

Sleep

In a recent issue we indicated that fatigue is an insidious cause of performance decrements. Fatigue has a negative effect on every aspect of physical and mental performance. Fatigue can be a result of strenuous physical exercise, prolonged mental concentration, disruption of circadian rhythms, or loss of sleep.

"Even an acute loss of sleep can degrade waking performance and alertness. Laboratory data indicate that, for most people, one night with 2 hours less sleep than is usually required is sufficient to degrade subsequent waking performance and alertness significantly."¹

Sleep is a basic physiological function. Just as the body requires food when hungry, and water when thirsty, only sleep will do when one is sleepy. Everyone has his own sleep requirements. An average is about 8 hours per day; but some require less and some require more.

Many of us are able to get about

the right amount of sleep. But the number of hours of sleep we get – the quantity – may be deceiving. You may get the amount of sleep your body requires, but if the quality of sleep is not right you may be waking up still feeling tired, and have frequent periods of feeling sleepy throughout the work day. It is this sleepiness that prevents your maximum performance, and can lead to a higher potential for errors.

One condition that can seriously affect the quality of sleep is sleep apnea. The following is an excerpt from the fall issue of the "Federal Air Surgeon's Medical Bulletin".

¹Rosekind, *Managing Fatigue in Operational Settings*, 1996. P.2

Sleep Apnea

By Lt Col Mustafa Alan, MD

Sleep Apnea is a serious, potentially life-threatening condition that contributes to a significant number of automobile deaths and other major accidents each year in the U.S. An estimated 18 million Americans suffer from sleep apnea.

The Greek word "apnea," or "apnoea," literally means "without breath." It is defined as a blockage of airflow for more than 10 seconds. There are two main types of sleep apnea: Obstructive sleep apnea (OSA), and central sleep apnea (CSA). Some persons have a combination called mixed sleep apnea. The OSA syndrome is the most common form of apnea and is caused by a blockage of the airway. Central sleep apnea occurs when the brain fails to send the appropriate signals to the breathing muscles to initiate respiration. Sleep apnea is extremely common and affects more than 12 million Americans, according to the National Institutes of Health. Sleep apnea occurs in all age groups and both genders, but it is most common in males and African-Americans. Four percent of all middle-aged men and two percent of middle-aged women have sleep apnea, along with excessive daytime sleepiness.

As people age, they commonly gain more weight, which causes the upper airway tissues to sag and become more collapsible. For these reasons OSA is more common in older individuals.

Certain mechanical and structural problems in the airway cause the interruptions in breathing during sleep. The sleepiness and the lower oxygen levels can have serious adverse consequences on daily life activities, including driving and job performance.

FATIGUE SIGNS AND SYMPTOMS

| | |
|----------------------|-------------|
| Forgetful | Fixated |
| Poor Decisions | Apathetic |
| Slowed Reaction Time | Lethargic |
| Reduced Vigilance | Bad Mood |
| Poor Communications | Nodding Off |

Sleep Apnea... pg. 1 cont'd.

One of the most obvious indicators of sleep apnea is extremely loud heavy snoring, often interrupted by gasps and long pauses in breathing. People with sleep apnea often feel very sleepy during the day and need frequent naps. The consequences of sleep apnea range from annoying to life-threatening: depression, irritability, sexual dysfunction, learning and memory difficulties, falling asleep inappropriately, hypertension (in as many as

suspect that something is wrong, usually because of the patient's heavy snoring and apparent struggle to breathe. Coworkers or friends may notice that the individual falls asleep during the day at inappropriate times. Several tests are available for evaluating a person for sleep apnea. These are two tests that are commonly used to diagnose sleep disorders and to determine its severity.

1. POLYSOMNOGRAPHY. Records important body functions during sleep: electrical activity of the brain,



50 percent), and other cardiovascular consequences.

Other symptoms may include: irregular heartbeat during sleep, frequent accidents, changes in mood or behavior, frequent waking, need to urinate during sleep, gastroesophageal reflux, chest and limb pain, dry mouth in the morning, and morning headache.

