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Heart To Heart Talk

With Philip S. Chua, M.D.

Health and Air Travel

How many aviation accidents happen each year?

There are more than 4000 accidents that occur each year in general aviation, varying in degree of gravity, mostly involving private recreational aircrafts and are often related to alcohol and/or use of drugs by the pilots. Commercial aviation safely transports hundreds of thousands of passengers all over the world every day. Statistically, flying in general is still safer than driving long distances.

Are commercial pilots medically screened?

Most definitely. They are rigorously screened and subjected to regular periodic medical examination, not only for any physical ailment but also for any psychological illness, stress and mental problem. They are also counseled against the use of drugs, including prescription medications, like antihistamines, narcotics and sedative medications. This strict standard “quality control” is practised by almost all airlines, especially in the United States.

What are the various problems encountered by the air traveler?

Changes in barometric pressure, decreased oxygen tension, circadian dysrhythmia, psychologic stress, and effects of air turbulence are the major problems imposed on the air traveler.

What cabin pressure is maintained by aircrafts during flight?

Modern aircrafts, including supersonics, maintain a cabin pressure that is equivalent to 5000 to 8000 feet. At such an altitude, free air in the body cavities tends to expand by about 25% and may aggravate certain medical conditions. Most persons with adequately treated chronic illnesses, like high blood pressure, diabetes, or heart conditions that are not severe, can safely tolerate flying, even international flights. However, those with anemia (low blood count), asthma, emphysema and those already short of breath from other lung problems or heart failure, may not be able to tolerate the high altitudes. It is always prudent to check with your physician if you have any concerns about flying.

Why do some people get air sickness?

Some people are born with vestibular-labyrinthine apparatus (inner ear structure that helps us balance ourselves) that is very sensitive to motion, more so than average. Stimulation of this apparatus in these people by acceleration and deceleration, or by upward, downward or swinging movements, cause dizziness or nausea and/or vomiting, which is commonly known as motion sickness, sea-sickness, air-sickness, etc. Oral medications are available for travelers to minimize or prevent motion-, sea-, or air-sickness.

What can be done to minimize air sickness?

The night before the trip, have a quiet evening, and avoid alcohol and spicy foods, including the morning of the air travel. During the flight, eat light and drink no alcoholic beverage but ingest about a glass (8 Oz) of water for every two hours of the trip to prevent dehydration and its side effects. If nausea occurs, recline your seat, close your eyes, try to relax and keep your head motionless. If it persists, anti-emetic (anti-nausea/vomiting) medication may be needed.

Does biofeedback help?

Yes, biofeedback helps relieve stress and many flight discomforts. While seating back, relaxing your whole body, with the eyes closed, think and concentrate hard that you are on a tropical beach, enjoying the white sand and clear, sky blue waters. Breathe normally, nice and easy, punctuated by a deep sigh every now and then. Let your arms and legs and the rest of your body go limp. Meditate, day dream, think good and happy thoughts. This strategy has been found to be very effective, especially on long flights.

Who do young children cry during take off and landing?

The changes in the altitude, barometric air pressure, causes temporary increased in the pressure inside our eustachian tube (inner ear) and this lead to severe pains in the ear, in the head and/or in the face (sinuses). To relieve the pressure (discomfort of blocked ears), one must swallow with the nose closed, or do frequent yawning during take off and landing. Filling the mouth with air and blowing hard, with mouth closed and the nose pinched (Valsalva Maneuver) may help “pop open” the blocked ears. Babies and young children should be made to drink or swallow liquid when the plane starts its ascent or decent. For adults and older children chewing gum or merely swallowing their saliva, during take off and landing, help prevent the occurrence of the excruciating earaches and /or headaches.

Why the bloating sensation?

The changes in cabin pressure increase the gas production in our guts. As the pressure falls, the air in the intestines expands, causing bloating and discomfort.

Abstinence from alcohol, or drinking in moderation, and eating light, especially on long flights, can minimize or prevent problems during flights, and make air travel more enjoyable.

Are upper respiratory infections aggravated by airlights?

Yes, because upper respiratory tract infection and even allergy may obstruct the eustachian tube, resulting in barotitis media (inflammation of middle ear from the increased pressure during flight) or barosinusitis (inflammation of the sinuses in our face around our nose). This is why closed-nose swallowing, frequent yawning, or decongestant nasal spray or antihistamines that reduced clogged nasal passages, are helpful in relieving the increased pressure in our middle ear and sinuses during take off and landing.

Why has smoking been banned in most flights?

Smoking in an airplane forces all passengers on board, including non-smokers, to inhale the smoke (passive smoking), which is hazardous to health. Passive smoking has been found to be more dangerous than active smoking when it comes to cancer risk. While smoking is prohibited in all U.S.A. commercial flights, it is unfortunate that not all countries and airline companies ban smoking on their flights.

Are patients with a history of collapsed lungs allowed to fly?

People with a history of collapsed lungs (pneumothorax) more than once, and not operated on, are not allowed to fly because pneumothorax may recur. If this should happen, especially at high altitudes, the shortness of breath that follows collapsed of the lungs will be worse, and aggravated to the point that the person might die of suffocation. Those with this condition should undergo a major but fairly simple operation to cut out the portion of the lung that is weak (with very thin wall that balloons out like a bubble) and leaking. Those whose pneumothorax has been corrected by surgery are allowed to fly, but not to pilot a plane.

Are pregnant women allowed to fly?

It is safe for pregnant women to fly on commercial airlines. However, most airlines do not accept passengers who are more than 35 weeks pregnant for untimely delivery and safety concerns. Those concerned should check with their airline or immigration office at the country of destination about entry regulations.

Is it safe for heart or lung patients, or diabetics, to fly?

Today's commercial flights are pressurized and generally safe for cardiac, pulmonary or diabetic patients. Heart patients who are able to climb two flights of

stairs (a dozen steps) without chest pains or any difficulty, stable asthmatics or emphysematous patients who can walk a 150-foot distance without breathing problems, controlled diabetics and high blood pressure patients, can fly safely. It is strongly recommended that patients carry with them in person their medications. If in doubt, consult your physician.

Why is alcohol bad during flights?

Prudent, moderate consumption of alcohol is generally tolerated by most people on board. Alcohol, just like smoking, increases body fatigue, hypoxia (lowering the oxygen level in our blood) and dehydration. Fatigue and hypoxia, which naturally occur during long flights, explains why some people “do not feel well” following the air travel. Alcohol and/or smoking aggravate these two conditions and the severity of circadian dysrhythmia (jet lag).

How does one prevent or minimize the hazards of long flights?

During long flights, like international travel, it is best strategy to minimize the effects of jet lag to adjust your sleep cycle starting a couple of days before departure. During the flight, eat light, drink a lot of fluids like fruit juices or water (not alcohol), get up and walk often and do light aerobic exercise in your seat every couple of hours or so, and get enough sleep (a mild sleeping pill prescribed by your physician might help in timing your sleep cycle in anticipation of the time zone change in your place of destination). Melatonin tablets have been effective in reducing jet lag in some people, but reports of possible side effects on the rhythm of the heart have discouraged some physicians from prescribing Melatonin. Some people take aspirin or other pain pills to minimize muscle aches and pains. On arrival, rest for a couple of days and limit your commitments during this first two days to minimize jet lag and allow your system to adjust.

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