

toxic free airlines ←

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INTERNATIONAL CREW HEALTH SURVEY

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In March 2009 Toxic Free Airlines started an online crew health survey in English to try to find out how many crew members believe they are suffering occupational health problems as a consequence of their working environment.

This survey will remain open indefinitely to all serving pilots and cabin crew worldwide. It will be updated every year and the results published on the Aerotoxic Association website www.aerotoxic.org

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Summary

To date, 1020 surveys have been received from 24 countries in Europe, North & South America, Africa, the Middle East & Asia.

Pilots: 50

Cabin Crew: 970

(864 of these were from 1 major UK airline.)

44% were male, 56% were female and the average age of those taking part in the survey was 41 years.

12 crew members reported no time off sick & no symptoms at all.

1008 reported some symptoms.

234 (23%) reported no time off sick

786 (77%) reported some time off sick

262 (25%) reported long term sickness of 3 weeks+

31% reported they suffered from allergies.

Some crew said they had not reported sick to their airline but they had been ill on their days off, leave or part time weeks. Others said they went to work when they weren't 100% fit because they were afraid of the consequences of taking time off. The top 12 disorders crew have been medically diagnosed with are:

Diagnosis	n	%
Depression	231	22.6%
IBS/Crohn's Disease	149	14.6%
High blood pressure	131	12.8%
High cholesterol	116	11.3%
Eczema/psoriasis	107	10.5%
Insomnia	103	10%
Migraine	100	9.8%
Pneumonia/bronchitis	84	8.2%
Asthma	77	7.5%
Chronic fatigue	75	7.3%
Miscarriage	70	6.8%
Thyroid disorder	64	6.3%
Cancer*	60	5.9%

*This figure does not include those with pre-cancerous cells or those who did not specify if their tumour was malignant. Using the UK National Average statistics we would expect to see 5-6 cases of cancer in a population of 1020 people with an

average age of 41. In the survey we have 60 people diagnosed with cancer, which is 10 times higher.

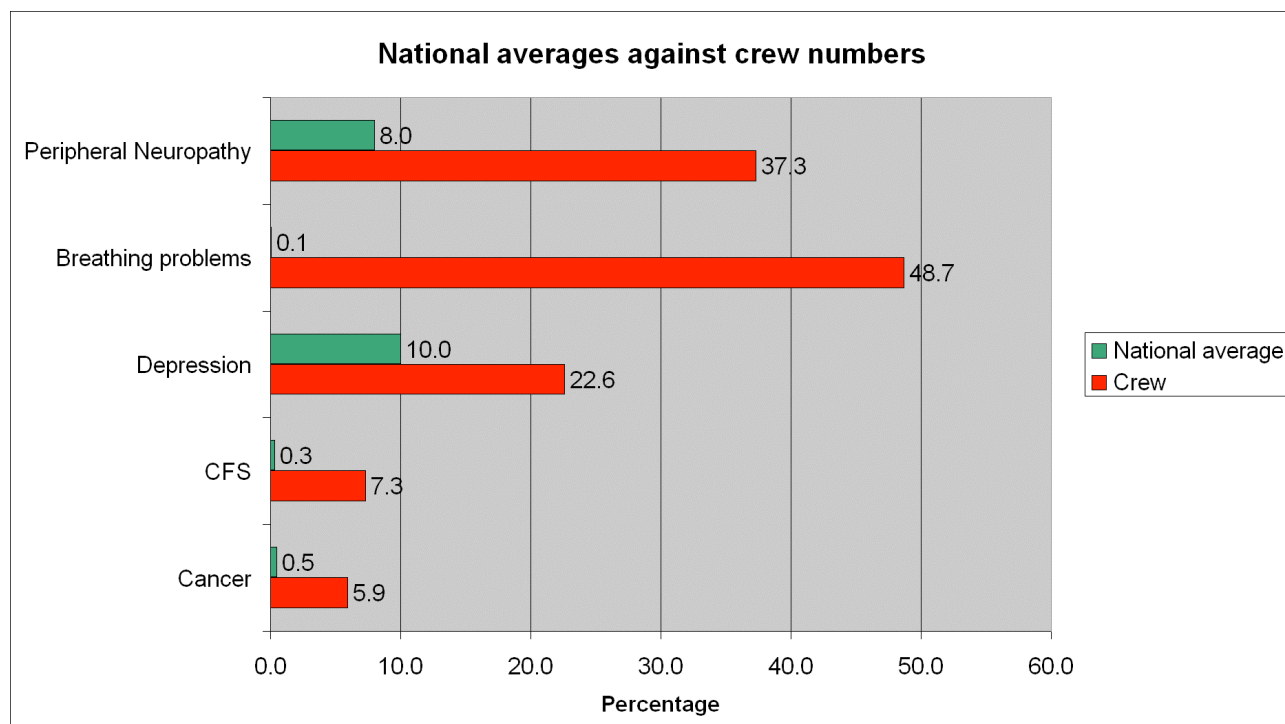
Crew also told us they have been diagnosed with many other conditions not listed on the survey. The most frequently mentioned were chronic sinus & nose problems, vertigo, tinnitus, eye irritations, frequent colds & flu and ear & throat infections.

