CANCER AND HEALTH LEADERS CALL FOR ACTION TO REDUCE THE BURDEN OF CANCER BY ADDRESSING ENVIRONMENTAL RISK FACTORS



We all aspire to achieve a cancer-free future. We can fulfill that vision, but only with an ambitious expansion of research, practice, and public policy to prevent the onset of disease.

It is now estimated that 1 in 2 men and 1 in 3 women will be diagnosed with cancer at some point in their lives, and for many cancers incidence rates continue to rise.[1] Research to better understand how cancer develops, the role of behavioral and environmental factors, as well as interventions to prevent the initiation of the disease, hold great promise for lifting the burden of cancer over time. We seek to expand both the definition of what it means to prevent cancer and the ways we can achieve that.

We have made great progress in identifying and addressing important lifestyle contributions to cancer (e.g., the importance of diet and exercise, tobacco smoking cessation, limiting alcohol intake). We have made great strides in improving secondary prevention such as early screenings. And, we have made impressive advances in cancer treatments. However, to truly lift the burden of cancer, we must expand the scope and strategies for reducing the high incidence rates of cancer.

Over the past two decades, science has advanced our understanding of how toxic chemicals contribute to the development of cancer. Not long ago, tobacco smoke was pervasive, and smoking was encouraged. Today, fewer people smoke, and thus fewer people get smoking-related cancers. Similarly, we can prevent many more cancers by reducing people's exposures to toxic chemicals in the environment. We know there are hazardous chemicals in our workplaces, our air, our water, our food, and the products we use every day; a growing body of research shows that many of these chemicals are important contributors to cancer.

- For breast cancer alone, more than 200 chemicals have been associated with mammary gland tumors in animal studies,[2] and about half of these are chemicals that women are routinely exposed to in their everyday lives.[3]

- Air pollutants such as polycyclic aromatic hydrocarbons have been shown to increase the risk of lung, bladder, liver, mammary gland and other tumor types.[4]
- Highly persistent synthetic per- and polyfluoroalkyl substances (PFAS), which manufacturers use in non-stick, stain-resistant and waterproof products, have been associated with testicular and kidney cancers as well as effects on the immune system.[5–8]
- Styrene, used to make unrecyclable foam packaging, is a probable carcinogen, recently upgraded by the International Agency for Research on Cancer (IARC) given evidence of its association with an increased risk of leukemias and lymphomas.[9]
- Organic solvents such as benzene are potent carcinogens, associated with leukemia, non-Hodgkin's lymphoma, and multiple myeloma. These solvents are present in the life cycle of a wide range of industrial processes from the extraction of fossil fuels to traffic-related air pollution.[10]
- In June 2012, IARC classified diesel engine exhaust as carcinogenic to humans with increased risk associated with lung cancer.[11]
- The use of pesticides in agriculture, on playing fields at school, and in residential spaces, has been linked with an increased risk of childhood cancers, including leukemia and lymphoma. [12-15]
- Formaldehyde is a known human carcinogen, yet companies continue to use it in building materials, textile finishes, nail polishes, and hair products. [16, 17]
- Widely-used flame retardants in consumer products have been linked with cancer, hormone disruption, and neurotoxicity.[18–20]
- Radon is a known human carcinogen that is responsible for between 10-15% of annual lung cancer deaths, making it the second leading cause of lung cancer.[21]
- Biomonitoring research shows that virtually every pregnant woman in the United States is exposed to many different environmental chemicals. As a result, babies are born pre-polluted since many of these toxic chemicals can cross the placenta.[22]
- In utero exposures have been linked to an increased risk of different types of cancers later in life. For example, women who were exposed in the womb to DES (diethylstilbestrol), have twice the risk of developing breast cancer after the age of 40 as unexposed women. Exposure to DES in the womb has also been associated with an increased risk of vaginal and cervical cancer.[23] Boys exposed to DDT (Dichlorodiphenyltrichloroethane) in the womb show an increased risk of testicular cancer.[24] Girls exposed to DDT in the womb show an increased risk of breast cancer later in life.[25]

Although we have made good headway in researching and identifying dangerous and carcinogenic chemicals, there is much more work to be done. Currently, only a small percentage of cancer research dollars is spent on cancer prevention. We need to expand this research to further understand the influence of environmental chemicals on cancer incidence, and take action to protect people from chemicals that we know are hazardous to our health. While we work on a cure for cancer, we need to act on the knowledge we have now about the environmental contributors to the disease.

