

## **John G Hoyte: A testimony of my past ill health and partial recovery**

**1980 – 1987** I flew non pressurised aerial crop spraying and fire fighting aircraft using hazardous chemicals. However I always flew in uncontaminated air and never had any health concerns at all. I reasoned that this type of flying was ‘dangerous’ so I chose to fly airliners in the future.

**1987 – 1989** I flew day and night operations in DC3 Dakota and light twin Cessna, both non pressurised aircraft types. Although I frequently felt tired from unusual shift work my health was still excellent with no health concerns.

**1989 – 1998** I flew the pressurised BAe 146 aircraft on night freight around Europe. In about 1990 I noticed some visual disturbances became evident under conditions of fluorescent lighting. This problem persisted until late 2006.

In this period my speech became slurred and I found word finding difficult. My memory also began to fail rapidly. I had difficulty thought processing. My ability to take alcohol was severely limited as I already felt permanently intoxicated and did not wish to amplify the unpleasant feeling. My balance suffered to the point that if asked to stand on one leg with eyes closed, I would have toppled over. I also noticed body temperature control problems.

I experienced serious chronic fatigue, which I attributed to the shift work demands of night flying. My hearing performance in a crowded, noisy room also declined markedly although my hearing when tested regularly was and still is, excellent.

As a result of all of these disabilities I preferred to retire from social company. I was convinced that I probably had early dementia, Alzheimer’s disease or BSE/ CJD. I told nobody as I feared for my job. I found meeting the basic demands of my job increasingly difficult, and lived in considerable fear of failing one of the many recurrent proficiency checks due to my declining performance.

By now my character and personality had changed markedly. A consequent reduced libido had caused a six year gap between the births of my two children born in 1989 and 1995.

By 1998 the symptoms above had become chronic and acute. My memory had become so bad that although I wanted to change aircraft types, I stayed on the same aircraft (the BAe 146) because I knew I would be unable to meet the demands of learning a new type, especially as the required ‘type rating’ training would place heavy demands on my memory. I decided to transfer to ‘day flying’ as I reasoned that my permanent night flying must be the cause of my multiple, unpleasant symptoms.

During this period I had no official fume events but was exposed to visible oil fumes frequently on the ground from the APU (Auxiliary Power Unit) of the BAe 146. Often for the first flight of the day or night when the APU was cold, it would emit visible oil fumes into the cockpit and cabin for around five minutes until the APU had stabilised. I had no idea which chemicals were in these visible fumes.

By calculation I would have been exposed to visible oil fumes over a sixteen year period of flying as follows:

Approx 5 minutes / day = Approx 30 minutes / week = Approx 25 hours per year.  
16 years @ 25 hrs / year = 400 hours  
400 hours = Approximately 16 days and nights of exposure to visible oil fumes over 16 years.  
Therefore Exposure = 1 day and night per annum breathing visible oil fumes.

**1998 – 2005.** At first there appeared to be some slight relief as a result of a change to day flying only. However I still had all of the above symptoms which intensified slowly. By now I had difficulty speaking as my words got very muddled and my confidence diminished. My personality had changed and I became quickly angry and had difficulty with the simplest of new tasks. I still probably appeared fit and well but inside I felt more and more ill and doubtful that I could continue to fly safely.

My main concern was my memory. I had great difficulty in remembering critical 'memory items' for the BAe 146. There are around twenty different memory drills which must be actioned without hesitation and I began to have a real fear that I would simply not be able to remember what to do in an emergency situation that required the quick and efficient use of my disabled memory. I relied more and more on the support of a First Officer.

In 2001 I tried to become a Training Captain in order to fly less or maybe progress to a ground based simulator to get some relief from flying. I took this decision despite my difficulty in speaking or being able to 'think on my feet'. A presentation of mine to other candidate pilots made on my Training Captains course was filmed in September 2001 and now represents evidence of my standard of speech. I could barely string a few words together. I was also criticised in the de briefing for my 'poor performance', especially the use of 'non words'. Surprisingly I passed the course (on reflection I should not have passed) but my health by now was of real concern; I could not understand why my speech was so poor and mumbling?

On 31<sup>st</sup> December 2002 I had my one and only officially recorded fume event in a BAe 146. The cabin and cockpit of the 146 are linked. Although the cockpit door was kept closed throughout the flight, it is not sealed and cockpit and cabin do share the same air. The passenger cabin on this flight filled with thick white smoke, although no visible fumes were seen in the cockpit.

Therefore during this flight I breathed invisible fumes for around 20 minutes and felt extremely unwell immediately after the flight and in fact for years afterwards. We did not use emergency oxygen, I had no knowledge of the dangers of oil fumes and my brain and intellect was well past being able to 'work it out' by this stage.

Over the next few months I felt awful and in March 2003 I bought some St John's Wort as a natural remedy for 'depression'. I took two pills and felt even sicker. I was not depressed but felt very ill.

In the spring of 2004 I felt exceedingly ill and close to saturation point and had an unfortunate altercation with my airline after refusing to do 'extra flying' at short notice. I vowed to go 75% part time in the autumn of 2004 in an effort to save my health.

