

Formaldehyde May Cause Some Blood Cancers, but Risk Drops over Time

Follow-up data from an ongoing study of U.S. industrial plant workers exposed to formaldehyde support previous findings of a possible link between formaldehyde exposure and risk of death from cancers of the blood and lymphatic system. The latest report by NCI researchers, which appeared online May 12 in the *Journal of the National Cancer Institute*, includes data through 2004, extending the previous observation period by 10 years.

Since the 1980s, researchers from NCI's Division of Cancer Epidemiology and Genetics have studied a cohort of 25,619 people who worked in 10 formaldehyde-using or -producing plants before 1966. The researchers estimated formaldehyde exposure among the workers by a number of methods, including the use of monitoring data and information about individual jobs. Death certificates and the National Death Index were used to record mortality and the cause of death. Their analysis showed that, overall, those who were exposed to formaldehyde had a risk of death from all causes that was similar to that of the general U.S. population. However, workers with highest peak exposure to formaldehyde had a statistically significant relative risk (RR) of 1.37 for death from blood or lymph cancer compared with those at the lowest level of peak exposure. This represents an excess risk of death from several specific cancers, including Hodgkin lymphoma, multiple myeloma, and myeloid leukemia—the type most often associated with chemical exposure. The observed increase in risk of death from myeloid leukemia was 1.78, and 1.42 for all leukemias. The highest level of increased risk of death from myeloid leukemia in this study occurred early on and has been declining steadily over time. This pattern could be due to chance, but the investigators note that similar risk patterns over time have been seen for agents that are known to cause leukemia relatively soon after exposure.

The relationship was observed only for those who had been exposed to formaldehyde at the highest level of peak exposure relative to members of the cohort who had minimal exposure. There were no significant relationships observed when exposure was classified using average-intensity or cumulative exposure.

<http://www.cancer.gov/ncicancerbulletin/051909/page3#e>

SOURCE

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