Research also shows that Indigenous, Black, and Latinx people, as well as recent immigrants and people with lower incomes are far more likely to work with toxic chemicals that increase their risk of cancer, and are more likely to eat, drink, and breathe toxic chemicals because of where they live.[26] These populations are often disproportionately affected by cancer. Children are especially vulnerable to environmental chemicals because of their developing bodies. Their young age also means they have more time to develop diseases with long latency periods such as cancer that may be triggered by harmful exposures early in life.

Over the past decade, motivated by evolving science and public concern, chemists, engineers, and business innovators have begun developing safer chemicals and materials, and in some cases manufacturers have removed toxic chemicals from their products altogether. But these efforts are small relative to the need and opportunity.

Reducing the use of and exposure to chemicals known to contribute to cancer should be a top priority for prevention and for public health leaders and communities seeking to eliminate chronic disease and lower health care costs. Similarly, scaling the design and development of safer chemicals and materials as alternatives to cancer-causing chemicals should be of chief importance. Primary prevention is the optimal and important goal, impeding the development of disease from the start.

All people should feel confident knowing that the water they drink, the air they breathe, and the products they use everyday, at home and in their workplaces, will not cause cancer or other debilitating diseases. All have the right to live and work in a clean, safe, and healthy environment, while children have the right to live, study, and play free from harm. We recognize that researchers, practitioners, trusted messengers, large-scale purchasers, health professionals, and cancer-focused institutions can play a primary role in educating individuals and calling on companies and governments to take action to protect us all—just as we did with tobacco smoke. Cancer prevention activities that focus on lifestyle and behavioral risk factors have been vital. We now need a framework to expand primary prevention to include reducing people's exposures to toxic chemicals that contribute to cancer.

RECOMMENDATIONS

Together we call on leaders in industry, government, policy and health care to take action to prevent cancers:

- Promote policies and purchasing practices that keep toxic chemicals out of our environment, our bodies, our consumer products, as well as the places we live, learn, and work. Resist the weakening of laws and regulations that protect the public from dangerous pollutants. This includes supporting the transition to safer chemicals throughout our economy by replacing harmful products and processes with safer alternatives.
- Encourage other health-and cancer-focused organizations to expand their work on prevention to include toxic chemicals, and incorporate primary prevention and toxic reductions into their association strategies, policies, and resolutions.
- Elevate the voices of vulnerable populations and disproportionately exposed communities, including workers and children, and advocate for increased prevention efforts to reduce disparities and social inequity.
- Enhance research on primary prevention and research that further identifies chemicals and other environmental factors involved in cancer development.
- Teach clinicians and other health professionals how to talk with patients about multiple cancer risk factors, including environmental carcinogens, and how reducing exposures can prevent disease.

SIGNEES

Alliance of Nurses for Healthy Environments

American Academy of Pediatrics

American Lung Association

American Thoracic Society

Bladder Cancer Advocacy Network

Breast Cancer Action

Breast Cancer Prevention Partners

Cancer Free Economy Network

Children's Environmental Health Network

Latinas Contra Cancer

Max Cure Foundation

National Hispanic Medical Association

National Medical Association

Silent Spring Institute

Stupid Cancer

Young Survival Coalition

Visit CancerFreeEconomy.org/Joint-Statement to see a current list of signees and to sign on.

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This statement is organized and produced by the Cancer Free Economy Network, a dynamic, collaborative network of experts and stakeholders cultivating an inclusive movement to promote healthy environments free from toxic chemicals.

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