Aviation Human Factors Industry News

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City Shuts Down Baggage Elevators at Airport

DAYTON - Because of a May 16 accident at Dayton International Airport in which a Pinnacle Airlines employee was killed, the city has closed 20 baggage elevators for an indefinite time.

The city, which owns the airport, has shut down the elevators as a precaution until it receives recommendations from the two manufacturers of the elevators about what should be done to ensure that the devices can be safely operated, city spokesman Tom Biedenharn said Thursday. There is no timetable for when the elevators will be returned to service, he said.

"We're being duly, and overly, cautious until we can make a decision on how to proceed with those," Biedenharn said.

The elevators are used to move carry-on baggage of passengers boarding or departing regional jets at the airport. For now, baggage handlers are moving that luggage by stairs.

Baggage handler Catrina Coffman, 21, of Harrison Twp., was killed in May while trying to remove luggage jammed in the elevator. The U.S. Occupational Safety and Health Administration investigated and concluded that Coffman's employer, Pinnacle Airlines, had failed to train employees in safety procedures to ensure that any powered machinery they serviced would first be disconnected from electricity sources.

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The Montgomery County coroner ruled that Coffman's death was an accident, and that she died of asphyxiation due to mechanical chest compression and blunt force injury to the torso.

Pinnacle agreed to pay a $7,000 federal fine and provide the employee safety training by Aug. 31. That training has been provided, according to Pinnacle, OSHA and the United Steelworkers, a union representing the Pinnacle employees. Pinnacle flies from Dayton under the brand of Northwest Airlines.

OSHA did not order the shutdown of the baggage elevators but considers that a prudent action under the circumstances, said Bill Wilkerson, OSHA's assistant area director in the Cincinnati regional office. The employee safety training should be provided to workers at the other elevator sites if those devices are serviced and returned to operation, Wilkerson said.

The city spokesman said the 20 baggage elevators were made by two Texas-based manufacturers, Jet Bridge Technology Inc. and FMC Technologies Inc. OSHA said Jet Bridge Technology manufactured the elevator involved in the fatal accident. There has been no finding against Jet Bridge, Wilkerson said.

Attention Aircraft Mechanics: Your Help is Needed

Aircraft Maintenance Technology has received a request by Matt Poelman, an instructor at LeTourneau University. He seeks your input on the aircraft maintenance environment. Below is the request from Mr. Poelman.

I am writing to ask your help in a study being conducted as a part of my graduate degree work for a thesis paper on the topic of "Aviation accidents and incidents where maintenance has been listed as causal." The goal of my thesis is to learn from you and your colleagues about how you view the aviation maintenance environment.

I have prepared a survey to collect responses. You can access the survey at this link:

http://survey.letu.edu/survey/l.dll/JGsA583B5D7lWZD9U3362J.htm.

The survey can easily be completed in less than five minutes. Your electronic responses will be tallied anonymously by automated software.

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Your responses are completely confidential and will be released only as summarized data in which no individual's answers can be identified. The general nature of the questions avoids any specific details being disclosed in the survey.

Your response is appreciated even if you no longer work in the aviation industry or if you have limited aviation experience. The goal is to get a broad base of observations and opinions.

If you have any questions or comments to share concerning this survey, please reply to me at MattPoelman@letu.edu.

Wing units awarded for mishap-free year

MARINE CORPS AIR STATION FUTENMA, Okinawa

The commanding general of 1st Marine Aircraft Wing presented two squadrons with the Chief of Naval Operations 2006 Naval Aviation Safety Award at their hangars Sept. 18.

Brig. Gen. Robert Schmidle spoke to the Marines of Marine Medium Helicopter Squadron 262 and Marine Aerial Refueler Transport Squadron 152 about the significance of the award, which is presented to units for having an occupational mishap-free year.

"This award is really a big deal," Schmidle said while speaking to the Marines of HMM-262. "It may not appear that way to you when you're in the trenches fixing planes, but you have a culture of excellence. You've always done things well."

HMM-262 flew 5,379 flight hours and performed 16,373 landings throughout last year without any mishaps, according to Capt. Kenneth Morrow, the aviation safety officer for HMM-262.

