

Possible hematological effects of exposure to ethylene glycol monoethyl ether acetates on shipyard painters.

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-Abstract-

Possible hematological effects of exposure to ethylene glycol monoethyl ether acetates (EGEEA) on shipyard painters were evaluated as a cross-sectional, observational study. An industrial hygiene survey was performed to characterize exposure of two groups of shipyard painters (low or high exposure group) to EGEEA (cellosolve acetate). Mean exposure level (range) to EGEEA (unit;ppm) in high or low exposure group are 3.03 (ND-18.27), 1.76 (ND-8.12), respectively. Hemoglobin, hematocrit, red cell indices, total and differential white cell blood counts, and platelet count were measured in shipyard painters and control subjects. The mean of WBC counts in high exposure group were significantly lower than that in non-exposure group, and a significant proportion (11%) of painters were leukopenic; none of the controls were affected. With hygienic evaluation and toxicological review, these abnormalities were possibly due to EGEEA.; other exposure could not explain the findings. These findings are consistent with prior animal studies and human case reports. Potential biases and confoundings of the data are discussed.