

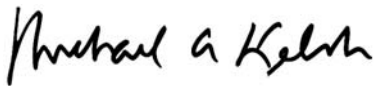
The recent EPA document “*Preventing Asbestos Exposure Among Brake Clutch Repair Workers*” provides valuable work practice recommendations for professional and home automotive mechanics. Given the general public health concerns about asbestos exposure, it is prudent to provide such guidelines to reduce exposure to brake wear debris. Our comments are directed at the current scientific literature regarding health risks among automotive mechanics, a discussion not presented in the EPA brochure.

We recently co-authored an extensive review and quantitative analyses of the nearly 30 epidemiologic studies that addressed the risk of mesothelioma and lung cancer in automotive mechanics (Goodman et al. 2004). The analyses showed that employment as an automotive mechanic does not increase the risk of developing mesothelioma or lung cancer. Although some studies had a small increase in risk of lung cancer among automotive mechanics, the data on balance, especially those studies that carefully assessed smoking behavior, do not support a conclusion that lung cancer risk in this occupational group is related to asbestos exposure (Goodman et al. 2004). Likewise, Harvard researchers also published a review of the epidemiologic studies and reached the same conclusions of no increased mesothelioma and lung cancer risk among automotive mechanics (Laden et al. 2004). Since the publication of both articles, the published epidemiologic studies on this topic have continued to indicate no increased risks (Welch et al. 2005, Rolland et al. 2005).

As noted in the Goodman et al. (2004) review, these epidemiologic findings are also consistent with other research that indicates: 1) low asbestos TWA exposures for auto mechanics shops (e.g., Anderson et al. 1973, Blake et al. 2003, Johnson et al. 1979, Kauppinen and Korhonen, 1987; Paustenbach et al. 2003, Roberts and Zumwalde 1982, Rödelsperger et al. 1986); 2) the type of asbestos used in brakes and clutches was chrysotile, a fiber found to be orders of magnitude less toxic in causing mesothelioma than other forms of asbestos (Eastern Research Group [ERG] 2003a, Hodgson and Darnton 2003, Berman and Crump 2003, Bernstein and Hoskins 2006); 3) the fibers found in brake dust are short (<5  $\mu\text{m}$ ), rather than the long fibers found to be associated with an increased risk of disease (ERG 2003b, Berman et al. 1995); and 4) the fibers found in brake dust are biologically inactive given the heat experienced during the braking process (Langer 2003). Given that professional automotive mechanics do not have an

increased risk of asbestos-related disease, home mechanics who likely perform work on brakes and clutches less frequently than professional mechanics would even be less likely to have an increased risk.

In the section of the EPA document “*What is asbestos and how can it cause health problems?*” we recommend a discussion specific to the health and exposure research among automotive mechanics. Such a discussion should place the potential health effects in the proper context and would avoid introducing unnecessary concerns among current and former automotive mechanics, without diminishing the importance of appropriate work practices to avoid dust exposures.



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