

P65

**ASSESSMENT OF RISK FACTORS INFLUENCING
INCIDENCE OF FEMALE BREAST CARCINOMA:
OCCUPATIONAL BURDEN**

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Objectives Each year, 1 million new cases of breast cancer are diagnosed. Four risk factor categories are applicable to breast cancer: genetics/ family history, hormonal/ reproductive history, lifestyle/ social, and environmental/ occupational. The authors report a study which sought to determine the role of each category and component risk factors on breast cancer incidence.

Methods Risk estimates alone do not indicate the contribution each risk factor makes to breast cancer burden. An attributable fraction (AF) methodology is described which aims to determine the role of risk factors in incident breast cancer.

Results While the AF for familial and genetic factors has been estimated to be 27% of all breast cancers, reliable/ robust risk estimates and exposure data are not available to determine the AF for many risk factors. The remaining risk factors from reproductive/ hormonal, lifestyle and environmental/ occupational can be expected to contribute to the remaining 73% of breast cancers. Based upon the relative risks for the remaining risk factors and the suggestion that reproductive, lifestyle and familial factors account for only 50% of incident breast cancer, it can be assumed that the remaining 50% may be due to environmental and occupational agents. AF calculations for a number of occupational scenarios suggest that shift work at night, employment as aircraft personnel, and exposure to various chemical agents including ethylene oxide, environmental tobacco smoke and organic solvents may be responsible for almost 10% of incident breast cancer.

Conclusions A clearer understanding of the relative contributions risk factors make to breast cancer will ultimately help focus health programmes.