for Aviation Safety Nicholas A. Sabatini.

‘In particular, manufactures are providing sophisticated technology like GPS and glass cockpits – and the training to go with them – and the FAA is vigorously encouraging adoption of these safety enhancements.”

Africa: Continent Records Highest Number of Airline Accidents

Africa has recorded the highest rate of accidents this year compared to other continents, the International Air Transport Association has said.

The continent's accident rate increased from 4.31 to 6.04 per million flights.

"But the problem crosses more borders so we are working multi-laterally to help airlines move forward on the agenda set by the ICAO's Safety for Africa," IATA's director general and CEO Giovanni Bisignani said last week during the Federal Aviation Administration (FAA) International Forum in the US.

In a bid to make air travel safer, IATA is looking at opening an office in Nigeria.

Poor infrastructure, poor maintenance of aircrafts and the lack of investment in new technologies have been identified as some of the reasons the continent has a poor safety record.

According to IATA, the preliminary results of 2007 show an accident rate of 0.9 per million flights globally with regions like Middle East and North Africa reporting zero accidents. Europe and North America also reported some improvements.

Brazil, Latin America and Asia Pacific were also identified as three major regions experiencing high accident rates.

IATA has a goal of zero accidents with an interim target to reduce the industry rate to 0.49 accidents per million flights in 2008, a 25 per cent improvement.

According to a 2006 safety report, adverse weather, poor communication and flight crew training were the main contributors to accidents last year.

NTSB recommends fire suppression on cargo planes

Fire-suppression systems should be installed in cargo airplanes, the National Transportation Safety Board recommended last week in a hearing prompted by the in-flight fire of a UPS DC-8 last year.

After an extensive investigation of the Feb. 7, 2006 incident in which the crew evacuated after touching down at Philadelphia International Airport, the board was unable to determine the cause of the blaze, which heavily damaged the plane and its cargo. There was no evidence of pre-existing problems with the mechanics of the plane, or issues with the qualifications or performance of the crew, the board said.

The crew had smelled smoke, but none of the aircraft alarms initially detected a problem. The fire smoldered until reaching a cargo container, where it began to spread. The plane was given emergency clearance to land in Philadelphia, and was in flame minutes after landing.

The NTSB does not have the authority to issue new regulations, but can recommend changes.

The board recommended that the Federal Aviation Administration provide clear guidance to passenger and cargo aircraft operators on how to respond in cases where there is evidence of fire, but no alarms are triggered. It also asked the FAA to ensure that detectors account for the effects of cargo and cargo containers on air flow around the sensors.

It further called for floor-level emergency exits on cargo planes and for firefighting and rescue personnel that serve airports to be fully familiar with cargo aircraft and with specialized aircraft firefighting equipment.

And the board called for steps to reduce the possible risk from carrying some types of lithium batteries, which some see as a fire hazard.

UPS spokesman Mike Mangeot said the company is looking into the feasibility of fire-suppression systems, though none are currently on the market. "We stress safety. That's first and foremost in our operations," he said.

Mangeot said there was no evidence that lithium batteries were to blame for the DC-8 fire. "We believe that we have adequate systems in place for the safe shipment of those batteries today."

jetBlue AIRWAYS

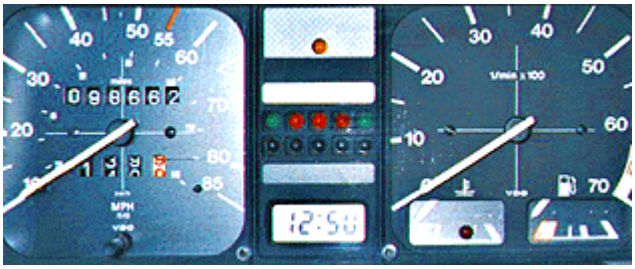
The Independent Pilots Association, which represents about 3,000 UPS pilots, was "very pleased with the recommendations that the board has made," said Michael Moody Jr., chairman of the organization's safety committee.

He said there should not be "two levels of safety" for passenger and cargo planes. Measures already required on passenger aircraft, such as fire-suppression systems, should be standard on all planes, Moody said.

