

# Many chemicals unproven to raise breast cancer risk

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Women who want to reduce their risk of breast cancer may have heard they should avoid exposure to industrial chemicals but scientific evidence has so far not proven a direct link, said a US group Wednesday.

The review of existing studies by the Institute of Medicine (IOM), part of the US National Academies of Science, sought to separate the myth from the reality when it comes to what has -- and has not -- been shown to increase risk.

For instance, doctors know that [drinking alcohol](#), hormone therapy that combines estrogen and progestin, too much exposure to ionizing radiation from CT scans, and being overweight after menopause are all proven risk factors in [breast cancer](#).

But they are less certain about things like secondhand smoke, breathing in auto exhaust or exposure to chemicals such as benzene, found in crude oil and pesticides, and bisphenol A (BPA) which is used in plastics and sealants.

"Multiple well-designed studies consistently have failed to show increased [breast cancer risk](#) for two [environmental exposures](#) -- personal use of [hair dyes](#) and non-ionizing radiation (emitted by microwave ovens and other [electrical devices](#))," said the report.

"For several other factors, the evidence is less persuasive but suggests a possible association with increased risk," it added.

"These factors are exposure to secondhand smoke, nighttime shift work, and exposure to the chemicals benzene, ethylene oxide, or 1,3-butadiene, which can occur in some workplaces and from breathing auto exhaust, pumping gas, or inhaling [tobacco smoke](#)."

When it comes to BPA, which is present in the lining of canned foods and in some plastics, "scientists can see a clear mechanism in animals by which the agents might cause breast cancer, but studies to assess the risk in humans are lacking or inadequate," the report said.

Urging further research in order to fill [knowledge gaps](#), the report added that there is plenty women can do to reduce their risk now.

"These actions include avoiding unnecessary medical radiation throughout life, avoiding use of postmenopausal hormone therapy that combines estrogen and progestin, avoiding smoking, limiting alcohol consumption, increasing physical activity, and, particularly for postmenopausal breast cancer, minimizing weight gain."

The United States' biggest funder of breast cancer research, the Susan G. Komen for the Cure, said the findings should guide further studies and urged other funders to help create a new effort to explore environmental hazards.

"As the IOM makes clear, significantly more research is needed to gain a full understanding of what substances can be definitively linked to breast cancer," the group's president Elizabeth Thompson said in a statement.

"We intend to use these findings to guide our decisions about research to fund so that women and their families have the best science to guide them in making important lifestyle choices," she added.

"We believe our efforts going forward will be made even more effective

through the guidance provided by this study."

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