Meanwhile, VMGR-152 has logged over 260,000 mishap-free hours and has not had a mishap since the Vietnam War, according to Lt. Col. Dwight Neely, commanding officer of VMGR-152.

"Thirty-seven years without a mishap. That is almost beyond belief," Schmidle said while speaking to the Marines of VMGR-152. "You've been doing this longer than I've been in the Marine Corps."

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Struck by a Runaway Baggage Cart

Bombardier CRJ1900. Substantial damage. No Injuries.

While taxiing to the runway at McCarran International Airport in Las Vegas, the night of April 30, 2006, the captain noticed a train of baggage carts moving rapidly toward the airplane from the left.

The captain swerved right of the taxiway centerline in an effort to evade the carts, but the first cart in the train struck the CRJ's left wing, became wedged between the wing and the taxiway, and was dragged about 150 ft (46m), the NTSB report said.

After the accident, the airline issued an employee memorandum that reiterated the importance of ensuring that the braking system is engaged before leaving baggage carts unattended.

UAL A320 Suffers 'Substantial' Damage In Off-Runway Excursion

Two Passengers Taken To Hospital Following Hard Landing At ORD A United Airlines Airbus A320 with 127 people onboard went off the runway following a hard landing at Chicago's O'Hare International Airport Tuesday night, resulting in two dented engine nacelles and at least two passenger injuries.

"We came down and as we landed, the first thing that happened is we just hit -- real hard, on the first impact," passenger Andy Pasternak told Chicago's NBC5 after the incident, which involved Flight 628 from Seattle. "It was unusually hard."

The aircraft blew a right maingear tire on landing, and departed runway 22 right at approximately 2030 CDT Tuesday. The aircraft then rolled back onto the runway, before coming to a stop.

"The engine must have, at that point, started hitting something, hitting some objects on the ground," Pasternak said. "Because there were very significant dents in the engine that you could see."

The aircraft was able to taxi to the gate under its own power. Two people onboard were taken to the hospital with unspecified injuries, and a flight attendant was also reportedly injured.

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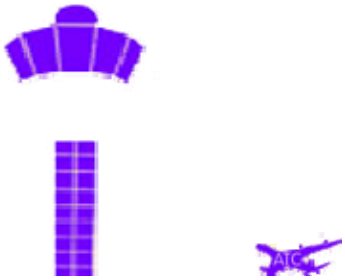
"It was the hardest hit I've ever had in an airplane, and we fly every week," said another passenger, Ron Bellamy.

UAL representatives declined to be interview, saying only the airline would investigate... and that safety was the carrier's Number 1 priority.

According to Bellamy, United pilots also have a gift for understatement.

"The pilot did say something" after the incident, Bellamy said. "He said 'Welcome to Chicago!'"

Air traffic control failure is examined



MEMPHIS, Tenn. — Ron Carpenter and his fellow air traffic controllers were busy keeping more than 200 airplanes on course over seven states when their communication system crashed. Suddenly they couldn't talk to pilots or call for help.

"Somebody just pulled out a cell phone," Carpenter said. "Then everybody else says, `Hey, that's not a bad idea.'"

So at a major Federal Aviation Administration center, controllers were reduced to using their personal cell phones to ask other centers to help keep planes on course and avert disaster.

They succeeded, but now members of Congress want to know if the Memphis failure last month was an isolated breakdown or evidence of a design flaw in a $2.4 billion project to upgrade telecommunications at air-control centers and other FAA installations across the country.

The FAA blames the disruption on the failure of a major AT&T phone line, but critics say that the trouble is deeper — that the new communications network being installed lacks sufficient backups.

"It's engineered this way, and it's going to happen again," said Dave Spero, a vice president of the union representing FAA technicians.

During the breakdown, 100,000 square miles of airspace were closed off for more than three hours and flights around the country were canceled, delayed or diverted, adding to the woes of a flying public already fed up with disruptions.

The upgrade is called the FAA Telecommunications Infrastructure project, or FTI. The prime contractor on the 15-year project is Florida-based Harris Corp., which said in September that nearly 90 percent of the FAA's entire system of more than 4,000 installations had been switched over.