Bad Designs

How fast am I going?

For a long time people were mistaking the tachometer for the speedometer. One might think that they could break this habit pretty easily. Why was this such a difficult habit to break? At first people thought that the problem was that in one of the cars, the speedometer was on the right (above) and on the other car, it was on the left (below). But as several readers pointed out, the speedometer and tachometer on the car below have the same numeric scale. So if a gauge shows 30, does it indicate 30 miles per hour, or 3000 revolutions per minute? The gauge above doesn't have that problem.



Design suggestion

When you have several similar displays close together and lined up, people will confuse them with each other. This is especially true when displays with numeric scales have the same increments. These displays should be made more distinctive by making the numeric scale increments different.

The top 10 IT disasters of all time

From faulty satellites nearly causing World War III to the Millennium Bug, poorly executed IT has had a lot to answer for over the years

Following the loss of the personal records of some 25 million child benefit recipients by Her Majesty's Revenue & Customs this month, the UK government will be acutely aware of how quickly mismanagement of technology can lead to serious problems.

While technology wasn't to blame per se in the HMRC data loss, there are plenty of recorded examples where faulty hardware and software have cost the organizations concerned dearly, both financially and in terms of reputation — and resulted in some near misses for the public.

Here's a considered list of some of the worst IT- related disasters and failures. The order is subjective — with number one being the worst.

1. Faulty Soviet early warning system nearly causes WWIII (1983)

The threat of computers purposefully starting World War III is still the stuff of science fiction, but accidental software glitches have brought us worryingly close in the past. Although there are numerous alleged events of this ilk, the secrecy around military systems makes it hard to sort the urban myths from the real incidents.

However, one example that is well recorded happened back in 1983, and was the direct result of a software bug in the Soviet early warning system. The Russians' system told them that the US had launched five ballistic missiles. However, the duty officer for the system, one Lt Col Stanislav Petrov, claims he had a "...funny feeling in my gut", and reasoned if the US was really attacking they would launch more than five missiles.

The trigger for the near apocalyptic disaster was traced to a fault in software that was supposed to filter out false missile detections caused by satellites picking up sunlight reflections off cloud-tops.

2. The AT&T network collapse (1990)

In 1990, 75 million phone calls across the US went unanswered after a single switch at one of AT&T's 114 switching centers suffered a minor mechanical problem, which shut down the centre. When the centre came back up soon afterwards, it sent a message to other centers, which in turn caused them to trip and shut down and reset.

The culprit turned out to be an error in a single line of code — not hackers, as some claimed at the time — that had been added during highly complex software upgrade. American Airlines alone estimated this small error cost it 200,000 reservations.

3. The explosion of the Ariane 5 (1996)

In 1996, Europe's newest and unmanned satellite-launching rocket, the Ariane 5, was intentionally blown up just seconds after taking off on its maiden flight from Kourou, French Guiana. The European Space Agency estimated that total development of Ariane 5 cost more than $8bn. On board Ariane 5 was a $500m set of four scientific satellites created to study how the Earth's magnetic field interacts with Solar Winds.

According to a piece in the *New York Times Magazine*, the self-destruction was triggered by software trying to stuff "a 64-bit number into a 16-bit space".

"This shutdown occurred 36.7 seconds after launch, when the guidance system's own computer tried to convert one piece of data — the sideways velocity of the rocket — from a 64-bit format to a 16-bit format. The number was too big, and an overflow error resulted. When the guidance system shut down, it passed control to an identical, redundant unit, which was there to provide backup in case of just such a failure. But the second unit had failed in the identical manner a few milliseconds before. And why not? It was running the same software," the article stated.

4. Airbus A380 suffers from incompatible software issues (2006)

The Airbus issue of 2006 highlighted a problem many companies can have with software: what happens when one program doesn't talk to the another. In this case, the problem was caused by two halves of the same program, the CATIA software that is used to design and assemble one of the world's largest aircraft, the Airbus A380.

