Letter to the Editor

Amphibole asbestos in vehicle friction products and gaskets?

This letter is a request for information on the past and current use of amphibole asbestos – crocidolite (blue) and amosite (brown) – in vehicle friction products and gaskets in South Africa.

Asbestos exposure by vehicle mechanics and individuals in similar trades has been a long-standing concern.[1] The concern arises from the use of asbestos in vehicle components such as brake shoes and pads, clutch plates and gaskets. During routine maintenance, repair or replacement of these materials, vehicle mechanics are at risk of exposure to asbestos. The risk is well-recognised and a number of countries have guides on working safely with these products: for example, New Zealand.[2] Despite the potential for exposure, asbestos-related diseases (ARDs) have been inconsistently found in mechanics, possibly influenced by the study setting: in high, middle and low income countries work practices and the amount of asbestos in products may differ.[1]

The uncertainly about the extent of the risk of ARDs in vehicle mechanics has been lessened by a recent article which concluded that "This meta-analysis of the epidemiologic studies provides evidence that motor vehicle mechanics, including workers who were engaged in brake repair, are not at an increased risk of mesothelioma".[3] The authors proffered a number of explanations for the lack of an increased risk, one of which is that the toxicity of chrysotile (white asbestos), the predominant or exclusive fibre used in vehicle components, is reduced substantially by heat (generated, for example, during braking). This is reassuring, not only concerning mesothelioma itself but because, if the mesothelioma risk is not increased, other ARDs are unlikely: most need more asbestos exposure than is required for mesothelioma. It is unclear, however, whether the reassurance provided by the meta-analysis extends to South Africa. All of the studies in the meta-analysis were done in North America or Europe, and exposure presumably was to chrysotile.

Based on poorly-recalled conversations and documents now misplaced, we think that amphiboles were used in South African vehicle components, particularly for heavy duty vehicles such as earth-moving equipment, trucks and buses. Is this true? This is a request for evidence of the use, in South Africa, of amphiboles in vehicle components such as brake pads and shoes. If you have knowledge of this, or written material confirming it, please contact David Rees at david.rees@nioh.nhls.ac.za, or Gaby Mizan at gaby.mizan@nioh.nhls.ac.za.

David Rees and Gabriel Mizan,
National Institute for Occupational Health,
National Health Laboratory Service; and the School of
Public Health, Faculty of Health Sciences,
University of the Witwatersrand, Johannesburg

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