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The FAA told a congressional subcommittee that the Memphis outage was an AT&T problem and that an investigation was under way.

FAA spokesman Paul Takemoto said the network has backup phone lines for emergencies and each center is served by more than one communications carrier.

"The failure was in a network we don't own or operate," Takemoto said. "It was a massive failure, according to what BellSouth has told us, that has never been experienced before and affected all of the customers in that region, not just the FAA."

But aviation consultant Michael Goldfarb said backup at the Memphis center was obviously insufficient.

"Wal-Mart losing its power is one thing, but for the FAA to lose power when planes are in the air is another thing," said Goldfarb, a former FAA chief of staff. "And to only have one line take down an air-control center, something is very wrong with that picture."

AT&T refused to talk about the breakdown except to say its cause was under investigation. Harris, which landed the contract in 2002, also had no comment.

The Memphis breakdown was the latest in a string of similar but less serious failures of the upgraded system at other air-control centers, said Spero of the technicians union. "This is the first time a whole center has gone down," he said.

Aviation safety in decline, says foundation president

Bill Voss, president of the Flight Safety Foundation, said yesterday that this year's global aviation safety performance seemed lackluster compared to that of last year.

"Overall, safety performance for commercial jets remains excellent, but not as good as last year," he said at the 15th National Flight Safety Conference in Taipei, jointly hosted by the Aviation Safety Council (ASC) and the Civil Aeronautics Administration (CAA).

Voss' presentation showed that 13 accidents have already happened from January to October of this year, in which a China Airlines' airplane explosion in Naha was listed.

Voss was referring to a China Airlines Boeing 737-800 airliner that caught fire moments after landing AT Naha Airport, Okinawa, in August. All 165 passengers on board escaped unscathed.

A total of nine aviation accidents happened worldwide last year, he said.

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According to Voss, an aviation incident was classified as an accident either when the aircraft is destroyed or there are multiple fatalities to the occupants. An accident also refers to the situation where there is one fatality and the aircraft is substantially damaged.

Statistics in his presentation indicated that the major accident rate has been decreasing from 31 per million departures in 1996 to 11 per million departures last year.

Voss also pointed out that accidents as a result of commercial jet loss of control and turbo propeller controlled flight into terrain (CFIT) dominate the fatality numbers this year.

Voss added that more than 50 percent of all major accidents this year occurred during the "approach and landing" phase of an aircraft's operation, which begins when an airplane news its destination airport and prepares for landing. Meanwhile, he said more efforts have been made to reduce the risks in runway safety.

Maintenance/Avionics Technician Awards

Common sense, high standards are operators' safety 'secrets'

Each year, NBAA recognizes the top aviation maintenance and avionics technicians with good safety records who work for member companies. Maintaining corporate aircraft or avionics for three accident-free years is the minimum requirement for an NBAA Safety Award but the actual number of years for many of the technicians adds up to four decades or more.

NBAA Convention News talked with five of the top maintenance technicians for 2006; the top seven collectively have 271 years of accident-free corporate aviation involvement.

John Porter of CSX's Corporate Aviation Department (39 years) and John Rogerson of General Dynamics (38 years) are included in the list, but both have been retired for several years. Gary Rogerson, General Dynamics' director of flight operations, said his father, John Rogerson, retired as chief of maintenance in 1990 but came back to be involved with the completions on the company's Gulfstream IVs.

James Miller
Maintenance Technician
BLS Aviation
Teterboro, N.J.
41 Years

James Miller started working at Teterboro Airport for BLS Aviation in 1966, meaning he will mark his 42nd year in the business next March. He told NBAA Convention News that he has been interested in aviation since he was a kid, and attended a vocational school for aviation. He was also involved with aviation in the U. S. Army.

The department operates a Gulfstream IV, which Miller lists as his favorite airplane to work on. "It's a very nice airplane," he said, "maintenance friendly, and we get very good support from Gulfstream."

Asked to what he attributed his long safety record, he replied, simply, "Common sense."

