

shown to enhance each others toxicity quite significantly.<sup>9,10,11</sup>

Further, the possibility of a synergistic interaction becomes more likely the more chemicals are involved in the exposure. An approach which selectively ignores any possible synergistic interactions between the individual constituents in an exposure is fundamentally illogical.

Of what is known about interactions, it seems that most interactions, where they have been reported, are of the additive type. However, the few synergistic interactions that have been reported give significant concern about the effects of other possible combinations of chemicals.

It is difficult to define the role played by chemical exposures since other causative factors may intervene (such as tobacco and alcohol use, medication, pithiatic or immature personality, arteriosclerosis, head injuries, and so on). However, it is important to realise that these are real symptoms which can often precede chemically related disease (see Figure 3 below). They must be placed into a relevant context to have meaning. They cannot be dismissed merely because medicine or science is too imprecise to measure them.

Figure 0-3: The Development of chemically related injuries

<b>Normal</b>	Chemical exposures do not cause health problems.	
<b>Sensitisation</b>	Susceptible individuals are affected at low exposures to chemicals. Sometimes the mechanism of effect is allergic.	-algias
<b>Irritancy</b>	Mainly non-specific or subjective signs and symptoms at chemical exposures that are considered "acceptable".	-algias -itis
<b>Inflammation</b>	More specific signs and symptoms at or above acceptable exposure to chemicals.	-itis
<b>Injury</b>	Damage and injury to unacceptable chemical exposures. Poisoning and clinical disease.	-osis

**Chronic Fatigue Syndrome**

Chronic fatigue syndrome seems to be a two stage condition in which the first stage appears to be a "precipitating" component such as an infection or exposure to toxic chemical(s). This usually responds well to conventional medical treatment. However, the second stage of the disorder is a long term debilitation which appears to be out of

proportion to the initial "precipitating event". This second stage also responds poorly to medical attention, leading to frustration in patients and the treating physician.

A definition was issued by the US Centers for Disease Control (CDC) in 1988.<sup>12</sup> A more restrictive definition was issued by the US CDC in 1995 (see Figure 4).<sup>13</sup>

# Leaking fumes case puts airlines on alert

**A court decision could prove to be costly for airline companies.**

By **GARRY BARKER**

Airlines around the world are reported to be keeping wary eyes on the Compensation Court of New South Wales where Ms Alyssia Chew, a former flight attendant, is suing Ansett Airlines, claiming fumes leaking into the cabin air-conditioning system damaged her health.

Ms Chew claims that working on the company's "Whisper Jet", the four-engined BAe146, exposed her to fumes that led to her contracting multiple chemical sensitivity and chronic fatigue syndrome.

The hearing before Judge Patrick Moran is now over and a decision is expected in April or May.

Industry observers say up to 3000

pilots and cabin crew with airlines around the world have claimed compensation for long-term damage to their nervous systems.

A report in yesterday's *Sunday Independent* newspaper in London suggests that airlines face lawsuits totalling billions of dollars from employees who say faulty air-conditioning units have caused them loss of consciousness, blurred vision, memory loss and neurological damage.

The paper alleged another Australian airline employee, a woman pilot, claimed to have felt "as drunk as a skunk" on one approach into Brisbane airport when she was in command of a BAe146. The pilot was not named and no date of the incident was given.

Ansett's corporate affairs manager, Mr Geoff Lynch, said yesterday that the company had "done a great deal of work on the BAe146, in conjunction with the Flight Attendants Association of Australia and

various other bodies, including several external medical experts.

"There is an overwhelming body of evidence to suggest that no link can be made between the cabin fumes and any long-term health effect," Mr Lynch said.

However, "we are aware that there have been instances of stinging eyes and headaches on a short-term basis," he said.

"We have not ruled out any link between short-term symptoms and possible cabin fumes. But we are very confident that there is no link between cabin fumes and long-term effects."

Mr Lynch said the airline had done an enormous amount of work over the past couple of years on the aircraft engines and seals to make sure oil did not vaporise and escape into the cabin by way of the air conditioning system.

"We are confident we have done as much as we can possibly do with the aircraft, and are very comfortable

that what we have done is ensure there is nothing toxic in the cabin that could lead to long-term effects."

Complaints about fumes leaking into airliner cabins go back at least 15 years and mostly have to do with the practice of using engine heat to warm air being pumped into aircraft air-conditioning systems. Allegations have been made that faulty seals allow vaporised oil to leak into the system and be carried into the cabin.

The *Sunday Independent* report says documents tabled in the Chew case show that 14 reports of "strong smells" detected inside BAe146 aircraft had been received by Ansett in less than a year.

The Australian Bureau of Air Safety was also reported to be investigating a separate incident in which a pilot became faint while approaching Melbourne Airport. The aircraft was later found to have a faulty engine seal, the *Sunday Independent* report said.

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