This was a major European undertaking and, according to *Business Week*, the problem arose with communications between two organizations in the group: the French Dassault Aviation and a Hamburg factory.

Put simply, the German system used an out-of-date version of CATIA and the French system used the latest version. So when Airbus was bringing together two halves of the aircraft, the different software meant that the wiring on one did not match the wiring in the other. The cables could not meet up without being changed.

The problem was eventually fixed, but only at a cost that nobody seems to want to put an absolute figure on. But all agreed it cost a lot, and put the project back a year or more.

jetBlue AIRWAYS

5. Mars Climate Observer metric problem (1998)

Two spacecraft, the Mars Climate Orbiter and the Mars Polar Lander, were part of a space program that, in 1998, was supposed to study the Martian weather, climate, and water and carbon dioxide content of the atmosphere. But a problem occurred when a navigation error caused the lander to fly too low in the atmosphere and it was destroyed.

What caused the error? A sub-contractor on the NASA program had used imperial units (as used in the US), rather than the Nasa-specified metric units (as used in Europe).

6. EDS and the Child Support Agency (2004)

Business services giant EDS waded in with this spectacular disaster, which assisted in the destruction of the Child Support Agency (CSA) and cost the taxpayer over a billion pounds.

EDS's CS2 computer system somehow managed to overpay 1.9 million people and underpay around 700,000, partly because the Department for Work and Pensions (DWP) decided to reform the CSA at the same time as bringing in CS2.

Edward Leigh, chairman of the Public Accounts Committee, was outraged when the National Audit Office subsequently picked through the wreckage: "Ignoring ample warnings, the DWP, the CSA and IT contractor EDS introduced a large, complex IT system at the same time as restructuring the agency. The new system was brought in and, as night follows day, stumbled and now has enormous operational difficulties."

7. The two-digit year-2000 problem (1999/2000)

A lot of IT vendors and contractors did very well out of the billions spent to avoid what many feared would be the disaster related to the Millennium Bug. Rumors of astronomical contract rates and retainers abounded.

And the sound of clocks striking midnight in time zones around the world was followed by... not panic, not crashing computer systems, in fact nothing more than New Year celebrations.

So why include it here? That the predictions of doom came to naught is irrelevant, as we're not talking about the disaster that was averted, but the original disastrous decision to use and keep using for longer than was either necessary or prudent double digits for the date field in computer programs. A report by the House of Commons Library pegged the cost of fixing the bug at £400bn. And that is why the Millennium Bug deserves a place in the top 10.

8. When the laptops exploded (2006)

It all began simply, but certainly not quietly, when a laptop manufactured by Dell burst into flames at a trade show in Japan.

jetBlue AIRWAYS

There had been rumors of laptops catching fire, but the difference here was that the Dell laptop managed to do it in the full glare of publicity and video captured it in full color.

(Unfortunately, the video capturing the incident appears to have vanished from the web).

"We have captured the notebook and have begun investigating the event," Dell spokeswoman Anne Camden reported at the time, and investigate Dell did. At the end of these investigations the problem was traced to an issue with the battery/power supply on the individual laptop that had overheated and caught fire.

It was an expensive issue for Dell to sort out. As a result of its investigation Dell decided that it would be prudent to recall and replace 4.1m laptop batteries.

Company chief executive Michael Dell eventually laid the blame the for the faulty batteries with the manufacturer of the battery cells — Sony. But that wasn't the end of it. Apple reported issues for iPods and Macbooks and many PC suppliers reported the same. Matsushita alone has had to recall around 54 million devices. Sony estimated at the time that the overall cost of supporting the recall programmers of Apple and Dell would amount to between ¥20bn (£90m) and ¥30bn

9. Siemens and the passport system (1999)

It was the summer of 1999, and half a million British citizens were less than happy to discover that their new passports couldn't be issued on time because the Passport Agency had brought in a new Siemens computer system without sufficiently testing it and training staff first.

Hundreds of people missed their holidays and the Home Office had to pay millions in compensation, staff overtime and umbrellas for the poor people queuing in the rain for passports. But why such an unexpectedly huge demand for passports? The law had recently changed to demand, for the first time, that all children under 16 had to get one if they were traveling abroad.

