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## Cytogenetic Risk Assessment in Workers of Rubber Industry

J.S. Yadav and A.K. Chhillar

*Human Genetics Unit, Department of Zoology, Kurukshetra University, Kurukshetra  
136 119, Haryana, India*

**KEY WORDS** Rubber industry; genotoxic; peripheral blood lymphocytes; chromosomal aberrations; sister-chromatid exchanges; satellite associations

**ABSTRACT** The genotoxic effect of environmental pollutants generated in a rubber tyre industry was investigated on somatic chromosomes of human lymphocytes of 50 workers exposed for different periods and compared with an equal number of unexposed controls matched in respect of age, sex, social status, period of exposures, smoking habits and drug intake, if any. The mitotic index (MI), chromosomal aberrations (CA), sister chromatid exchanges (SCE) and satellite associations (SA) were analysed. All the parameters showed a significant increase ( $p < 0.01$ ) in the exposed sample compared with controls : viz MI (3.72-6.69), CA (0.92-3.40), SCE, (3.76-10.82) and SA (3.66-11.10). The occurrence of DG type of satellite associations was highest and the 3D type lowest. The frequencies of SCE and CA showed significant elevation ( $p < 0.01$ ) with the duration of exposure. The environmental pollutants generated in rubber industry were thus found to be genotoxic and tobacco smoke was found to enhance the genotoxic effect.

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