

## Environmental Cancer

Commentary

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In last month's Harvard Report on Cancer Prevention, an impressive array of specialists missed the boat on the link between cancer prevention and environmental protection. This is hardly surprising, since recognizing the link depends on breaking down the artificial conceptual barrier that specialists and many government agencies have constructed between environmental protection and occupational health.

The report suggested that the three most important causes of cancer are tobacco, diet and lack of exercise. Tobacco and diet were each linked to 30 percent of cancers; lack of exercise to 5 percent. Cancers caused by what was described as "environmental pollution" came in far down the list, at 2 percent.

But the report got it wrong when it concluded that environmental exposures "appear to be far less important sources of cancer risk than most people assume."

The report overlooked the link between environmental exposure and occupational factors, which, according to the report, account for 5 percent of cancers.

A closer look at the report shows that these occupational factors largely involve exposure to cancer-causing chemicals, metals and fibers used and generated on the job. Most people would consider exposures to such hazardous materials also to constitute "environmental" threats. The only reason they are not treated as such in the report is that these are threats suffered primarily by people at work, as opposed to the general public.

However, the report confirms that among the most direct cancer threats are exposures to hazardous materials—first to those who work with them, and then to the communities close to industries that use and generate them. Properly viewed, hazardous materials in and around the workplace account for more than 5 percent of cancers, moving what most would consider environmental factors into third place on the list of causes—ahead of lack of exercise, family history, viruses and perinatal factors.

The threat of such exposures becomes all the more alarming when one considers that many people do not live and work close to such cancer-causing materials. Hence, while such exposures may account for 5 to 7 percent of cancers among the general public, the percentage of cancers caused by these substances among those living and working closely with them is likely much higher.

The report expressly states that one of its goals is to focus public education and policy efforts on cancer prevention by identifying the real causes of cancer. Had the report recognized the link between workplace and broader public exposures, it would have identified the "big three" factors to be tobacco,

diet and hazardous material exposures. There are implications for public education and policy in recognizing this.

Protecting people from threats posed by hazardous materials and wastes is central to environmental protection efforts. Not only do these substances increase the risk of cancer, but they pose a host of other health threats. For example, exposure to a metal such as lead, while not associated with cancer, can cause serious brain, nervous system and kidney damage. Non-cancer-causing reactive hazardous materials, when mishandled, can cause explosions, endangering the safety of both workers and the surrounding community.

Many of our environmental laws are designed to reduce the use and generation of these materials in the workplace and throughout society, and to ensure that when they are used or generated, proper precautions are taken. In the last several years, state enforcement efforts have uncovered serious, even criminal violations of these laws, with resulting workplace and community exposures to both cancer and non-cancer-related health hazards.

Few would dispute the basic recommendations of the Harvard report: Avoid tobacco, eat a healthy diet, get exercise. But the report erred in discounting the risk of environmental and occupational exposures.

On that score, the people are right: When it comes to the health of our families and neighborhoods, we should be concerned about the environment.