RISK FACTORS

- Being Male and overweight
- Nasal obstruction
- Hypertension
- Alcohol. Acute alcohol ingestion promotes apnea in later sleep.
- Facial abnormalities
- Familial

DIAGNOSIS

For many sleep apnea patients, their spouses are the first ones to

eye movements, muscle activity, heart rate, respiratory effort, air flow, and blood oxygen levels.

2. MULTIPLE SLEEP LATENCY TEST. Measures the speed of falling asleep. People without sleep problems usually take 10 to 20 minutes to fall asleep. Individuals who fall asleep in less than 5 minutes are likely to require treatment for sleep disorders. This test shows the quality and deepness of sleep, as well as the frequency of wake-ups.

TREATMENT

Treatment options will vary dependent on how severe the sleep disorder is. Untreated, sleep apnea may be responsible for job impairment and motor vehicle accidents. At least 4% of crashes may be caused by drowsy drivers, based on

estimates by the National Highway Transportation Safety Administration.

Medications are generally not effective in the treatment of sleep apnea. A variety of anti-snoring, apnea prevention devices can be found in such over-the-counter products as SnorBan, Noiselezz, Snore No-More, Snorless, etc. But it cannot be estimated if any of them can be helpful, since individuals have different forms of airway and facial structure.

Behavior changes are an important part of the treatment program, and in mild cases, behavior therapy may be all that is needed. One should avoid the use of alcohol, tobacco, and sleeping pills, which make the airway more likely to collapse during sleep and prolong the apneic periods. Overweight persons can benefit from losing weight. Even a 10% weight loss can reduce the number of apneic events for most patients. In some patients with mild sleep apnea, using pillows and other devices that help them sleep in a side position is often helpful.

CPAP. Nasal continuous positive airway pressure is the most common, effective treatment for sleep apnea.

Surgery. Some of the more common procedures include removal of adenoids and tonsils (especially in children), nasal polyps, or other growths, or other tissue in the airway and correction of facial deformities.

Dr. Alan is an International Exchange Physician from Izmir, Turkey, where he is an assistant professor in the Department of Aerospace Medicine at Gulhane Military Medical Academy and is in charge of the education and training of flight surgeons and aircrew. In January of 2000 he began a year-long tour at the FAA Civil Aeromedical Institute.

TIPS AND REMEDIES FOR SLEEP APNEA

- Snoring does not necessarily equate to sleep apnea.
- Seek treatment if sleep disorder is suspected.
- Seek treatment if a snorer and hypertensive (*especially if over 40 and obese*).
- Avoid alcohol and sleeping pills
- Stop smoking
- Lose weight (not everyone with OSA is overweight)
- Go to bed and wake up at the same time every day of the week.
- Do not drive, fly or perform tasks that require close attention when sleepy.
- Try different sleeping positions.

There I Was...



Here are some accounts sent to us by readers.

222 Ice.

"January. We took off from Vancouver for a medevac flight to Powell River Airport. Due to the weather at the time we filed an IFR flight to Comox and subsequent VFR flight to Powell River Airport. The clearance we filed was for V-317 at 4,000 feet. Weather at the time was patches of scattered and broken clouds from 2,000 to 3,000 tops at 6,000 to 10,000 feet and surface temperatures of -4° C.

We took off runway 30 and switched to Vancouver Departure Frequency upon heading 260° .

Radar contact was immediately established and ATC gave us an option of maintaining lower altitude (2,500 feet) until TRELL

Intersection (MEA V317 is 4,000 feet). Outside air temperature at 2,500 feet was -5° C and clear of clouds. However, from this altitude, I could see patches of stratus and cumulus type clouds in the area.

I performed cruise check and turned on the anti-ice for both engines and pitot heater on. Upon reaching TRELL Intersection, ATC advised us to begin our climb to 4,000 feet, our clearance altitude. Climb was normal and, passing 3,000 feet, we went IMC. I checked with Radio for the latest surface actuals. Comox reported ... ceiling

2,600 feet, overcast, visibility 20 miles, temperature -2° C, dew-point -4° C, winds 280 at 4 knots, altimeter setting 30.11.