Tory MP Anne Widdecombe summed it up well while berating the then home secretary, Jack Straw, over the fiasco: "Common sense should have told him that to change the law on child passports at the same time as introducing a new computer system into the agency was storing up trouble for the future."

10. LA Airport flights grounded (2007)

Some 17,000 planes were grounded at Los Angeles International Airport earlier this year because of a software problem. The problem that hit systems at United States Customs and Border Protection (USCBP) agency was a simple one caused in a piece of lowly, inexpensive equipment.

jetBlue AIRWAYS

The device in question was a network card that, instead of shutting down as perhaps it should have done, persisted in sending the incorrect data out across the network. The data then cascaded out until it hit the entire network at the USCBP and brought it to a standstill. Nobody could be authorized to leave or enter the US through the airport for eight hours. Passengers were not impressed.

(Note: Article purposely omitted incidents that resulted in loss of life.)

Idaho's Oldest Crop-Duster Retires

After 43 years and 150,000 takeoffs and landings (!), 74-year-old crop-duster Don Taylor says it's time to take on some milder pursuits—like skydiving, hang gliding, scuba diving and the little aerobatic aircraft he's building. "If it was just up to me, I'd still be up there," Taylor told the Idaho Statesman as he reflected on one of the longest crop-dusting careers ever recorded. "Flying has always been a miracle to me."

The Statesman did some digging on this story and found that a career crop-duster has a one-in-three chance of dying on the job. Taylor told the newspaper that ego is the biggest determining factor in pilot survival. "You have to realize your limitations," he said. "The most dangerous thing is an ego. People with big egos think they can break the rules. You can't." With that kind of experience, close calls are inevitable and Taylor has had his share, but they've never shaken the grip crop-dusting holds on him. "To me it's a miracle," he said. "I have the feeling that flying a crop duster is like being a cellist; it's an extension of your physical and mental abilities. It's so graceful. I'm going to miss that."

Midnight Shift Nugget

Your bedroom might be keeping you form restful sleep. Here are the essentials:

A calming paint color. **Studies have shown that color can produce emotions. When we walk into a room, we want to have a sleep environment that's conductive to sleep. Don't use high gloss paint in your bedroom. You want a flat paint because again, it helps with the tone and the color.**

The right light. **Keep your same lamp but use a 45 watt bulb. One that not so bright that it's telling your brain that it's morning time and then you should stop producing melatonin, which is one of the things that helps your sleep. Also put a dimmer switch in your bedroom to create that ambiance.**

A good reading light. **Look into purchasing the Light Wedge (www.lightwedge.com). What's interesting about this is you place it across and it actually shoots light across the page. So you're not getting that bright light that would prevent you from getting melatonin. It also reduces eye strain as well.**

Ambient comfort pillows. **This pillow can help increase oxygen levels to your body by up to 29 percent. It uses a specific thing called nanotechnology, and what it does is it takes the ambient energy in the air and it pulls it in, and when you lie on the pillow, it helps give it back to your skin which on your skin helps bring oxygen to it. Ambient comfort pillows can be found in various department stores.**

The Indulgence pillow. **This is perfect for people who sleep on their sides. What's great about this is it's a little bit thicker, it's got a little bit more fill in it. What's also nice is it's completely hypoallergenic. Find these pillows at Bed, Bath & Beyond.**

How Much Exercise Is Enough?

Everyone should exercise for 20 minutes three times per week. No, make that five times per week for 30 minutes. No, make it more like an hour every day. No, scratch that — short bursts of intense activity for 10 minutes at a time, a few times a day.

You hear so much contradictory information about exercise, it's hard to know what to believe. No wonder so many people tune out completely, and go back to surfing the Net or watching TV. A logical conclusion might be that researchers do not know what they are talking about. Actually, the situation is much worse — all of those seemingly contradictory recommendations are probably true.