Robert Motl
Chief of Aircraft Maintenance
GTC Management Services
Islip, N.Y.
40 Years

Robert Motl has served as chief of aircraft maintenance for GTC Management Services' East Coast operations for 17 years. In addition to being an A&P, he is an ATP-rated pilot with type ratings in the Gulfstream II, III and IV and Bombardier Challenger 601. He became involved in aviation while serving in the U.S. Army.

When NBAA Convention News asked which was his favorite corporate airplane to work on, he replied, "The one that's in the hangar!"

He said his long safety record could be attributed to "uncompromising standards" and "the support of my colleagues."

GTC Management is a media and entertainment company. The East Coast operation, based at Long Island MacArthur Airport in Islip, N.Y., operates a Gulfstream IV, a GV and a G550.

Eric Van Benschoten
Chief of Maintenance
Pfizer
Trenton, N.J.
38 Years

While still in A&P School at the Teterboro School of Aeronautics, Eric Van Benschoten started working as a line service tech for Teterboro Aircraft Service at

Teterboro Airport (TEB) in New Jersey. He moved up to aircraft maintenance and inspection repairs, and then to engine overhauls for all the flight school aircraft. "After I received my A&P license, my boss again moved me into a new position as installer for avionics packages on turbine aircraft," he told NBAA Convention News. "Then he moved me to the bench repairs and warranty service." Van Benschoten later became the department's Northeast troubleshooter in charge of the warranty repair service center for all the major avionics manufacturers.

"Later, I started my own business at Morristown Airport, doing avionics maintenance repairs and installation service and aircraft maintenance service," he said.

When the bottom dropped out of general aviation in the late 1970s, he said, he became director of maintenance for Air Charter Service. He then joined Warner Lambert as chief of maintenance and continued in that position when the company was bought by Pfizer, adding the collateral duties of environmental health and safety and corporate security officer.

Van Benschoten said he attributes his long safety record to "continuous training, past experience and relying on your gut feeling," as well as "the quality of work you do, setting the example of high standards for your team members to follow." He added that his involvement with corporate environmental health and safety played a role.

He pointed out a number of safety innovations that the department has adopted, including equipping its Sikorsky S-76 with the Pulse Light system on the recognition and landing lights and installing fire ports on the cockpit instrument panel, pedestal and circuit breaker panel. "Our department was also one of the first in corporate operations to have EVS on a Gulfstream V," he said.

His department received one of the first Gulfstream G550s in corporate operation, which he pointed to as his favorite airplane to work on, "because of its latest state-of-the-art in technology."

And, he added, one realizes "people's lives depend on the quality of our work." In fact, aviation safety was the reason Van Benschoten became involved in the industry, he said. A high school friend had gone to the College of Aeronautics at La Guardia Airport, and then worked for Pan Am. His friend returned to his small town for the weekend in his uniform, which impressed his hometown friends.

The friend was killed in an airplane crash. In an effort to find out why this had happened, Van Benschoten became involved in aviation.

He concluded, “My aviation career has been rewarding, exciting and a growing experience that I could never have imagined for myself.”

Peter Kubler
Director of Aircraft Maintenance
Nike
Portland, Ore.
38 Years

Peter Kubler grew up in the Bronx, N.Y., under the flight path to La Guardia Airport, so it was natural that he decided to attend New York’s Aviation High School. “The teachers there not only taught but also motivated the students and instilled ethics,” he said. He is both a maintenance and an avionics technician, with A&P, IA and FCC ratings/licenses. He is also a commercial pilot, having attended the first corporate flight school at FlightSafety in La Guardia’s Marine Terminal. He took Gulfstream II initial pilot training in 1972 when he was working for Combustion Engineering at Westchester County Airport in White Plains, N.Y., his first aviation job.

He later became chief of maintenance for Mobil Oil in Virginia and then spent five years with Trillium as director of maintenance. He has served as director of maintenance for Nike’s flight department for six years. Nike’s current fleet includes two Gulfstream Vs and a Dassault Falcon 2000EX. Kubler said that his favorite corporate aircraft to work on is the Gulfstream, and then the Lear 24F, which he calls “a real little hot rocket.”

