

### **Inquiry – CO Exposure**

One of our handlers is also a Hazmat technician. He monitored the air in the barn where the engines are stored and his readings were zero for any types of dangerous fumes. So, the question now becomes "is there any effect of prolonged exposure to carbon monoxide to the canine olfactory receptors"? We just need to know what if any studies have been performed in this arena.

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We are currently attempting to gain approval to bring the FEMA canines to the firehouses. We have done research with other departments that allow canines and have written a standard operating procedure for the canines.

The administration is working with the Task Force on this issue but we have now hit another speed bump which is a concern about the canines being harmed by exhaust fumes in the barn. One of the chiefs believes the fumes from the engines could harm the canines and wants to know if there have been any studies performed at a station. Do you know of any such studies or do you have any knowledge that would help?

### **Response**

After much searching and inquiries to all members of the USAR vet group, and responses from several university personnel, to date no one is aware of any studies that looked at loss of olfactory function in relation to exposure to CO.

There was one study done with rats and CO. One sentence in the study mentioned the nose and larynx effects in the rats after smoke exposure: 'Slight reserve cell hyperplasia in the anterior part of the nose as well as hyperplastic and metaplastic epithelial changes in the larynx were the only observed dose-dependent findings'. Cell hyperplasia is an increase in the number of cells in a tissue or organ, metaplasia is a transformation of the cell (from a normal to an abnormal state).

All other studies concentrate their findings on the lung tissues, where the majority of CO exposure damage is found (in all who inhale CO).

I hope this answers your questions. If I can be of further assistance please let me know!

Regards,

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