During

the climb I constantly checked, (using our flashlight) the windshield, winglets, main rotor and left skid for signs of icing. There was no trace of icing. ATC inquired if we were encountering any icing and I replied negative.

We leveled off at 4,000 feet. Temperature at this flight level was -6° C. I was about to perform another cruise check when I noticed our speed was only 100 knots. I checked the torque setting, which at this point was 85%. When I checked the windshield again it was now covered with rime ice. The buildup of ice was very sudden.

I immediately asked the pilot to turn 180° and asked ATC for a clearance to return to Vancouver and to descend to a lower altitude. On the turn the helicopter started to fly rough. We were cleared to descend to 2,500 feet where it was VMC. The windshield was still half covered with rime ice.

We made an ILS approach to Runway 08 and landed at 0130. The helicopter was put inside a heated hangar for approximately 15 minutes. Rime ice of half-inch thickness was still present in the front part of the nose, all cross tubes, leading



edges of the intakes, antenna, and all protruding vents in the belly. Clear ice of half-inch thickness was present in the inner 1/3 of both main rotor blades. The yoke, main mast, and pitch links were glazed with clear ice, which I think would take 45 minutes to an hour to thaw. The tailboom and tail rotor were clear of ice".

Mountain Landing.

"During a landing at the mountains a pretty heavy passenger just dropped off the helicopter at about 2 or 3 feet from the ground. So I lost some control for a little while as I started to gain a bit of altitude. The thing that amazed me was that I was really focussed on landing because of the gusty wind and I never noticed or heard when he opened the door and jumped. I was surprised and it took a moment to understand what happened."

OH-58

"I'm a fairly low time OH-58 pilot for a state highway patrol agency and recently had an unforgettable experience that I think others should know about.

In May of this year I was conducting a low level search for an escaped convict who was thought to be drowned somewhere along a 14 mile stretch of a river. I was single

pilot with a Deputy Sheriff on board as an observer/spotter who had no aviation experience other than riding in a helicopter once during his previous military service.

We had flown the 14 mile stretch down and back. Along the way both times I had noted three sets of power lines draped across the river with the first ones being at our starting point. As we flew along I would note the location and keep an eye out to ensure I had enough altitude to clear each one as we passed them.

We were about halfway back up the stretch when I mentioned to the Deputy to keep his eyes peeled for wires or any other obstruction that could potentially cause us problems. As we approached our starting point the Deputy asked me if we could do a low level intense search at the starting point, as that's where the cadaver dog had alerted previously. I told him we could and he said as soon as we do that if we haven't located anything we can conclude our search. So I slowed to about ten knots and descended to tree top level. Being accustomed to having passengers that aren't familiar with aerial surveillance, I don't put a lot of faith in them being able to locate the objective very well. So like most other law enforcement pilots I'm forced to divide my attention between flying and searching.

It took about five minutes to search the small area. We concluded that we weren't going to locate anything so we decided to head in. I took one glance forward to clear the area, nosed the aircraft for-

ward slightly, applied some power and accelerated to about twenty knots. As I did this I looked back down for one quick last minute look. As I did, I felt the aircraft suddenly stop in midair. The nose pitched up and the helicopter began to shake violently. In an instant I looked forward and immediately realized what had happened, as I saw each individual strand of a power line cutting into my windshield. As I fought to keep control I felt the tail trying to come around. I applied left pedal and all I could think to do was shove the cyclic forward. Suddenly I felt the aircraft break free and all I could think was that I was to have to ditch in the water below as there were trees on both sides. As I descended I looked in for a second to check the gages, and to my disbelief everything looked fine and the aircraft was still flying. So not knowing the extent of any external damage, I applied power, pulled the nose up, and climbed to clear the trees. I remembered that there was a field to my right. I entered a right turn and safely touched down in the field without incident and performed an emergency shutdown. I immediately told my passenger to exit as I did. We both cleared the blades and sat down on the ground thankful that we were alive.