He attributes his long safety record to “never taking anything for granted and being a bit paranoid–coupled with good training.”

Kubler acknowledged that his current base in Portland is “a long way from where I started back in New York,” but “overall, it has been one heck of a ride for a kid who grew up in the South Bronx. I’ve been given the opportunity to meet some wonderful and great people along the way. Yes, corporate aviation has been good to me.”

Timothy Detwiler
Chief Inspector
Johnson & Johnson
West Trenton, N.J.
37 Years

Timothy Detwiler has been chief inspector for Johnson & Johnson’s corporate flight department for five years.

He became involved in aviation working part time at Carson Helicopters, in Perkasie, Pa., during high school, toiling there in the evenings, on weekends and holidays. He told NBAA Convention News that it was a good summer job that paid fairly well, and offered the opportunity to travel throughout the U.S.

His early interest in helicopters is reflected in his answer to the question of favorite corporate aircraft to work on–he lists the Sikorsky S-76 followed by the Gulfstream IV.

As for the reasons for his long safety record, he said, "Attention to detail."

Megasafe Knife Makes the Cut

A US company has won a workplace safety award for its spring-loaded, retractable-blade utility knife.

Martor USA will be recognized at the National Safety Council Expo in Chicago, IL, October 15-17. Its new Megasafe Safety Knife has won the Workplace HR & Safety Commitment to Worker Safety Award.

The aluminum knife features a spring-loaded blade that instantly retracts when the edge of the blade loses contact with the material being cut. Even if you have your thumb on the blade slide mechanism, the blade still retracts when surface contact is lost. What some people don't realize is that you don't have to keep your thumb on the blade slide mechanism to make it work – the blade stays out while you're cutting.

Previous models required the blade to be fully extended before the safety system responded. But now the system responds even if the blade is only partially extended.

The Megasafe knife costs $19.74 each. For more information, visit www.martorusa.com

Next Generation Air Transportation

Researchers at the University of Illinois think they can save you time at the airport. This year flight delays reached an all time high and it's only expected to get worse. The government says something needs to be done.
Researchers say the answer is a complete overhaul of the current system.

One example would be to decrease the role of the air traffic controller and give the pilots and planes more control.

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It's something they say can save you hours of waiting in terminals.

There's not much to do when you're stuck in an airport waiting hours for your plane. "It's extremely frustrating, especially when you spend a lot of time at a connecting airport," says Andreas Moser of Bloomington.

Some have gotten so used to it delays don't even bother them anymore. "I usually have a book or something and I'm just prepared for it. I understand it's just part of the experience these days," says Elihu Smith of Champaign.

But researchers at the U of I say something needs to be done. In the next 30 years, air traffic is expected to triple. That's why they're working on a massive overhaul of the system developed in the 60's. They're equipping model planes with new and improved sensors so pilots can make more decisions and not rely on air traffic control.

"If a pilot who's encountering a storm is able to weave around it, he can save literally an hour off of flight time instead of circling, waiting for the controller to clear him and then flying a completely elongated route," says assistant professor Natasha Neogi.

The process is far from complete, but researchers hope the wiring and technology they put inside the small planes will help the real ones become more efficient in flight. "We want to be able to show that these aircraft can fly their own routes, not have any conflict, not have any potential mid-air crashes and essentially manage their own airspace," says Neogi.

Another part of the plan is bringing more flights to airports that are underutilized, like Willard Airport in Savoy. Some congestion occurs because the majority of flights take off and land in only 65 airports. There are 5,000 more out there that could help alleviate some of the congestion

Orlando International Airport Puts Lightning Safety First with ForeWarnTM System from ARINC

Annapolis, Maryland,— When lightning storms threaten near an airport, ramp managers must decide when to curtail outside activities on the ramps for personnel safety—and when to resume ramp activity again. To make the right decisions, managers need the best weather information they can obtain.

Ramp managers at Orlando International Airport now have the advantage of an enhanced lightning warning system from ARINC Incorporated.