Other conditions reported included: pituitary tumour, brain tumours, endometriosis, osteoporosis, diabetes, shingles, gallstones and carpal tunnel syndrome. There were also 2 cases of sarcoidosis of the lungs. The British Lung Foundation advises the usual incidence of this in the UK is 1 in 10,000 of the population.

380 (37.2%) said they had the symptoms of peripheral neuropathy (numbness/pins & needles in face, hands & feet).

National averages

As a comparison Toxic Free Airlines looked at UK national average figures.



Sources:

Cancer Research says the chance of getting any cancer aged 35-44 is **1 in 200**

ME Research UK says the incidence of CFS is up to 150,000 which is **1 in 400**

Mental Health Foundation says every year **1 in 10** will suffer from some form of depression.

Health & Safety Executive figures for 2008/09 state an estimated incidence of breathing or lung problems for people working in the last 12 months to be 64 per 100,000 or 0.064%

The Medifocus Guidebook on Peripheral Neuropathy states that the prevalence of peripheral neuropathy worldwide has been estimated to range from 2% - 8% of the population.

Toxic Free Airlines Comment

Having read all 1000+ surveys we are concerned that not only is crew health being adversely affected as a consequence of their occupational working environment but flight safety is also being compromised. Both cabin crew and pilots say they are having difficulty performing their occupational duties: 45% said they suffered from confusion and difficulty thinking, 55% said they had difficulty concentrating and 49% said they had memory loss.

These are people who were considered to be fit and well when they were accepted for the job. It is therefore possible that passengers are also being affected. The elderly, pregnant women, babies, children and those with underlying health issues could be at risk.

We urge the airlines and regulators to apply the precautionary principle and protect airline workers and passengers from harmful health effects by fitting bleed air filters and contaminated air detectors without delay.

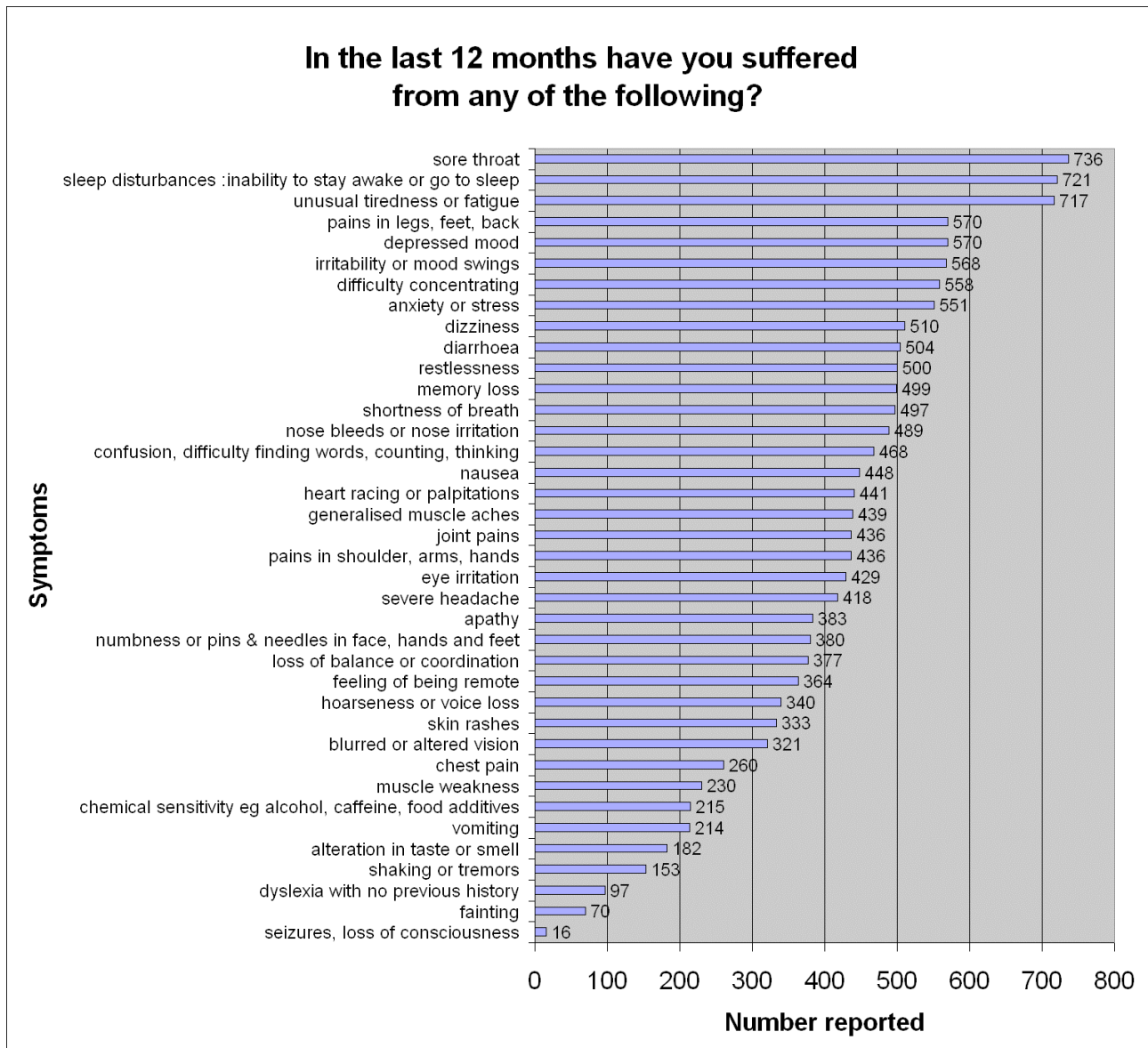
All original survey forms are kept in the Toxic Free Airlines office and can be made available for viewing and verification of the data contained in this survey.