After the blades stopped turning I approached the aircraft and saw the damage was minimal. There were striations in one of the main rotor blades, a long gash in the front top cowling, and the windshield was cracked all the way down from the OAT gage which was torn out. It was then I realized the wire strike protection system had saved our lives! It had worked beautifully.

As other members of the search team arrived they told us what they had seen and said they couldn't believe we were alive, and neither could I. It was at that point they





told me that I had not only cut one line but managed to cut three of the four lines that were across my path. As I looked at the wire cutters, I could see that the top wire caught about two inches from the point of the top cutter. It almost took my breath away to know that if I had been two inches lower the wire would have struck the mast and probably flipped us over. Evidently the middle line was the one I saw as it went up and was also cut at the top. The other line was cut by the bottom cutter, and luckily I just skimmed over the bottom fourth wire

Anyway, the point is that I did some things I was proud of that day, but for the most part I did some things that I wasn't proud of.

First, the good stuff. I did try to get the Deputy to help me look for obstacles. Unfortunately I'm sure he didn't think much about the importance of it until later. Also, as we were going through this death defying experience the Deputy was grabbing for anything he could get his hands on, and I don't blame him. Luckily I had removed the passenger side controls to avoid any unwanted control inputs by a non-pilot which I was glad of because I'm positive he would have grabbed the cyclic and I don't want to even speculate about that.

So on to the bad things. I should have paid more attention to my flying and less attention to searching, especially at that altitude and knowing that there were lines in the area. When I had cleared the area with my "quick glance," the lines blended in with the clear blue sky and were invisible. Even though I had seen them previously, I had forgotten about them just that quick.

I guess the point I want to make is that you shouldn't get wrapped up in the mission. As my instructors always told me "Fly the aircraft first, everything else is secondary." No other quote is more true. Luckily the incident turned out fine..."

Funny Feeling

"Had a funny feeling. Normally fly low at 60-70 knots. One mission was at altitude – 6,000 feet. When I looked out at the ground I had no sensation of movement even though the instruments told me that we were moving at 70 knots. Doors were off so I had the normal wind through the cockpit. When I looked at the instruments or in the cockpit all the information I was receiving told me I was moving.

But when I looked out at the ground it appeared that I was not moving, while at the same time the wind through the cockpit told me I was moving. I felt more comfortable looking at the instrument panel

gages; and when I did look out I would look at the rotor disk and horizon."

Bight of Biafara

"This was in a 206B in 1996. A storm was coming through. I landed on an offshore oil production platform. The plan was to tie the aircraft down until the storm passed. I kept the engine and rotor turning while the tie downs were installed. I could see that the crewman connected the tie downs on the front and aft of the right skid. The whole situation – with the gusty wind and the way the helicopter was reacting - made me feel that this would be too unsteady. I decided that it would be better if I would takeoff and fly away from the storm. I told the tie down guy to remove the tie downs. I could see him remove first the right front, and then the right aft tie down. I immediately began to add power for takeoff but I felt something funny, so I stopped the takeoff attempt and set it down. One of my colleagues got on the radio and advised me that there still was a tie down on the aft left skid.

During all this effort I never noticed that there were two tie down guys. One worked the right side and the other worked the left side. I finally got all the tie downs removed and flew away. Close call."

BO-105

"We used to fly the BO-105 to mountains at 4,000 feet with OAT near 40° C. We managed to land but for takeoff with one pilot and one pax and enough fuel to take us back to base I have to pull takeoff power 810° TOT and the helicopter is not lifting one inch from the ground. So holding power and waiting for some wind to give us slight lift and just drop it from the mountain to gain speed and reduce the power."



YOUR ANSWERS.

In the last issue we asked "Tell us about a birdstrike experience you have had"



Here are some of your answers:

Human AD.

Sky Hawk.