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An ARINC customer since 2000, the Greater Orlando Aviation Authority recently upgraded to ARINC's ForeWarnTM TWX1200 system.

It not only evaluates the risk of lightning on the airport grounds, but shows personnel the actual locations of lightning strikes as a storm moves closer and enters pre-defined warning areas.

"As the busiest passenger airport in Florida, we are constantly looking for the latest technology to help detect and provide accurate and minute-by-minute information on weather systems as they move through the area that may impact aircraft operations," states Parker McClellan, Jr. AAAE, Senior Director of Airports for the Greater Orlando Aviation Authority.

The enhanced ForeWarn system displays all nearby lightning strikes, allowing managers to use their judgement as a storm approaches. The system also offers a fully automated warning light display. It monitors data from electrical field mills (EFMs) installed on the airport grounds, and combines this local data with regional lightning information from ARINC's partner Vaisala, the world's leading provider of lightning data.

Storm threats and storm conditions can affect all types of ground support at airports. The best way to minimize impact is to detect when a high risk of lightning exists, take appropriate action, and confirm when the risk has passed. ARINC ForeWarn is designed to accomplish this goal, providing enhanced safety for ramp operators with minimal downtime. ForeWarn is used at major airports throughout North America and is tailored to meet the specified safety requirements of each. ARINC is the exclusive North American partner of Vaisala, Inc. in the area of aviation lightning warning systems.

ARINC Incorporated is a world leader in transportation communications and systems engineering. The company develops and operates communications and information processing systems and provides systems engineering and integration solutions to eight key industries: airports, aviation, aerospace and defense, government, healthcare, networks, security, and transportation. Founded to provide reliable and efficient radio communications for the airlines, ARINC is headquartered in Annapolis, Maryland, and maintains regional offices in London and Singapore, with over 3,200 employees worldwide. ARINC is ISO 9001:2000 certified.

MP airs 'fuming' fears as mishaps increase

East Belfast MP Peter Robinson has backed calls for airlines to take action to cut the number of "fuming" incidents on board aircraft flying in and out of Belfast City Airport.

In the wake of a series of incidents in which cabin crews have been hospitalized after being overcome by fumes on board flights, the DUP deputy leader and Stormont

Finance Minister warned: "The consequences don't need to be spelt out, particularly if it affects pilots.

"We are dealing with the lives of not only those who would be on board, but those on the ground if something was to go drastically wrong."

The potential risks to cabin crews and passengers have been highlighted recently by trade unions after a number of so-called "fuming" incidents on board flights in and out of Belfast were detailed in Civil Aviation Authority reports.

Dessie Henderson of the Unite union has backed calls for greater testing of aircraft after a series of incidents involving Flybe crews on board BAe 146 jets.

Last month Sunday Life revealed how a crew from a Flybe jet needed hospital treatment after becoming sick on board a flight between Birmingham and Belfast.

And at least twice this month crews have been treated in hospital following "fuming" incidents in which the cabin air supply has become contaminated.

In one incident, pilots had to don oxygen masks while carrying out an emergency landing on an empty plane.

It is widely believed by MPs and aviation experts that the number of incidents could be slashed if the air being passed into the cabin was filtered after being "bled" from aircraft engines.

Flybe has said that its tests following the incidents showed no fault with its aircraft and that its planes and systems more than meet civil aviation standards.

However, Mr. Robinson, who has been approached by a number of his constituents who have been affected in "fuming" incidents, said: "If staff is having to be taken to hospital, I would think it is at a very serious stage.

"If there was someone with respiratory conditions on board the flight, they could be affected by this. If there is work to be done they (the airlines) should get on and do it.

"In the absence of that I am looking for the Civil Aviation Authority's safety group to take whatever action is necessary to make sure that the safety of passengers and people on the ground is secured."

Just last week, the Department of Transport said it hoped to carry out tests on a range of aircraft after the government-backed Committee on Toxicity (COT) recognized that there was a large amount of anecdotal evidence linking ill-health among cabins crews with poor air quality.

A COT report said that, with current evidence, it was not possible to conclude there was a causal link between harmful fumes and sickness, but urged further tests to establish if there was a definite link.

