

Does your job increase your breast cancer risk?

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Is there a link between the risk of breast cancer and the working environment? A study published in BioMed Central's open access journal *Environmental Health* provides further evidence on this previously neglected research topic, confirming that certain occupations do pose a higher risk of breast cancer than others, particularly those that expose the worker to potential carcinogens and endocrine disrupters.

[Breast cancer](#) is the most frequent [cancer diagnosis](#) among women in industrialized countries, and North American rates are among the highest in the world. Endocrine-disrupting chemicals and carcinogens, some of which may not have yet been classified as such, are present in many working environments and could increase breast cancer risk. In their study, James T Brophy and his colleagues set out to characterize the possible links between breast cancer and occupation, particularly in farming and manufacturing.

The population-based case-control study was conducted in Southern Ontario, Canada, and included 1006 breast cancer cases (referred by the Windsor Regional Cancer Centre) with 1147 randomly selected and matched community controls. Using interviews and surveys, the team collected data on participants' occupational and reproductive histories. All jobs were coded for their likelihood of exposure to carcinogens and endocrine disruptors, and patients' tumor pathology regarding endocrine receptor status was assessed.

The authors found in this group of participants that, across all sectors,

women in jobs with potentially high exposures to carcinogens and endocrine disruptors had an elevated breast cancer risk. Sectors with increased risk included agriculture, bar/gambling, automotive plastics manufacturing, food canning and metal-working. Importantly, premenopausal breast cancer risk was highest in the automotive plastics and food canning industries.

The findings also suggested that women with lower [socioeconomic status](#) had an elevated risk of breast cancer, which may result from higher exposures to endocrine-disrupting chemicals in the lower-income manufacturing and agricultural industries of the study area.

The results lend weight to hypotheses linking [breast cancer risk](#) and exposures likely to include [carcinogens](#) and endocrine disruptors. Lead author Brophy said, "Our results highlight the importance of occupational studies in identifying and quantifying environmental risk factors and illustrates the value of taking detailed occupational histories of cancer patients. Mounting evidence suggests that we need to re-evaluate occupational exposure limits in regulatory protection."

More information: Neural Breast cancer risk in relation to occupations with exposure to carcinogens and endocrine disruptors: a Canadian case-control study James T Brophy, Margaret M Keith, Andrew Watterson, Robert Park, Michael Gilbertson, Eleanor Maticka-Tyndale, Matthias Beck, Hakam Abu-Zahra, Kenneth Schneider, Abraham Reinhartz, Robert DeMatteo and Isaac Luginaah, *Environmental Health* (in press)

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