"In 1983, I was flying a Cessna 172 Sky Hawk. Myself and another pilot who was occupying the right seat, were cruising at 1,500 feet msl. Due to the fact that we were in south central Florida, we were also at approximately 1,500 feet agl. At the time I was a low time rookie pilot for the Florida Highway Patrol. We were on the west side of Lake Okeechobee, when I spotted what appeared to be a flock of ducks. Before I came close enough to create what I thought would be a hazard, the flock of ducks separated, some going to the left, and the others going to the right, creating an opening in the flock. I started a gradual climb to avoid a strike in the open area created by the flock. Apparently (there's always one in every flock) one of the birds also decided to climb. As my aircraft

came closer, the bird folded his wings and dropped, not in front of the prop, but precisely between the prop and the windshield. If the bird had dropped in front of the prop, all I would have had was bird debris on my windshield, however, the bird hit the top of the cowling and shot through the plexiglass, shattering the windshield and putting bird debris all over my face and the inside of the cockpit.

We opened the pilot and passenger side windows to help the airflow through the cockpit. The other pilot saw all the bird fragments on my face and head and thought I had been seriously injured. When I reached up and wiped the bird debris off my forehead, he said "Damn, I thought that was your brains. Are you OK?" I said "Yeah, I'm fine. I just feel real stupid." We landed about 10 minutes later at Clewiston Airport without further incident. A few days later I talked with Mr. Noel Chandler, who worked with the Audubon Society, and he told me that when many birds migrate they will fly at higher altitudes when they feel danger, or if

they think a predator is close, they will fold their wings and drop. I found out later what I hit was a cormorant, a bird native to the Lake areas of Florida. During the entire incident we surprisingly kept our cool and remembered to fly the aircraft."

J-3 Cub

"I'm currently a police helo and fixed wing pilot. My one and only birdstrike occurred while giving dual instruction in a J-3 Cub out of the Fremont California Airport.

I was doing Tail-Wheel Transition training for a fellow helo pilot. I had him sit in the front seat so he could see. Shortly after takeoff we both heard a deep thud and feathers were flying around the cockpit. We landed without incident and inspected the Cub. We both thought that the bird had struck the area of the right wing root since many feathers entered the cockpit from the door and window on that side of the aircraft. We could find no damage or any evidence of the bird strike.

We went back to flying the Cub and landed approximately one hour later. When I reached for the Hobbs log/clipboard in the rear baggage compartment (behind my seat and covered with a small rear hinged plywood door) I found the victim. A dead seagull. Somehow the bird had made it past both of us on its final flight to our baggage hold. We were both lucky that we were not hit in our faces at 60 mph (OK 50 mph) by our feathered friend."

BO-105

"My birdstrike experience occurred at night while flying a hospital helicopter (BO-105). We were inbound to our base at Anchorage, flying at about 1,000



Your Answers... pg. 6 cont'd.

feet agl and 110 knots when all of a sudden, Wham! No warning. Never saw what it was that we hit. It made a very loud bang and really sent a noticeable jolt through the controls. The only way I can describe it to people is to have them imagine driving down a road at night with no lights on at 100 mph and hit a pothole. It was very unnerving in light of the fact that two days earlier the Air Force had lost an AWACS with 26 on board on takeoff from Elmendorf due to numerous geese being ingested by the engines.

After the event, I very slowly moved the tail rotor pedals, and gingerly moved the cyclic and collective. I didn't detect any abnormalities so we continued on (another 5 minutes) to the hospital, landed, and had our maintenance people inspect the aircraft. Other than some feathers on the swashplate, we found no damage to the helicopter.

I was very surprised to learn that the birds around here are night rated, and was more than a little upset with the fact that they don't fly with lights on. I still get the willies through that area at night."

OH-6.

"This was my third rotation into the night crew since I had joined the



McAllen, TX
Border Patrol
Sector Air
Operations Unit
11 months ago. I was not fully mission qualified so my night flying duties entailed night vision goggle training and operating the forward looking infrared (FLIR) equipment on missions. The weather was typical for south Texas in September. It was hot, windy, and dusty, but always VFR.

My partner and I had been flying an OH-6 helicopter since dark providing several border patrol agents with FLIR coverage. We wrapped up a call helping agents locate a group of illegal aliens that they had been tracking from the Rio Grande River six miles to the south, and turned toward the border in response to another call. My partner and I simultaneously saw a line of large birds through our night vision goggles. The birds were slightly above us, and since we were at 800 feet, our normal altitude for FLIR operations, the birds did not pose a threat. We commented to

each other that the birds were probably at 1,000 feet and how bad it would be if we did not have night vision goggles to help avoid birds at night. We dismissed the sighting and proceeded to the next call.