Midnight Shift Nugget

Exercise and Sleep

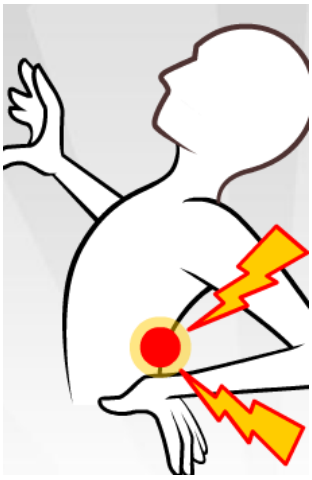
Exercise regularly improves sleep in three areas of particular interest to shiftworkers:

Exercise helps you fall asleep faster. In a 1997 study, regular exercise cut the time it took people to fall asleep in half – from 28 minutes to 14. The study looked at a group of sedentary people who completed a 16 week program of moderate exercise.

Exercise help you sleep longer. The same study found exercise added an average of more than 45 minutes to participants' main sleep block.

Exercise improves sleep quality. To wake up feeling refreshed, you need to spend good proportion of your time in bed in deep sleep. A 1994 study found that people who completed an aerobic training course experienced a one-third increase in Stages 3 and 4 sleep.

ERGONOMICS AND INJURIES

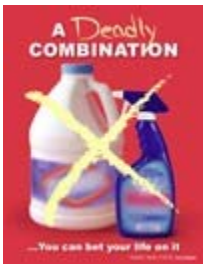


Some people know that ergonomic assessments can help limit or prevent injuries caused by repeated similar movements over time. But ergonomics is about more than just preventing repetitive motion injuries. An ergonomic redesign may help prevent sudden serious bodily harm, too. Help keep your workforce injury-free with this safety talk about ergonomics from Safety|Smart!

- To listen to the talk, click the link

CONSUMER PRODUCTS

The Other Hazardous Materials in Your Workplace



Your hazardous materials communication system shows your employees how to protect themselves from all the dangerous chemicals in your workplace. Or does it?

Consumer products may also be used where you work and may not be covered by the same information system as the products intended for industrial use. Your workers might be surprised to learn just how dangerous these consumer products can be, since they probably use them at home.

Here are some examples of hazardous consumer products commonly used in the workplace and at home:

- **Laundry detergents containing bleach can cause burns to the eyes, skin and respiratory system.**
- **Paints can contain solvents which affect the central nervous system, and cause cancer and damage to the kidneys and liver. Solvents in paint can also be flammable, causing fires and explosions.**
- **Cleaning products are often corrosive, causing burns. Cancer and damage to internal organs can be caused by certain cleaners.**
- **Glues can affect the central nervous system and they can be flammable.**
- **Pesticides are likely to be toxic and flammable.**

Train your workers in these four areas regarding consumer products:

1. **The hazards of these products;**
2. **Methods for protecting themselves;**
3. **Emergency procedures;**
4. **How to obtain more information about the product.**

Include consumer products in your chemical safety program. Make sure your workers know how to read and understand labels and follow precautions.

Is your food safe to eat?

Aside from being nutritious, healthy foods must also be safe — untainted by bacteria, free from dangerous levels of pesticides and other impurities. Concerns about food safety have grown stronger and more far-reaching.

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Modern farming and food processing methods have done a great job of making more food available.

But these methods have created safety issues. Efforts to maximize yield have led to greater use of pesticides on crops and hormones in animals. The crowded animal pens of factory farms and the large-scale assembly-line nature of slaughterhouses and food processing plants have increased the spread of dangerous bacteria in food. Farmers' routine addition of antibiotics to animal feed has given rise to bacteria that are resistant to treatment with medications.

In truth, our food supply is reasonably safe, but it could be safer. The government is working with farmers and slaughterhouses to take greater precautions against the spread of germs. Meanwhile, there are steps you can take in selecting, handling, and storing food to minimize safety problems.

