



Agricultural Health Study

NC OFFICE • BATTELLE • CENTERS FOR PUBLIC HEALTH RESEARCH & EVALUATION
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Lung Cancer

Lung cancer is one of the most frequently diagnosed cancers in the world and is the leading cause of cancer death.

Are participants in the Agricultural Health Study at increased risk for lung cancer?

Based on the current findings from the study, participants are significantly *less* likely – over 50% less likely – than other people in North Carolina and Iowa to be diagnosed with lung cancer. This is very good news for the farm population.

Why do farmers, overall, have less lung cancer than the general population?

There may be several reasons, but the main one is that farmers and their spouses smoke less than non-farmers. Overall, 14% of Agricultural Health Study participants currently smoke, which is less than the 23% rate in the general population.



For the Agricultural Health Study participant who smokes — is there concern?

Study participants who do smoke are at a significantly *increased* risk of lung cancer as compared to others in the study. Participants in the Agricultural Health Study with a long history (20 years) of cigarette smoking have 20 times the risk of lung cancer as those who never smoked.

Almost all lung cancers observed in the Agricultural Health Study occurred for individuals who were former or current smokers, as is consistent with previous research that strongly associates smoking with over 85% of lung cancer in western countries.

Other studies report benefits of quitting smoking.

Other studies show that people who quit smoking by age 35 avoid 90% of risk due to tobacco use and by age 50 have half the risk of dying in the next 15 years compared with people who continue to smoke. After 10 years the lung cancer death rate for former smokers is about half that of a continuing smoker.

Information about quitting smoking, therapies, quitlines, support groups and information about where you can go for help is available at **1-800-ACS-2345**.

Does the lower incidence of lung cancer in the Agricultural Health Study mean there are no agricultural exposures associated with the development of this cancer?

Even though, overall, farmers and their spouses have lower rates of lung cancer than other residents in North Carolina and Iowa, researchers found that four pesticides used by Agricultural Health Study participants may be associated with development of lung cancer.

Two herbicides (*metolachlor* and *pendimethalin*) and two insecticides (*chlorpyrifos* and *diazinon*) were associated with an increased rate of lung cancer in the Agricultural Health Study.

However, these new findings cannot be viewed as conclusive until they are reproduced in further follow-up in the Agricultural Health Study or in other studies.

Since the pesticides in question are so widely used in the U.S. and around the world, it will be very important to continue to study the occurrence of lung cancer in this population.

Are there lung cancer risks for off-the-farm jobs or other activities among Agricultural Health Study participants?

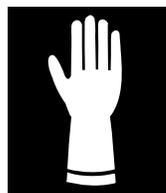
Yes, exposure to asbestos (a well-established lung carcinogen) and lead were found to be associated with lung cancer in off-the-farm activities for study participants.

Were farmers in the Agricultural Health Study who used personal protective equipment less likely to be diagnosed with lung cancer?

The evidence here is not clear. The associations between chemical use and lung cancer are very complex.

Researchers need time to carefully review the results of study updates conducted in telephone interviews to gain a better understanding about ways to reduce risks for disease.

Participants can help the project answer these hard questions by continuing to participate when asked to do so in the next phase of data collection.



It is always advisable to use precaution when handling potentially hazardous chemicals. Always follow the label instructions.

Learn More...

More complete information about lung cancer and other study findings from the Agricultural Health Study is given at www.aghealth.org.

Booklets and other forms of information published by the National Cancer Institute (NCI) are available by phone at 1-800-422-6237 (1-800-4-Cancer); through the mail at NCI Public Inquiries Office, 6116 Executive Boulevard, Room 3036-A, Bethesda, MD 20892-8322; or on their website at www.cancer.gov.

The Agricultural Health Study is a long-term study to investigate the effects of environmental, occupational, dietary, and genetic factors on the health of the agricultural population. This study will provide information that agricultural workers can use in making decisions about their health and the health of their families. The study is conducted in North Carolina by Battelle Centers for Public Health Research and Evaluation and in Iowa by the Department of Epidemiology at the University of Iowa. This study is directed by the National Cancer Institute, the National Institute of Environmental Health Sciences, and the US Environmental Protection Agency. Research results are being developed, peer reviewed, and made available to the scientific, medical, and agricultural communities.

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