After 35 minutes, the ground agents from the second call rounded up the remaining illegal



aliens that they were tracking, and we started back to McAllen to refuel. Gus gave me the helicopter and instructed me to hold 1,000 feet and 80 knots for the 30 mile leg back to base. Our cross country took us about 3 miles south of Alamo, Texas where our previous call had been. I did not give any thought to the birds we spotted in this area 35 minutes earlier at around 1,000 feet, and dutifully maintained the flight parameters specified by the pilot-in-command. I was scanning back and forth through the goggles and stopped to look straight ahead. All of a sudden I saw several large, light colored birds in front of the helicopter no further than the length of a rotor blade. At the same instant, there were two loud bangs on the windscreen.

My partner saw them at the same time I did, and he ducked behind the instrument panel. He felt bird debris hit his right arm. The instant before the birds hit I saw three of them. They looked like pelicans and the one that hit my partner's side spread his wings as it impacted. I was surprised to not feel any wind, plexiglass, or pieces of bird. The windscreen apparently held, and after the impact I held the controls in place and began assessing controllability. There wasn't

anything strange happening with the helicopter so we continued to McAllen and made an uneventful landing.

We pushed the helicopter into our hangar and performed a detailed inspection. There were two bird strikes. One went into the rotor blades and then hit the upper left canopy section. One rotor blade had a fair amount of blood and feathers on it about four feet from the rotor hub. The metal strip attaching the left upper canopy to the left overhead canopy was dented, with feathers and flesh pieces wedged between the metal and canopy. The right upper canopy took a hit in front of the instrument panel, but did not break. We found a trail of feathers, flesh and blood down the left side of the tail boom that stopped just shy of the tail rotor gearbox. There was a sizeable amount of blood, feathers and flesh on the upper vertical stabilizer, the horizontal stabilizer, and the strut that connects the two.

In retrospect, I believe the OH-6's relatively slow speed kept the birds from penetrating the windscreen. We were fortunate the carcasses missed the tail rotor also. We had visual aids and saw birds in the area 35 minutes before our bird strike, but we did not consider the birds could still be around. We should have been cognizant to the bird activity and planned to fly at an altitude different from the bird's altitude, even if the bird sighting was 30 minutes prior. I knew that birds fly at night and other pilots in the unit have mentioned to me that nighttime bird strikes often occur around 1,000 feet. From now on, I'll use any advance information I may have on birds and make sure I'm not where the birds could be.

Night vision goggles add another level of safety in that

you can see obstacles, or birds, and plan your maneuvering accordingly. However, they are not the cure-all for nighttime hazards. They reduce your field of vision and take depth perception away. You still need to slow aircraft movements down when close to the ground. You also need to look around the goggles to get peripheral vision inputs. In our case, the goggles only let us see the birds before we hit them. They did not provide some advance information on the birds we hit, which could have prevented the incident."

Here are two more responses to an earlier question regarding passengers.

Surprise

"Back in 1992, I was still working towards my commercial helicopter license and was helping out the flight school load and unload passengers for helicopter rides during the airfield's annual airshow. The landing area was well secured and there was no shortage of volunteers (rated pilots and instructors) to help with selling tickets, giving passenger briefings to those waiting, escorting passengers to and from the helicopter, and assisting them in and out of the helicopter.

Sometimes it seemed we had more people in the crew than we had in the lines waiting to go.

The flight school was using a Hughes 500C, loading two passengers up front through the right-front door and two in the back, one on each side. I was working the left-rear door behind the pilot. This meant when the helicopter landed, I would arrive next to that door, help the passenger out of his or her seatbelt, and guide the customer out from under the spinning rotor disk to the escort waiting in front of the helicopter. The escort would then take the passengers back beyond the safety ropes. While he did this and the next passengers were on the way, led by yet another escort, I would ready the seat for the next rider, loosen seatbelts, etc. The same was occurring on the other side of the helicopter by the two others, one for the two front passengers, and one for the right-rear passenger.