Some of the problematic bacteria you want to protect your family from include:

E. coli. This bacterium, found mainly in ground beef, causes an estimated 25,000 cases of food poisoning in the United States each year and kills about 100 people. Some people infected with E. coli suffer permanent kidney damage. Contamination occurs during meat processing, when E. coli from the animals' intestines becomes mixed in with the meat. E. coli contamination has prompted massive recalls of millions of pounds of ground meat.

Salmonella. This bacterium is found mostly in meat and eggs. But it spreads to other foods, such as ice cream and fruit, when they are shipped with contaminated meat or eggs. A study in the New England Journal of Medicine in 2001 showed how alarmingly prevalent it is: 20% of 200 samples of ground chicken, beef, turkey, and pork contained salmonella. Of particular concern, 84% of the salmonella samples were resistant to at least one antibiotic, and 53% to at least three antibiotics. This means that when animals carry salmonella — and when people get salmonella food poisoning — it's more difficult to cure than it was in years past.

Campylobacter. This bacterium is especially common in poultry. Antibiotic-resistant strains are becoming more prevalent because of the widespread use of antibiotics in chicken feed. In a 2001 report in the New England Journal of Medicine, 17% of chickens sampled in supermarkets in four states had campylobacter strains that were resistant to antibiotics.

Handling food safely

You can prevent most cases of food poisoning in your household by preparing and storing your foods safely. These precautions will help kill germs that are present in the meat and eggs you buy and help you avoid introducing new bugs to your food at home.

Rinse foods. **Rinsing can wash off some germs from meat, poultry, and fish and pesticide residues from produce. Rinse all meat, poultry, and fish under running water before cooking. Rinse all fruits and vegetables under running water before cooking or serving them.**

Wash your hands. Frequent handwashing helps prevent you from passing germs from one food to another. Use soap and water to wash your hands each time you handle a raw food. Don't wipe your hands on a dishtowel without washing them first.

Use separate utensils. Don't prepare meat and fish on the same surface that you use for other foods — otherwise, you risk contaminating those foods with bacteria from the meat and fish. Use one cutting board for meats and fish and a second one for produce. Be sure to wash the cutting boards with soap and water after each use. Use different knives to cut different foods to prevent cross-contamination.

Cooking. Cook all meat, poultry, eggs, and freshwater fish. Don't rely on color alone to indicate whether meat is fully cooked. The USDA recommends that everyone use a meat thermometer. Different temperatures are required to kill off germs in different kinds of meat. It's also important to cook hot dogs and other precooked meats and fish, to destroy bacteria that may have contaminated them in the processing plants.

Storing. Don't leave any foods, before or after cooking, at room temperature for more than two hours (one hour if the air temperature is above 90° F). Put them in the refrigerator or freezer. The temperature inside your refrigerator should be 40° F or below; your freezer should be at 0° F or below. If you have large amounts of leftovers, divide them into small batches when you put them away in the refrigerator or freezer. That way, the temperature of each batch will reach a safe level faster. Keep in mind that freezing does not necessarily kill bacteria; wash meats and poultry thoroughly after thawing, and handle them the same as you would fresh meats.

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How long to store foods

Discard foods after the time period given below has elapsed.

Food	Refrigerator	Freezer
Fresh meat and fish		
Ground beef	1–2 days	3–4 months
Steaks and roasts	3–5 days	6–12 months
Pork chops	3–5 days	4–6 months
Ground pork	1–2 days	3–4 months
Pork roasts	3–5 days	4–6 months
Lean fish (flounder, haddock, cod, etc.)	1–2 days	up to 6 months
Fatty fish (blue, perch, salmon, etc.)	1–2 days	2–3 months
Whole chicken	1–2 days	12 months
Chicken parts	1–2 days	9 months
Giblets	1–2 days	3–4 months
Cured meats		
Lunch meats (ham, turkey, etc.)	3–5 days	1–2 months
Sausage	1–2 days	1–2 months
Dairy products		
Milk	5 days	1 month
Cheese (Swiss, brick, processed)	3–4 weeks	—
Ice cream, ice milk	—	2–4 months
Uncooked eggs (in shell)	3 weeks	—
Hard-boiled eggs	1 week	—
Source: FDA		

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Picture This!