Grateful thanks to all the crew who have completed surveys for giving us this personal information and also to our colleagues at the Aerotoxic Association for their help in gathering and compiling this data.

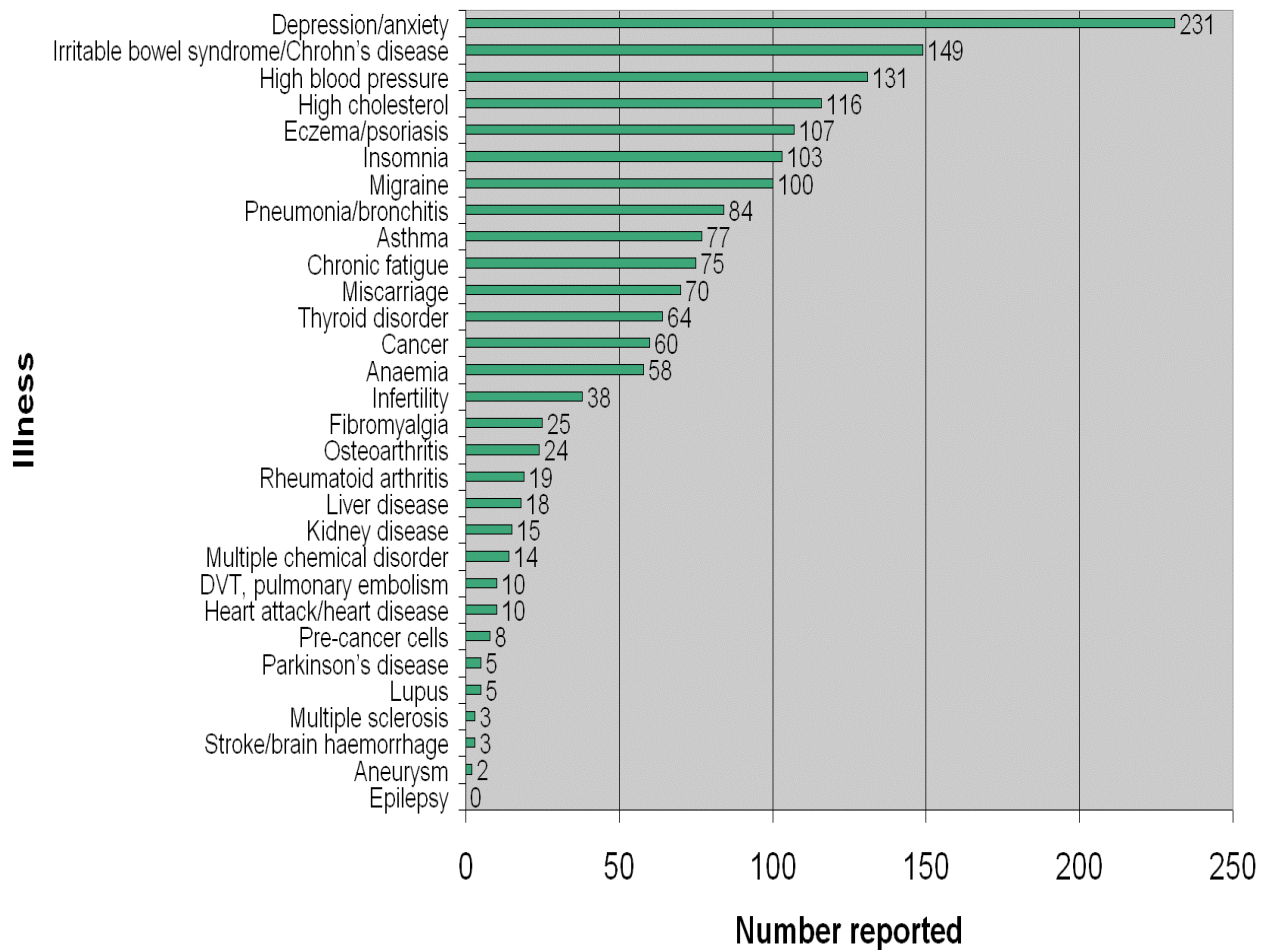
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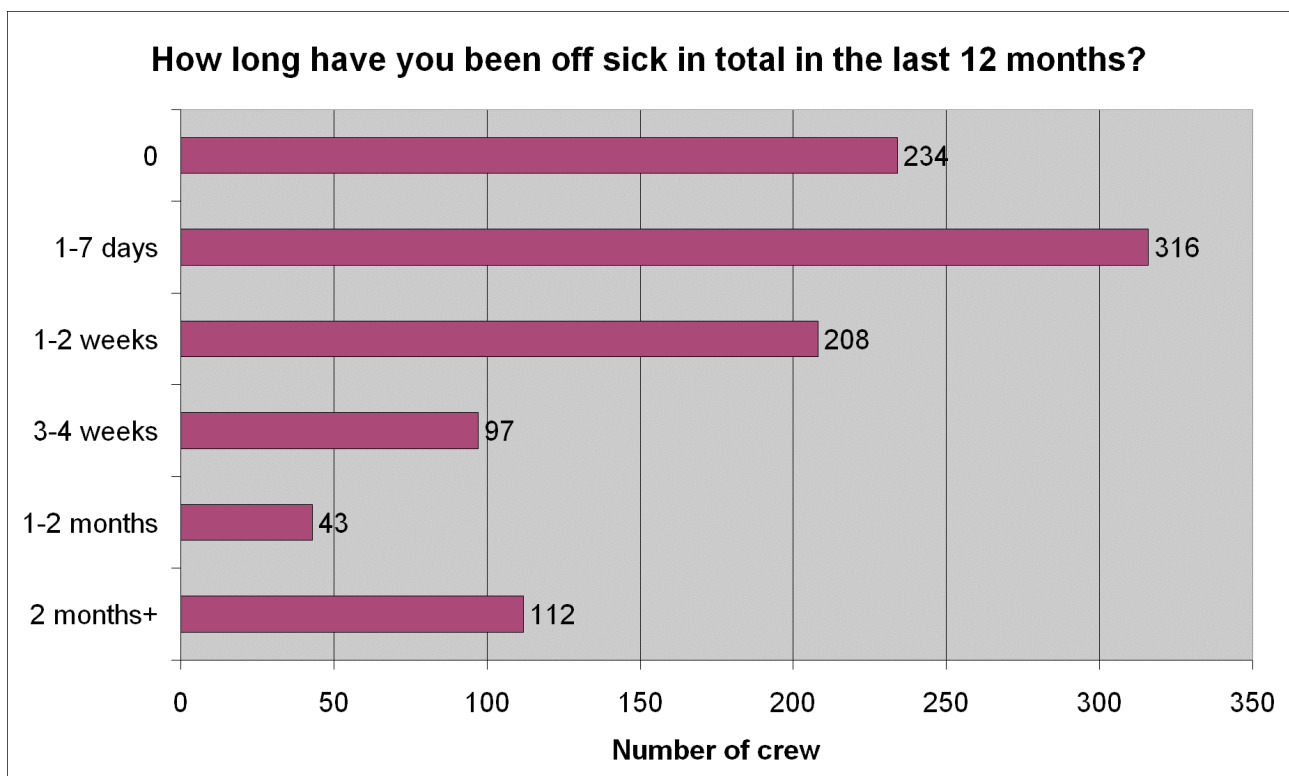
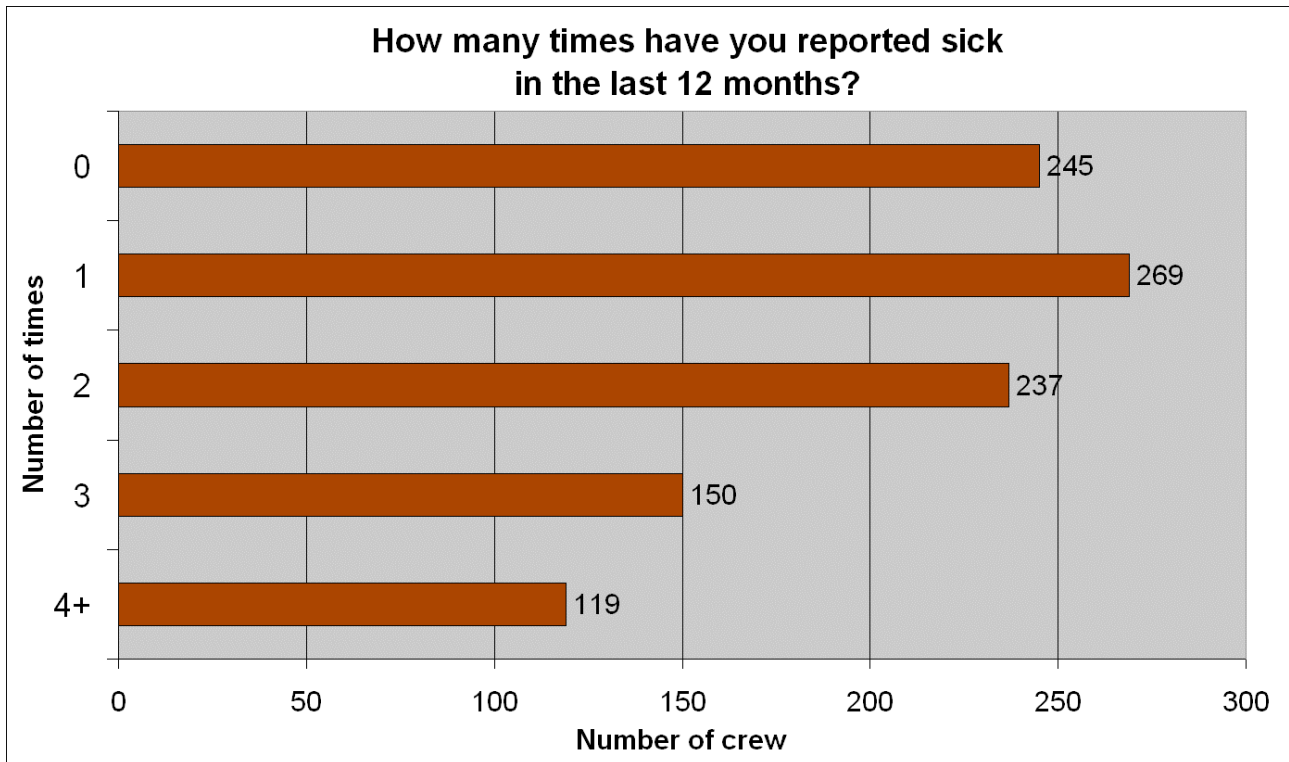
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Survey results