In actuality, you only need to do gentle activities like walking and gardening to lower your risk of heart disease. Below is a quick guide to what constitutes a reasonable prescription for exercise:

jetBlue AIRWAYS

1. **If you aren't doing much physically, then mild exercise a few times a week will cut your heart disease risk in half. Americans have become incredibly sedentary — remote controls, drive-up banks, elevators, and other conveniences have made it possible to get through the day burning a trivial amount of calories. As a result, even mild activity — like walking at a reasonable clip — a few times per week can make a big difference in the health of your blood vessels. Just raising your heart rate and dilating those arteries modestly can help to lower your blood pressure and fight off atherosclerosis. So, if you are a true couch potato, begin by doing 20- to 30-minute walks three days a week. If you feel chest pressure, light-headed, or markedly short of breath, see your doctor right away. But if not, get back out there in two days.**
2. **If you do mild exercise a few times a week, increase the frequency to every day. At this point, we know it is safe for you to take those one- to two-mile walks. So what's the point of waiting two days before your next one? Going to daily exercise will help you to burn more calories, and that will have a whole range of beneficial health effects.**
3. **If you can do mild or moderate physical activities daily, start doing short bursts of more intense activity. You can jog five or 10 miles per day at the same slow clip, and you will burn plenty of calories, but you won't really make your cardiovascular system much healthier. One of the painful messages from recent research is that intense activity — 30 to 60 seconds of really pushing yourself — takes the health of your blood vessels to a new level. This kind of interval training is what athletes do, and for good reason. It conditions your arteries to pump out nitric oxide and other chemicals that help them dilate when your muscles really need a lot of blood. And there is pretty good evidence that this kind of stress on the arteries helps to keep them younger.**

Naturally, you should not increase your activity level if you feel any of the warning symptoms described above. Those are good reasons to stop, rest, and give your physician a call. But the bottom line on exercise is that whatever you are doing, try doing more. If you are burning a lot of calories with long bouts of exercise, you should try exercising more intensely for shorter periods.

It takes *discipline* to constantly move to a higher level of exercise. Sometimes working with a trainer or going to an exercise class can help.

Sporty's 2007 Christmas Ornament

This year's Sporty's Christmas Ornament features Charles Lindbergh's Spirit of St. Louis. This aircraft was selected for the 2007 ornament because 80 years ago this year Lindbergh made his famous flight.

jetBlue AIRWAYS

The Spirit of St. Louis is etched on the ornament, along with the year. Sporty's Crystal Christmas ornament comes in an attractive gift box and includes a colorful ribbon.

Sporty's 2007 Crystal Christmas Ornament is available for $24.95 and may be ordered from Sporty's Web site.

HOLIDAY SAFETY

As the holidays draw near, decorative lighting and special effects become important components of the festive season. Christmas trees, in particular, are a traditional part of the season. And although they are special, trees pose a definite safety risk.

If you're using a natural tree this year reduce the risk of a tree fire by taking the following precautions.

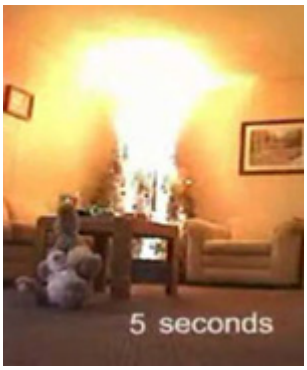
- **Choose a freshly cut green tree, not one that has dried out through weeks of storage. If you are buying one from a tree lot, tap the trunk on the ground; if several needles fall off, it's too dry. Needles that bend and are not easily pulled off indicate a fresh tree.**
- **Consider a potted Christmas tree so you can plant it in your yard once the holidays are over.**
- **Before setting up your tree, cut two inches diagonally off the butt. The tree will draw water more easily from a fresh cut.**
- **Stand the tree in a tub or bucket of water and keep the tree butt immersed to prevent the tree from drying out.**
- **Select a safe location for the tree, away from drapes and curtains and from drying and heating sources such as registers, radiators and television sets. Don't block doors or windows which might be used to escape in an emergency and never put a tree near a fireplace!**
- **Use a tree-stand with widespread legs for better balance and a large water reserve in which to immerse the tree butt. Check the water level every day and add more as required.**
- **Check your Christmas lights for defects. Spread them out on a non-flammable surface before installing them. Make sure there are no broken bulbs, all electrical cords are free of cuts or frays and the plugs are in good condition.**
- **Extension cords should never be placed under carpets or where they could be a tripping hazard.**
- **Don't leave the Christmas tree lights on if there is no one in the room.**
- **If the tree begins to lose an excessive amount of needles, remove it immediately.**
- **Never burn your tree in the fireplace!**

