Safer Chemicals Healthy Families

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The President's Cancer Panel Report

IMPLICATIONS FOR REFORMING OUR NATION'S POLICIES ON TOXIC CHEMICALS

Overview

In a groundbreaking report released in May of 2010, the President's Cancer Panel provided strong confirmation that exposure to toxic chemicals is an important and under-recognized risk factor for cancer, and recommended that the Government take immediate action to reverse this trend. The report, titled "Reducing Environmental Cancer Risk: What We Can Do Now" opens with the observation that ". . . the true burden of environmentally induced cancer has been grossly underestimated." The report goes on to say that our government agencies are "failing to carry out their responsibilities" and concludes with specific recommendations for overhauling our nation's flawed chemicals management system.

Acknowledging the devastating toll that a cancer diagnosis takes on an individual and a family, the report urges policymakers to shift their focus to reducing environmental cancer risk and enacting stronger chemical regulations. Indeed, the Panel highlighted the need for Congress to reform the Toxic Substances Control Act (TSCA), commenting that this law is "the most egregious example of ineffective regulation of chemical contaminants" and noting that weaknesses in the law have constrained EPA from being able to properly regulate known carcinogens such as asbestos and formaldehyde. The report calls for legislation that shifts the burden of proof from the government to industry, requiring manufacturers to prove the safety of new and existing chemicals.

Cancer in America: the report in context

The President's Cancer Panel report provides an annual update on the status of the National Cancer Program, also known as the "War on Cancer." Previous Panel reports have focused on how factors like poor diet or smoking can affect cancer rates. This report intentionally focuses narrowly on environmental factors linked to cancer.

- The lifetime chance of a man developing an invasive cancer is about one in two, and approximately one in four men die from cancer. For women, the lifetime chance of developing an invasive cancer is one in three, and one in five will die from cancer.[1]
- Cancer is the second most common cause of death in the U.S., exceeded only by heart disease. More than 1.5 million people were diagnosed with new cases of cancer in 2009.[2]
- In 2009, cancer cost the nation $243.4 billion–$99 billion for direct medical costs, $19.6 billion for cost of lost productivity due to illness, and $124.8 billion for cost of lost productivity due to premature death.[3]

Over the past two decades, the rates of some cancers rose significantly.[4] These include:

- Kidney, liver, thyroid, esophageal, and testicular cancer, as well as melanoma in men.
- Non-Hodgkin's lymphoma, Hodgkin's disease, melanoma, and cancers of the thyroid, liver, and kidney in women.
- Childhood cancers overall, especially childhood leukemia and brain cancer.

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George W. Bush appointees Margaret L. Kripke, Ph.D. and LaSalle D. Leffall, Jr., M.D.

The report is based on testimony from dozens of experts in cancer, toxicology, and public health, and the 200-page document references hundreds of peer-reviewed scientific studies to validate their recommendations. Report authors LaSalle D. Lefall, Jr., M.D., F.A.C.S., of Howard University College of Medicine and Margaret L. Kripke, Ph.D., professor emeritus at the University of Texas M.D. Anderson Cancer Center, were appointed by President George W. Bush.

> **"... the true burden of environmentally induced cancer has been grossly underestimated."**

The Panel emerged from their two-year fact finding mission with a strong sense of urgency, as expressed in their message to the President:

"... the grievous harm from this group of carcinogens has not been addressed adequately by the National Cancer Program. The American people—even before they are born—are bombarded continually with myriad combinations of these dangerous exposures. The Panel urges you most strongly to use the power of your office to remove the carcinogens and other toxins from our food, water, and air that needlessly increase health care costs, cripple our Nation's productivity, and devastate American lives."

The report also rejects out-of-date assumptions about environmental causes of cancer and single chemical toxicity testing.

"The widely quoted estimates of avoidable cancer deaths due to environmental factors developed by Doll and Peto in 1981 (and estimated in similar later studies using the same methodology) are woefully out of date, given our current understanding of cancer initiation as a complex multifactorial, multistage process."

"In virtually all cases, regulations fail to take multiple exposures and exposure interactions into account."

Summary of recommendations for policy makers

Below we have summarized the President's Cancer Panel's recommendations for policy makers. The report is available here at *http://deainfo.nci.nih.gov/ADVISORY/pcp/annualReports/index.htm*.

- The full extent of environmental influences on cancer must be better understood.

New report puts spotlight on science linking cancer to chemicals

Among the problem chemicals highlighted in the report:

- **ASBESTOS**—used in building and automotive materials and known to cause several types of cancer, including mesothelioma. In industrialized nations such as the U.S., nearly one in three people with mesothelioma have no history of workplace exposure to asbestos. (See *http://www.nrdc.org/health/asbestos-fs.asp*.)
- **BISPHENOL A (BPA)**—a widely used plastic and epoxy resin component. Extensive research has linked BPA to cancer, early puberty, altered brain development, metabolic disturbances, and other serious medical problems. (See *http://www.nrdc.org/health/toxics/bpa.asp*.)
- **CHROMIUM**—used in chrome plating and other metal production, dyes and inks, and leather tanning. Workers exposed to chromium at risk for lung, nasal, and nasopharyngeal cancers. In addition, inappropriate disposal of industrial wastes has contaminated many drinking water sources with hexavalent chromium which has also been linked to cancer. (See *http://www.nrdc.org/health/HexavalentChromium-fs.asp*.)
- **FORMALDEHYDE**—a preservative commonly used in pressed wood products, textiles and personal care products. Formaldehyde is known to cause cancers of the nasal cavity and nasopharynx and has been linked to leukemia. (See *http://www.nrdc.org/health/formaldehyde-fs.asp*.)
- **MERCURY**—released as by-product of industrial pollution and used to produce batteries, thermometers, and skin creams and ointments. Methylmercury persists in the environment and accumulates up the food chain. People are exposed to mercury when they eat contaminated fish. In addition to being a known neurotoxin, mercury is also suspected of causing cancer. (See *http://www.simplesteps.org/chemicals/mercury*.)
- **PERCHLOROETHYLENE (PERC)**—used by approximately 28,000 dry cleaners in the U.S. and a common drinking water contaminant. Perc has been linked to cancer and workers inhaling perc are also at risk for liver damage and neurological problems. (See *http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=264&tid=48*.)
- **PHTHALATES**—commonly used to soften plastics or to add fragrance to personal care products. Animal studies link phthalate exposure in the womb to a greater risk of infertility, genital birth defects, and testicular cancer. (See *http://www.nrdc.org/health/phthalates.asp*.)
- **TRICHLOROETHYLENE (TCE)**—an industrial solvent frequently found at hazardous waste sites that contaminates up to a third of U.S. drinking water supplies. Research has strongly linked TCE exposure to multiple types of cancer. (See *http://www.nrdc.org/health/tricholoroethylene.asp*.)

See our coalition's report "The Health Case for Reforming the Toxic Substances Control Act" for a thorough overview of how researchers are linking toxic chemical exposure to a variety of major public health problems, including cancer. *http://healthreport.saferchemicals.org*

- The nation needs a comprehensive, cohesive policy agenda regarding environmental contaminants and protection of human health.
- Children are at special risk for cancer due to environmental contaminants and should be protected.
- Existing regulations for environmental contaminants need to be enforced and updated; stronger regulations are needed.
- Workers, and other populations with known exposures, and the general public require full disclosure of knowledge about environmental cancer risks.
- Safer alternatives to many currently used chemicals are urgently needed.

Mortality from childhood cancers has dropped dramatically since 1975 due to vastly improved treatments that have resulted from high levels of participation by children in cancer treatment clinical trials. Yet over the same period (1975–2006), cancer incidence in U.S. children under 20 years of age has increased.[5] Breast cancer rates in the U.S. increased by more than 40% between 1973 and 1998, and though in the last several years there has been a slight decline in breast cancer incidence, it remains one of the leading causes of death in women.[6]

It's time for Congress to take action

The Safer Chemicals, Healthy Families coalition and key members of Congress share the Panel's concerns. In 2010 both the House and the Senate introduced legislation to overhaul TSCA. Both proposals include many of the same recommendations made by the Panel. Common sense reform would:

- Shift the burden of proof by holding industry responsible for demonstrating a chemical's safety.
- Require chemical manufacturers to provide basic health and safety information (including known cancer risks) for all chemicals as a condition for remaining on or entering into the market.
- Set health standards to protect vulnerable populations like children and people living in environmental "hot spots."
- Contain provisions that would boost efforts to find non-toxic, greener alternatives to toxic chemicals.

Conclusion

This report marks the first time in its more than 40-year history that the President's Cancer Panel has addressed the role of environmental contaminants in cancer incidence. As the Panel's far-reaching recommendations make clear, to win the war on cancer and protect public health, there must be a greater focus on precaution and prevention of known carcinogens in the environment, including toxic chemicals.

IARC Criteria for Assessing Cancer Causation Due to Environmental Exposures

- The link or association between the exposure and cancer is strong.
- The risk of cancer increases with more exposure to the agent.
- Multiple studies by different investigators with different groups of people yield the same finding.
- The exposure to the agent came before the cancer.
- There is a plausible biological explanation for how the agent would cause the cancer.
- The link is specific, and the agent causes a specific type of cancer.
- The link is consistent with what is known from other studies.

Sources: International Agency for Research on Cancer. IARC monographs on the evaluation of carcinogenic risks to humans—preamble. Lyon, France: IARC; 2006, and Emanuel EJ. Will your cell phone kill you? The New Republic. 2008 April 9.

Endnotes

1. American Cancer Society, "Lifetime Risk of Developing or Dying From Cancer," *http://www.cancer.org/Cancer/CancerBasics/lifetime-probability-of-developing-or-dying-from-cancer* (accessed September 2010).
2. American Cancer Society. *Cancer Facts & Figures 2009* (Atlanta: American Cancer Society, 2009).
3. National Heart, Lung, and Blood Institute. Fact book: fiscal year 2008. Bethesda (MD): National Institutes of Health; 2009. *http://www.nhlbi.nih.gov/about/factpdf.htm*.
4. Safer Chemicals, Healthy Families, "The Health Case for Reforming the Toxic Substances Control Act," *http://healthreport.saferchemicals.org/* (Washington, D.C.: Safer Chemicals, Healthy Families, 2009).
5. Source: SEER 9 areas and U.S. Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are age-adjusted to the 2000 U.S. Std Population (19 age groups—Census P25-1103), as referenced in the President's Cancer Panel Report "Reducing Environmental Cancer Risk, What We Can Do Now, 2008-2009, page 38.
6. Janet Gray, ed, "State of the Evidence: The Connection Between Breast Cancer and the Environment," (San Francisco: Breast Cancer Fund, 2008).

The Safer Chemicals, Healthy Families coalition includes nurses, parents, advocates for the learning disabled, scientists, environmental health advocates, and concerned citizens from across the nation. These diverse groups are united by their common concern about toxic chemicals in our homes, places of work, and products we use every day.

www.SaferChemicals.org