Have you been diagnosed with any of the following since you started flying?





Crew Comments

A selection of comments from the crew health surveys

Comments from the cabin crew ...

Since I started flying I have never felt so unwell. My quality of life has changed beyond recognition. My personality was always joyful and positive – I am so negative now and cannot shake off an impending sense of doom. I have constant headaches and cannot stop crying.

I feel horrible all of the time and have been otherwise healthy and active my whole life. Over the last 4 years have had Bell's Palsy and vertigo simultaneously for 6 months now more recently Brown's syndrome with double vision.

I live in a constant state of confusion, somewhat like ADD and Alzheimer's combined. I feel betrayed by my company.

I was on an air quality incident and have been out of work for 20 months. Very little improvement having trouble getting my bills paid and very depressed.

We were working a flight this year where passengers complained of numerous headaches. A passenger threw up. I started feeling confused, went to the bathroom and was sick. We asked the pilot to increase the air flow, which he said he did, but we suspect he didn't.

I find my symptoms are worse on the 777. The memory loss and lack of ability to concentrate is debilitating particularly if I am Senior Cabin Crew Member on the day. I also find my kidneys affected and my vision distorted. Dizziness and headache are a sure thing. I often feel intoxicated and can't form sentences easily. I like to think, having a First degree, I'm reasonably intelligent and yet more often than not on the 777 I feel almost retarded inflight. It really upsets me and then I get depressed that it affects me this way EVERY single trip!

I sincerely hope this issue gets rectified because a lot of passengers and cabin crew are ingesting a great amount of engine smoke!!

I am at a loss to explain my poor health except that it is related to my job.

Within 5 hours of flying my entire body begins to ache and movement is extremely painful.

All that changed when I started flying (previous good health). I suffer asthma, skin rashes, food reactions, constant eye irritations etc. I am getting closer to retirement and no longer fear repercussions from Airline management.

I've had recurring insomnia ever since I started working. My memory is also very poor for a 29 year old woman.

When I was off on maternity for 18 months from flying I had no symptoms.

The constant fatigue and exhaustion I feel have greatly affected me over the last year to the extent I have no quality of life.

I have been involved in 2 air quality incidents in the past 7 years. Have seen significant memory loss since.

Was treated as a liar by my airline with regards to all of my symptoms due to the fact that I constantly made complaints about the smell of vomit/oil in the passenger cabin of each aircraft. Only through this website was I able to find out what was happening to me and why I was suffering so badly with what I have come to discover was aerotoxic syndrome.

I had 4 separate exposure events leading to all my symptoms. In the meantime I became informed of the chemical composition of these fumes and the deadly effects.