Everything was running extremely well and everyone working the rides was quick to control happy, eager, and sometimes situationally unaware passengers. As the day went on, we all became very familiar in our specific roles and duties. We were getting a rhythm in our





tasks like one working on an assembly line.

Somewhere in the later afternoon, I had just unloaded my passenger, pointed the way to disembark and went to the seatbelts. Once ready, I turned to face forward looking for my next load, making sure to remain aft of the door. I was a point of safety that did not allow my passenger to pass toward the whirling tail rotor. After a few minutes went by and still no one in sight, I looked around the front of the helicopter and only saw the two escorts walking back toward the ticket stand. Thinking that there was no one to be loaded in my seat, I turned to fasten the seat belts while still keeping an eye toward the front in case of any last second passenger. This had happened a few times throughout the day and was not uncommon.

Just as I was pulling the seatbelts tight and tucking the loose ends in, I felt a tap on my RIGHT shoulder. I turned quickly and in shock and looked into the eyes of this eager passenger. I asked him how he got there and he said he went to the wrong side (followed his friends to the right side of the aircraft) and then just waked under the tailboom to my side once he realized his mistake. Fortunately, he did

not walk so far aft to get hit by the tail rotor and he also didn't seem burned from the exhaust of the engine. Over all the noise, I gave him a quick reminder NEVER go under the tailboom of a helicopter and proceeded to buckle him in.

While the helicopter took its passengers for their five-minute ride, I quickly briefed everyone as to what just occurred. Everyone noted the seriousness of the situation and complacency instantly disappeared. The rest of the day went without incident and everyone had a great time. We were extremely lucky that this one mess-up did not end in tragedy."

Alouette

"I was flying an Alouette III on a Naval ops on a sweltering hot and humid afternoon in the tropics, the temp was 110°F and humidity was over 90%. The Naval firing range was active nearby and I was asked to swing by and pick up two passengers from a helipad serving the range. My copilot and I had already been in the air for 5 hours that day and we had three passengers on board at the time in addition to a nearly full tank of gas. Performance was marginal in these conditions and all on board were thirsty.

The helipad was in a coconut

plantation in a clearing the size of a football field. The request for a drink was passed on to the range officer on the radio, and when the two passengers boarded they arrived with large water-filled coconuts which had been slit open on the top. Passed them around to the thirsty passengers. I was busy talking with a range official accepting some documents while my copilot left for a quick trip to the toilet. The empty coconut shells were left behind before we departed.

I elected to do a running takeoff under the high temp, humidity, full load, and wind conditions. When I applied collective on the takeoff roll, the wheels came off the ground but I could not move the cyclic stick aft of neutral. The helicopter was now airborne at full climb speed and hurtling toward the 4 story high trees. I could not pull the nose up with the cyclic stuck at neutral. There was no OUT except to crash into the tree trunks which were now about a hundred feet away. In sheer desperation, I yanked on the collective, vertically hauling the helicopter out of its level trajectory and exceeding all torque limits. The rotor clipped some foliage from the treetops and the wheels then plowed through the canopy but somehow we emerged out at the top, still flying.

I looked down to see what was restricting the cyclic. To my horror I saw a large coconut wedged in between the copilot's seat and his cyclic. Directly under his thighs and on the vertical face of his seat is a map case, a sort of cloth pocket with an elastic mouth, and lying in it was this coconut. When the copilot had left the helicopter and I was talking to the range officer, a passenger in the front row next to the copilot, had used this pocket to dispose of the empty shell."



FAA NPRM NOTICE OF PROPOSED RULE MAKING PART 0, SECTION 000 (A)I(C)

SECTION I – No pilot or pilots acting on the direction or suggestion or supervision of a pilot or pilots may try, or attempt to try to comprehend or understand any or all, in whole or in part, of the herein mentioned Aviation Regulations, except as authorized by the Administrator or an agent appointed by, or inspected by, the Administrator.

