

# Yale SCHOOL OF MEDICINE

*Department of Neurology*

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Re: Senate Bill # 920, An Act Concerning the Statute Of Limitations in Carbon Monoxide Poisoning Cases0

February 27, 2013

To Mr. Chairman, Senator Coleman, Representative Fox, and members of the Judicial Committee:

I find it necessary to extend the statute of limitations bill regarding carbon monoxide cases. Carbon monoxide (CO) is odorless and colorless it is not always evident when it has become a problem. Levels of CO concentrations of 10-20% may only cause mild headache, mental confusion, nausea and shortness of breath. However, over time this degree of exposure has been shown to cause long term complications characterized as a delayed encephalopathy. Clinically, this is noted by severe dizziness and neuropsychiatric symptoms including cognitive and affective impairments. The most frequently observed cognitive symptoms are memory deficits, decreased attention, visuo-spatial impairments, and apraxia, while affective changes include depression, anxiety, and personality changes.

CO poisoning has been shown to cause delayed neurologic sequelae (DNS), which is a well-described clinical syndrome occurring after an initial period of recovery from an acute episode of CO poisoning (Dolan; CMAJ 1985, 133: 392-399). Microscopically, this is primarily seen as demyelination, degeneration of the periventricular white matter, and cortical degeneration. Neuroimaging studies of patients with chronic CO exposure demonstrate generalized or lobar (e.g. frontal and parietal lobe) cerebral atrophy or shrinkage, manifested as increased sulcal space and ventricular dilation as reported in the literature (Reynolds et al; Arch Clin Neuropsych 1999, 14 (2): 235-249). An example of such findings is shown in Figure 1 from a representative patient from Yale who suffers from DNS.

The effects of CO exposure can vary greatly from person to person depending on age, overall health and the concentration and length of exposure. This bill will provide time in which a person can assert their rights and ensuring that their information is available for evidence. Defendants will be protected by this extension and be able to defend themselves and make it easier to gather evidence that may be relevant to their cases. Therefore, I support Senate Bill # 920, An Act Concerning the Statute Of Limitations in Carbon Monoxide Poisoning Cases. Please contact me with any additional questions.

Sincerely,



Duarte Machado, MD  
Assistant Professor of Neurology



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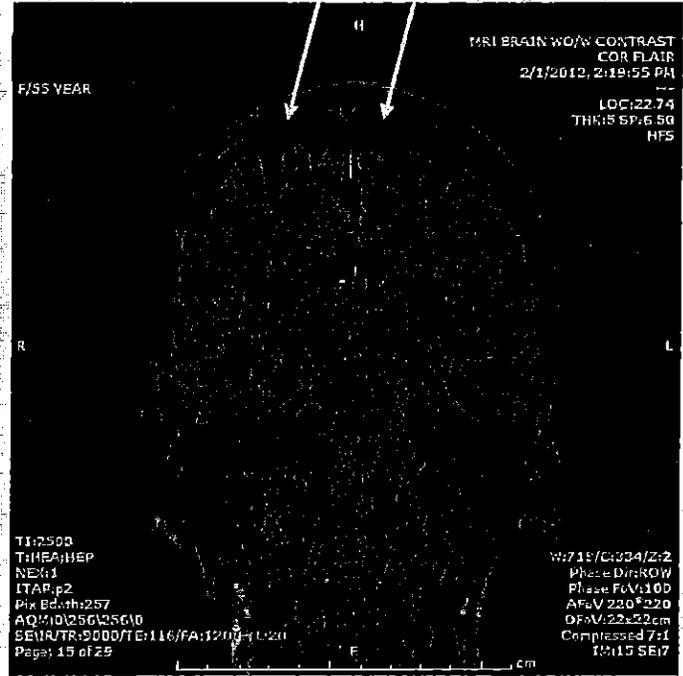
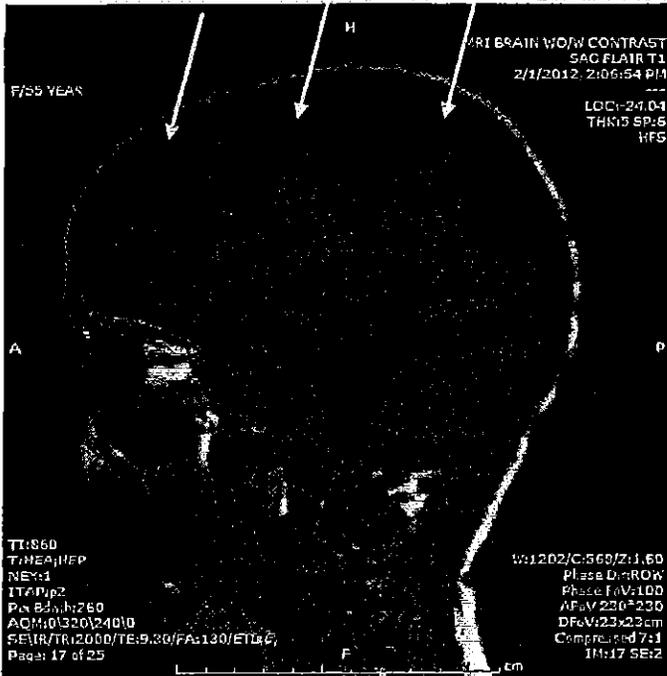
## Department of Neurology

Figure 1: Panels A and B show sagittal and coronal MRI brain images, respectively, from a patient with DNS from CO poisoning showing extensive frontal and parietal lobe atrophy in which the brain has shrunk away from the skull and the space filled with CSF (denoted by arrows). An age and sex matched MRI brain is shown in panels C and D for comparison showing the brain matter in close approximation to the skull.

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A

B.



C.

D.