These safety tips will help prevent your Christmas holiday plans from going up in smoke!

jetBlue AIRWAYS

FROM THE VIDEO FILES

Yes, Virginia, There Really Is a Danger



Having trouble convincing your workers that there's much difference between a dry Christmas tree and a well-watered one? Show them this demonstration conducted by the National Fire Protection Association and Underwriters Laboratories.

Click here to watch the demonstration video.

Avoid the perils of perfectionism this holiday season

Often evident at the holidays, this personality trait has a dark side.

It may be "the most wonderful time of the year," but in many ways the holiday season could also be called the perfectionist season. Although holiday celebrations vary, conditions are perfect for one personality trait to emerge forcefully: The desire for everything to be perfect — serving the perfect meal, hosting the perfect family gathering, or showing off the perfect children.

Perfectionism can be exhausting. In extreme forms, it may also be hazardous to mental health.

Various studies over the years have linked perfectionism to obsessive-compulsive disorder, obsessive-compulsive personality disorder, mood disorders (such as anxiety and depression), eating disorders (such as anorexia and bulimia), body dysmorphic disorder, and an interest in cosmetic surgery. Perfectionism has also been investigated — but subsequently dismissed — as a cause of insomnia and irritable bowel syndrome.

Exploring perfectionism

Efforts to pin down perfectionism over the years have been, well, less than perfect. The debate continues about how best to define this personality trait and whether it is always a detriment to mental health, or might sometimes be a benefit.

Two perfectionism scales are used extensively today. The Frost Multidimensional Perfectionism Scale assesses six specific aspects of perfectionism: concern over mistakes, personal standards, parental criticism, parental expectations, doubts about actions, and organization.

The Hewitt and Flett Multidimensional Perfectionism Scale, in contrast, measures three personal and social traits: self-oriented perfectionism (setting high standards for yourself), socially prescribed perfectionism (thinking other people are setting high expectations for you), and other-oriented perfectionism (having high expectations of other people).

In 1978, Dr. Don Hamachek first suggested that perfectionism could come in two forms — the "neurotic" one characterized by excessively high standards and driven by a fear of failure, and the "normal" version, characterized by more reasonable standards and a feeling of satisfaction. When it comes to the research, though, scientists have overwhelmingly focused on the detrimental aspects of perfectionism.

One glaring example: eating disorders. Researchers reviewed 55 papers on eating disorders and perfectionism that were published between 1990 and 2005. Most studies suggested that eating disorders (especially anorexia) tend to develop in people who are perfectionist by nature and that the perfectionism endures even after recovery.

It remains unclear what causes perfectionism to develop in the first place. Some evidence suggests that, like perfect skin and teeth, perfectionism seems to run in families, and so may have a genetic component. Another view is that perfectionism is a response to environmental pressures and needs to be understood in a social context.

Relax and enjoy

Keep in mind that the holiday season is short and you can only do so much. Here are some tactics to help make the season more enjoyable:

Choose activities that are most likely to bring joy to you and the people you care about.
Use the time at any "obligatory gatherings" to deepen or newly explore a few relationships that matter most to you, rather than touch superficially on everyone in the room.
Try to delegate or discard tasks that eat into your time, or do them together with friends or family members.
Instead of trying to squeeze all your socializing into the holidays, make dates to see friends in the following weeks.
Be flexible; this may be the year for a family vacation instead of the usual round of events and gatherings.

jetBlue AIRWAYS

Picture This!

Here's photo of a recently replaced engine. This was a new engine but it had to be replaced again due to the misplaced tool.