Was out of work for 3 months. Diagnosed as having a TIA. It all went downhill from there. I do not smoke, drink alcohol and am not overweight. I was in good health & exercise. I suffered from debilitating nausea, diarrhea, vomiting, no energy, no appetite. The doctors could not figure it out either, I was given all kinds of tests and they also found 2 tumours on my brain. I went back to work for about 4 months and then got some of the symptoms again. My airline friends asked if it was from toxic fumes.

I feel that my health is quickly deteriorating. I fly on prescribed antidepressants and have less stamina and more short spells of sickness than ever before.

I have been very, very ill 5 years+. I have been very shabbily treated by my manager. There have been days I couldn't have told you what my name was! I suffer THE most horrendous pain in my joints and muscles. BA are now trying to terminate my contract.

I've had blood tests showing high levels of petroleum related chemicals, nickel, cadmium and damage to enzymes and mitochondria, neurological tests showing some damage to nerve endings and damage consistent to exposure to toxins.

Flight Deck seem generally unwilling to report or investigate fumes. I suspect that Captains are being discouraged from using reporting procedure.

Regular blood tests appeared to show that bloods were more abnormal after my working month and generally improved the month I wasn't working (part time).

4 years ago I became ill with a bad wheezy chest which I put down to maybe a flu virus. I had never had flu before and rarely catch a cold. This illness lasted from March until I ended up in hospital in July. Asthma was diagnosed. I firmly believe it was caused by flying as these symptoms still affect me sometimes when I am on an aircraft.

Constant tiredness and lack of co-ordination. Unable to think clearly, cannot concentrate.

Have never been so ill since starting this job! !

Started flying in 2006 with a charter airline. Experienced some numbness in toes after

approx 6 months of flying on the A330. Feeling of numbness faded away during 6 months away from flying. I then moved to BA. About 6 months ago the numb feeling came back along with intermittent muscle pains, always in the 24 hours after a long haul flight. I was referred to a neurologist by my GP, who found no signs of any muscle condition.

Midwife said she could not believe how many problems I had for my age (26). It was quite unusual.

Twice within last 6 months I've operated back to base horizontally, having spent the previous 24 hours with nausea and vomiting. These incidents have not been officially reported. Both times I was operating on B777.

Am off sick at the moment with unexplained pains in my chest and back, pains in my arms, out of breath by just going up the stairs, am seeing a thyroid specialist as blood tests show high level of hypothyroidism.

I often feel vaguely unwell on the 777 – dizzy and prone to headaches. Can quite often detect very faint acrid smell in the air.

Since operating on B777 aircraft I have suffered increasing respiratory problems (shortness of breath on board) and nose bleeds.

Unable to physically get out of bed some days...severe pain in arms and legs..chronic chronic fatigue ...struggle some days to remember my name. Typically after working sectors I felt as if coming down with flu. Quite often remember smelling fumes in bunk areas on 747 during crew rest.

I go to work sick so that I won't get pulled up by my manager. I love my job to pieces but I have put my name down for part time as my body has changed so much since I started flying.

Diagnosed with Aerotoxic Syndrome. BA have denied any problems. Have noticed continued fuel smell on 767 on push back.

There is such a fear of reporting sick that many crew go in when they should not. I feel constantly tired, I also find that I often come down with sore throats and cold symptoms, particularly after being on the 777 aircraft. The crew often feel tired, dehydrated and sickly on this aircraft. I feel that it is amazing that airlines are prepared to use recycled and possibly toxic air in order to save money, rather than using fresh air in the cabin.

I have had the worst symptoms on Boeing 777 + 767. After about 10 minutes on board my nose and throat feel swollen and dry and I have severe dehydration. I no longer fly longhaul but while regularly on 777s I suffered terrible sleep disturbance, depression, mood swings, and a general feeling of being detached from life for about 1 year. I am also extremely worried about the numerous cases of cancer and infertility people suffer in this job and feel strongly that thorough research needs to take place.

I had toxic fumes on the Airbus 319 about 3 years ago, did not know what it was at the time till I saw a program on toxic fumes, had all the symptoms, sore eyes, nausea, hard to breathe, flight deck on oxygen feeling the same, company telling us if symptoms continue

to go to hospital. Found out later that it was fumes from the oil filter (told by my manager.)

Despite being sick constantly with numerous complaints, because of the draconian sickness policy at british airways I am scared to call in sick and so go to work ill, so the body just seems to get worse and worse.

Since flying on the 777 mostly feel short of breath, exhausted, aches in feet, legs and back, dry skin and nose bleeds, after flight constant sneezing. My lungs are still 100% toxic I cannot clear them. I have now been told my thyroid is failing.

Been tested several times for chronic fatigue, headaches, thyroid disorder, sleep problems & just generally feeling unwell.

Over the last 2 yrs I have had bouts of vertigo which have increased in length each time. The last attack lasted for 7 weeks. On some occasions this has led to sudden loss of vision and blurred vision.

Been positioned home TWICE by global lifeline. Am a trainer too and concerned that my job is at risk if I draw attention to my situation.

