

The medical aspects of a FAA-funded research project concerning exposure to oil fumes in the cabin and flight deck

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In response to legislation passed by Congress in 2003, the Federal Aviation Administration awarded two research groups funds to review medical records of crewmembers who reported exposure to oil fumes, and to develop a medical protocol intended to educate health care providers on the health effects associated with exposure to oil fumes on aircraft. Medical record review of airline crew members who were examined after exposure to contaminated bleed air found acute respiratory and/or central nervous system symptoms among the most commonly reported. In all of these cases, airline crew submitted written reports to their airlines of in-flight exposure to airborne contaminants that they suspected to be engine oil or hydraulic fluid, and the nature of the exposure was often confirmed by aircraft mechanical records. All developed acute symptoms that were temporally associated with exposure and all sought immediate medical care. In some cases, the symptoms persisted, necessitating long-term medical care. Many of the neurological symptoms reported by airline cabin crew following contaminated bleed air exposure are similar to those reported among other workers exposed to triarylphosphates. The medical protocol developed under this research grant provides information about the health effects that may result after exposure to aircraft bleed air contaminants, and makes recommendations regarding treatment methods. The protocol is largely based on information that has been published in the medical and scientific literature, and also relies on the clinical experience of the primary author who has diagnosed and treated airline workers who report contaminated bleed air exposure.