SECTION II – If a pilot, or a group of associate pilots become aware of, or realizes, or detects, or discovers, or finds that he or she, or they, are or have been beginning to understand the Aviation Regulations, they must immediately, within three (3) days notify, in writing, the Administrator.

SECTION III – Upon receipt of the above-mentioned notice of impending comprehension, the Administrator shall immediately rewrite the Aviation Regulations in such a manner as to eliminate any further comprehension hazards.

SECTION IV – The Administrator may, at his or her discretion, require the offending pilot or pilots to attend remedial instruction in Aviation Regulations until such time that the pilot is too confused to be capable of understanding anything.



Helicopter Safety Information

The National Aeronautics and Space Agency (NASA) have a Helicopter-related Website.

You can access it via their address:

Safecopter.arc.nasa.gov

PILOT SAFETY AWARDS

Bell Helicopter Textron Inc. (BHTI) recognizes that safe helicopter flying does not happen by "accident". It is a result of making good decisions coupled with a high level of flying skill. To recognize pilots, who fly safely, BHTI offers a Pilot Safety Award for verifiable accident-free flight hours in Bell helicopters. Award certificates are issued in 1,000 hour increments and recognize both civilian and military flight hours.

Requests should be submitted, after a favorable internal review of flight records, by the chief pilot, safety officer, or individual with like authority to BHTI Product Safety. Please provide us with a list of the names (as they are to appear on the certificate) and the corresponding amount of accident-free flight hours flown in Bell helicopters. If a requirement exists to include military rank, please indicate that in the request. Please submit requests by mail, fax, or email as listed below. If a presentation of the safety awards is planned for an upcoming safety meeting, include that date to get a priority response. The BHTI Product Safety Group will verify the accident-free flight hours for each pilot and then process and mail the awards. Awards are sent to the requesting individual, so make sure to provide a return address and telephone number.

Bell Pilot Safety Awards are an excellent way for management to recognize their pilots for continued safe flying. To further recognize these pilots, a list of award recipients since 1997, is on the Bell Helicopter web site. To view the web site, log on to www.bellhelicopter.textron.com, click on Customer Support and then Flight Safety.

ACCIDENT HISTORIES

Additionally, as a service to Bell customers, the BHTI web site also contains listings of Bell helicopters that have been determined (by an official government agency) to be destroyed. A list of Bell aircraft identification data plates that have been destroyed is listed as well. The web site also includes links to official government investigation agencies (like the NTSB) where accident reports may be viewed. If additional information is needed about the history of a particular helicopter, don't hesitate to call us at (817) 280-2676.

BELL HELICOPTER TEXTRON INC. PRODUCT SAFETY GROUP CONTACT INFORMATION

Mailing Address

Roy Fox

Chief, Product Safety

Bell Helicopter Textron Inc.

P.O. Box 482

Ft. Worth, TX 76101

Fax: (817) 280-2790

Phone: (817) 280-2676

Email: productsafety@bellhelicopter.textron.com

WHAT'S YOUR ANSWER ?

QUESTION:

"Tell us about an experience where you or one of your crew members fell asleep inappropriately - in the cockpit, in the cabin, in the office/ready room, while on duty, etc."?



Mail your
ANSWERS

or e-mail:
jszymanski@bellhelicopter.textron.com

to: Heliprops Administrator
Bell Helicopter Textron
P.O. Box 482, Mail Stop 082835
Fort Worth, Texas 76101

Yes!

I would like to receive
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THE HUMAN AD.



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Heliprops Administrator; P.O. Box 482
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The primary objective of the **HELIPROPS** program and the **HUMAN AD** is to help reduce human error related accidents. This newsletter stresses professionalism, safety and good aeronautical decision-making.

Letters with constructive comments and suggestions are invited. Correspondents should provide name, address and telephone number to:

Bell Helicopter Textron, Inc.
Jim Szymanski
HELIPROPS Manager
P.O. Box 482
Fort Worth, Texas 76101



or e-mail: jszymanski@bellhelicopter.textron.com