I have administered oxygen to myself on landing as I felt so dizzy and out of breath I feared for myself, I also know that many of my colleagues are sneaking puffs of oxygen as they feel faint, out of breath and dizzy but have been sick so often they are afraid of reporting sick for duty due to airline supervisors pressure and threats and lack of sick pay.

Ever since I started flying I have noticed that I experience extreme fatigue after flying duties. I have also suffered ongoing sinus problems and an increase in contracting cold and flu viruses and I am convinced this is related to flying. Over the years I have noticed an impairment in simple mental processes such as memory, mental arithmetic and sometimes even finding the words to speak! Before flying I considered myself fairly intelligent and articulate and educated to degree level. I am sure that lack of oxygen/poor air quality/cosmic radiation/increased cabin pressure/ other factors has contributed to my decrease in mental and physical wellbeing and I really do hope further research and help for those affected will be conducted in this area.

I collapsed at work and was rushed to hospital after landing. I had been on the 777.

777 particularly bad. Every single trip on this aircraft I have at least 1 nosebleed and my eyes are always bloodshot. This takes about 24 hours after operating to clear.

Over the years my memory has become worse in all areas. I find it difficult to concentrate, I suffer more frequently from dizziness and imbalance. I find it more difficult to find the right words more and more every day.

I have been suffering with many of these symptoms over the past 3 years especially. The company I work for are constantly telling me that I am the only one with a problem, but I know of others who are too afraid to speak out. Two flight crew have been incapacitated recently. My GP is worried for my health. I was made an example of last year as I kept reporting problems and submitted an Air Safety Report. This led to me being grounded for 6 months as a warning to the other crew to keep quiet! Also, the flight crew will not put

anything to do with fumes in the tech log.

Have had 2 fume events so far within a year. Both on old Airbus A320 during engine start up. Previously on Concorde we thought the DAILY occurrence of noxious fumes on engine start up was usual.

Under specialist for very poor memory, hospital said there is very strong evidence of quite rapid memory loss/deterioration there is no underlying reason for it that they could find.

My skin condition which appeared 3 years ago out of the blue, has started coming back, which is strange as I have been off for 15 months on maternity leave, where skin problem seemed to have cleared, but since back at work 3 months ago seems to be returning. A type of eczema.

All my allergy and auto-immune tests have come back negative. My Consultant says he believes I am an "intrinsically healthy person" and all my health problems have been caused by "external factors." My GP believes all my health problems have been caused by flying and has written Aerotoxic Syndrome on my medical certificate. I have been on sick leave for over a year and BA has threatened to terminate my contract on 3 occasions. I thought there were employment laws designed to protect workers from this sort of thing. Why isn't anyone helping us?

Never been so ill since started flying. Had operation to clear sinus. Diagnosed asthmatic. Blocked ears. Chest infection approx 5 times. Diagnosed to have allergies.(Been flying 2 years.)

I started to suffer constant headaches, whilst flying on shorthaul for just over a year. Most days we were, especially on early morning flights on 757, subjected to fumes in the cabin...a lot of it and when asked we were told, by the Flight Deck that it was normal due to start up of APU. My IBS/headaches, along with very weak legs, just got worse. A few years later I suffered a brain haemorrhage and I had to have 2 operations. Every day I still suffer from headaches and severe back/leg pain. I have now been given a walking stick, a blue badge and was awarded DLA due to my health and mobility problems. I used to be a fit, healthy and vibrant person, until I started my flying career, I feel like an old lady now ...and I'm not! (Aged 37) My flying career has left me partially disabled. I have nearly died from it.

Up until now I just presumed that the symptoms were just "part of flying" and the lifestyle. I am now going to see my GP after reading Toxic Free Airlines. (23 year old who has only been flying 2 years and has developed tremors.)

Constant tiredness and lack of co-ordination. Unable to think clearly, cannot concentrate. (35 year old In Charge Crew Member on longhaul aircraft.)

Am now considering leaving flying as I am so fed up of feeling tired and unwell.

Have had quite severe headaches over last 10 years when flying on 757,

Was diagnosed as asthmatic last year after a bout of feeling ill, with a severe cough and chest infection which continued for months.

Heart palpitations after flights for last 15 years.

The dizziness and nausea are now occurring on virtually every flight on the 777. During the last flight I operated I ended up secretly using the oxygen as I felt so light headed. I rarely feel 100% well.

I have been diagnosed with depression since 2004 and take regular medication, I have headaches on a regular basis, nose bleeds when flying on boeing 777. I have had no feeling in the left of my hand and little finger for some years. I take sleeping tablets every night and go through phases of not being able to get out of bed. I have a fear of going out and although I do I prefer to stay indoors where I feel safe. Bouts of diarrhoea come and go. I become very anxious when alone in hotel rooms, I end up in floods of tears.

Even when feeling ill I have to go in or I fear they will 'manage' me out of my job.

Progressive idiopathic neuropathy in feet started about 10 years ago and now beginning in hands.