On 29<sup>th</sup> August 2004 I was preparing to fly to Salzburg. The weather at the destination was poor and the flight would have been particularly challenging. I did not feel I could safely operate this flight and for this reason I walked off the flight deck shortly before the flight was scheduled to depart. I was feeling very unwell and stressed as by now, I no longer trusted my memory or my ability to fly a difficult approach in poor weather.

At this point I had about four months off flying. I felt seriously ill and confused but all of the specialist doctors just advised me that I was stressed and fatigued by a hectic roster.

I returned to flying part time in January 2005, at first it was a relief to fly less but I soon felt ill in the same way as before. I had a permanent echo in my head and found any sort of talking and thinking difficult. I would prepare phrases in my head and then blurt them out in a maximum of ten words at a time. I often stumbled across difficult words and preferred to remain silent in any sort of company.

This had been the case now since around 1991 – 2? My brain felt as if it was foggy all the time and I knew that I could not continue to fly safely any more.

On 30<sup>th</sup> June 2005 I flew what was to be my last flight. Again I had refused to do extra flying and was involved with a dispute over a smoky flight but not from engine oil fumes, the smoke was from an electrical source.

I had another unpleasant disagreement with the airline and voluntarily grounded myself once again on 8<sup>th</sup> July 2005, convinced that I was a hazard to aviation.

For the rest of 2005 I went to various doctors including an airline Company Doctor who suggested that I was being ‘paranoid’ and two GP’s. Nobody mentioned anything about the possibility of oil fume related illness. I felt stressed and knew I ought to retire from flying permanently.

Two doctors offered me anti depressants (Citalopram and Prozac) in this period which I refused to take as I knew I wasn’t ‘depressed’ – I am simply not a depressed type nor ever have I been. Instead of taking drugs I went to the gym in an attempt to improve my health. This did not work. I also took a course of acupuncture as I had a serious nervous twitch in my cheek and extremely stiff neck and shoulders muscles.

## **2006 – Present.**

In early 2006 I was grounded by aviation medical expert Professor Bagshaw for ‘chronic stress’ – by now I was past caring I just couldn’t face going back to flying and financially I was facing economic difficulty, so I opted to take a ‘loss of licence’ payment. Although I had some knowledge of the possible action of oil fumes by now following a Balpa conference in London in 2005 at which many experts from around the world had concluded that ‘contaminated air was a definite cause of chronic ill health in aircrew’, I was not able to connect it to my sixteen years of mysterious ill health symptoms.

In the next few weeks I was invited to take part in some testing into contaminated air being conducted by Balpa and I readily agreed, still not sure of whether my problems had anything to do with oil fumes. I was one of 27 pilots to be tested.

A Biolab fat test was done in April 2006, which was paid for by Balpa and testing by Dr Sarah Mackenzie Ross of UCL was also done in April 2006. These blood / fat tests were done around 9 months AFTER my last flight or exposure to oil fumes.

The Biolab results came back showing abnormal amounts of chemicals including traces of tri cresyl phosphate (an organo phosphate added to the engine oil of a BAe 146) in my fat.

The neuro-psychological testing carried out by UCL showed significant cognitive dysfunction, in two particular areas – memory and visual scanning. The same pattern of under functioning was common to all of the pilots tested, all of whom had reason to believe they had been exposed to organo-phosphate fumes.

In June 2006 I was told I probably had Aerotoxic Syndrome by another pilot, this was the first time I had ever consciously heard these words; no doctor had ever suggested the possibility.

In August 2006 I asked Dr Hembry for an expert opinion on my blood tests. She advised me to avoid re exposure and that I had possible Aerotoxic Syndrome.

In November 2006 a sample of my blood was analysed by Prof Abou Donia in the US which indicated brain damage consistent with chemical induced nervous system injury.

In May 2007 Dr Myhill compared my Bio Lab results from April 2006 with results from April 2007. This indicated a clear improvement in my body chemistry.

In June 2007 (two years after my last flight) I was seen and tested by Dr Goran Jamal and a report was received several months later.

Since I stopped flying (2005) my health has slowly started to improve towards how it had been in 1989. I still suffer from some background 'brain fog' in general but it is benign and liveable with. Also under conditions of physical exertion, my symptoms (brain fog / feeling of intoxication) intensify temporarily. I still have significant temperature control problems.

My speech and memory were still poor until around May 2007 after which I noticed a total disappearance of the echo in my head which occurred when I talked, my brain fog also reduced such that I could begin to analyse situations which would have previously been impossible. I also tried public speaking again and for the first time since 1989 and was able to think and talk at the same time, which has been very pleasing after an eighteen year gap.

With each day my health has returned more and more until in December 2007 I was advised by a CAA AME doctor, that I should try and get my aviation Class One medical reinstated, if I felt fit enough.

This is a true and honest testimony of the nature of my health from 1980 to the present time.

John Hoyte  
Former BAe 146 Training Captain.

9<sup>th</sup> December 2008.