

Haematological changes among construction workers exposed to cement dust in West Bengal, India

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ABSTRACT

Purpose: This study measured haematological parameters in construction workers exposed to cement dust, silica and other hazardous materials. This was done in order to identify a simple, readily available, and cost effective screening test that could help to identify the presence of disease and its severity in workers potentially related to their work space.

Materials and methods: The study was composed of 150 construction workers and 52 participants in an unexposed control group, with ages ranging from 15-60 years. Blood samples were collected from each participant and percentage of haemoglobin, total RBC count, WBC count, platelet count, and different RBC indices were analyzed.

Results: The haemoglobin concentration, PCV, and MCV decreased significantly, but the MCHC and eosinophil counts increased significantly in

comparison to the control group, though the increase in the monocyte count was not significant. No significant changes in haematological parameters with a year of exposure have been found. However, the percentage of prevalence of anaemia on the basis of haemoglobin concentration and PCV value were higher in construction workers in comparison to members of the control group.

Conclusion: This study recommends that construction workers working in hazardous environments must support health education and should regularly use protective devices in their workplace. They must also have regular medical checkups, which might help detect disease in early stages.

Key words: Construction workers, haemoglobin, PCV, platelet count, WBC count, RBC indices.