Due to sickness policies introduced over the past two years, many crew now feel pressurized to fly when they are not 100% fit.

I sometimes feel I'm going mad and I fear if I suggest toxic air to my GP this might confirm that I am mad. I have refused anti-depressants prescribed by my GP, and symptoms have improved since being off work on unpaid leave.

I was diagnosed yesterday with severe hypertension. Treatment initiated immediately & off work now.

Since we started doing longhaul there have so many people with lung problems on our fleet!

Total number of fume events I was part of last year: 150! (26 year old cabin crew member diagnosed with osteoarthritis)

I have been on toxic airplanes twice in last few months, first exposure was very ill and had severe memory loss and other neurological damage for 3 weeks. Second exposure happened two days ago. I got off the aircraft in question and refused to get back on, the aircraft has been grounded 2 times in the past 3 days and is now on its way to Nassau and not repaired!!!!

Having been fit and healthy prior to flying, to suddenly be getting approx 3-4 recurrent bouts of flu and colds in the space of 4 months has been very frustrating and out of the norm for me.

I couldn't have radiotherapy or chemo for my cancer because it was a malignant melanoma. I had to have 2 operations to cut a big lump of my abdomen out and now have a nice big scar where my 6 pack should be. The Specialist said it was very rare to develop it so young, average age being 58....I'm 29.

My Dr has directly attributed my illness to exposures to fumes and toxic chemicals on the planes at work. I am about to lose my home to foreclosure and everything I have worked my entire life to obtain.

Comments from the pilots ...

No will to continue or take part in the flight, short term memory problems, word finding difficulties, a general slowing down of reactions and thinking times, a tingling in my finger tips. I also drove down the wrong side of the road twice, just after filling up with petrol and smelling the fumes. One day I breathed in a lot and suffered mentally for the short remainder of the flight. I then discovered through a colleague, exactly what organophosphate poisoning was. On reading up I found I had loads of the symptoms. I am still flying even though my company knows I am claiming to be poisoned by Ops. I ensure that whenever the aircraft smells, I use a combination of speedbrake and power that prevents idle power and so prevents the fumes entering. I am putting my, and my passengers health ahead of fuel economy. My health is permanently affected but I feel there is little I can do to prove it.

I recently experienced several fume events on q400 aircraft within the last month, 3 cabin crew were affected. After repeatedly grounding the aircraft eventually the airline I worked for boroscoped the engine and found oil traces in the compressor of the engine and oily water in one of the air conditioning packs. The engineering investigation found a leaking labrynth/bearing seal and the aircraft is now having an engine change.

Multiple events of oil fumes in flight deck on start up in the A340-500 plus 1 severe fume event causing immediate aerotoxic symptoms. Rolls Royce carried out a fleetwide modification to front engine oil seal and most fume events stopped. Management and medical department refuse to acknowledge aerotoxic syndrome is a potential problem and provide information to crews.

I have suffered these symptoms increasingly over the last few years and recently did experience a fume event. I am therefore wondering if any research into the cumulative effects constant exposure to small amounts of organophosphates has been conducted.

Flew BAE 146 1997 to 2000 – was poisoned by contaminated air. Lost job and stopped flying for several years. Regained licence in 2005, poisoned again by contaminated cabin air in 2006. Again lost job and stopped flying for several years. Have just regained licences and now plan to stay in GA so contaminated bleed air poisoning is not a possibility.

UK CAA removed my pilot Class 1 medical certificate in 2006 as being long term unfit. Quote from their letter “cognitive and autonomic impairmentthis impairment may have been caused by exposure to cabin fumes.”

I have experienced dozens upon dozens of flights where I had exposure to fume events.

Lost consciousness during the flight and was brought to the hospital. An Air Safety Report was filed and the aircraft BAE 146 air conditioning was checked for contamination of oil. It was found that the pack was fully contaminated with fresh engine oils. 5 years later and I

still have some symptoms which keep me from my normal life I used to live. Before I started my flying career I used to be a long distance runner and did a lot of sports, never smoked in my whole life.

I have had several smoke events on Airbus fleet. On cold mornings first flight of the day, oil pools in the engine from contracting oil seals. Some of this oil burns and creates a large plume of blue smoke which is distributed first to the pilots then to the rest of the cabin. The other source of toxic smoke is from oil seeping from pack seals.

My first inexplicable symptom occurred 9 years ago when I experienced strange thought patterns, feelings of detachment and confusion. At about the same time I developed a heart arrhythmia which grounded me for a year. I was seen by an airline doctor, 2 heart specialists, an internist and my family doctor – after a battery of tests no one was able to diagnose the problem.

I had an event of smoke within the cabin during take off. Both pilots donned oxy masks as a precaution. Flight was turned around and landed safely in 9 minutes. Neither my First Officer nor I had any symptoms but I did admit one flight attendant to the hospital later that night for toxic fume symptoms.

October 2011