

A+ CALIFORNIA TEACHERS STUDY Report Card

VOLUME VIII, FALL 2005

CONTINUING THE SEARCH

RESEARCH ON THE CAUSES OF CANCER COMES in many varieties. Some scientists learn from growing cells in cultures, others study animals, some even extract clues from fruit flies, bacteria or computer modeling. In contrast, the California Teachers Study focuses on the daily lives and experiences of women. As you know, the design is quite simple: asking women questions about their lifestyles, exposures, and health and, over time, looking for significant relationships

between those factors.

It seems hard to believe that five years have passed since the last survey. A lot has changed in many people's lives, so we will use the enclosed survey to catch up and to explore some new hypotheses. You'll see questions about your living environment at various points in time and about med-

ications, both prescription and over-the-counter. We'll update your personal and family medical history and take another look at dietary habits.

We've done our best to keep it short while collecting scientifically valid data. We hope that you'll complete and return it quickly so we don't have the expense of sending another copy and so that we'll be able to begin compiling the results sooner. If you have any questions feel free to contact us at www.CalTeachersStudy.org or 800-568-9471. Thank you in advance for your assistance. ❖

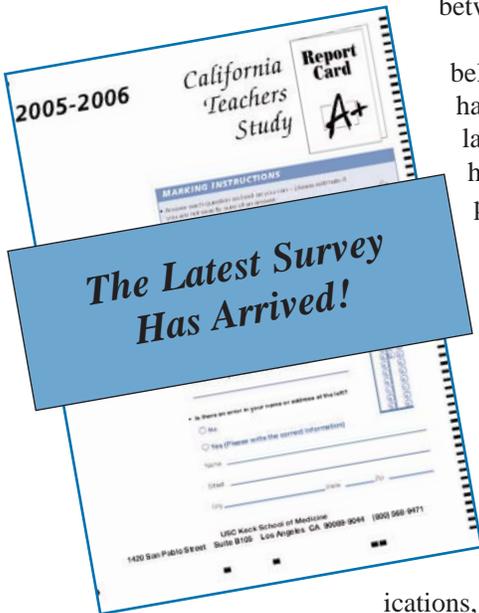
RESEARCH RESULTS FROM THE TEACHERS STUDY

IN RESEARCH, WE'RE ALWAYS AWARE OF THE importance of quickly making the latest findings available to the public and other researchers. The information provided by the members of the Teachers Study is so rich and varied that we are able to work on several research reports at once. We would like to take this opportunity to highlight some of the most recent Teachers Study results that have been published in medical journals. However, please remember that no study (even ours!) should be assumed to be the "final answer" and must always be evaluated in the light of other research.

Crop Spraying and Breast Cancer

Questions about pesticides and breast cancer date back at least several decades to when the harmful effects of DDT on reproduction in birds was documented. Agricultural pesticide use is recorded in California by the Department of Pesticide Regulation. We used home address as a way to estimate how close women in the California Teachers Study live to areas where pesticides were applied; this gave us a measure of pesticide exposure for each woman. We then determined whether these exposures were related to breast cancer risk over the time period from 1996 to 1999. Using the California Pesticide Use Reporting data we were able to see the types of pesticides used, the volume of use, and how likely it was that people would

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have been exposed. A new research method which overlays maps with this information, called Geographic Information Systems, then allowed us to estimate which pesticides were applied within a half-mile radius of the homes of women in the California Teachers Study. We did not find any evidence that these pesticide exposures were related to breast cancer risk.

Environmental Research, Volume 96, pages 206-18, 2004.

Aspirin Study Stirs Debate

Many studies have found that over-the-counter pain-relieving medications such as aspirin and ibuprofen can reduce the risk of colon cancer. Researchers are therefore eager to see whether these medications can reduce the risk of other cancers. To date, the results have been mixed with regard to breast cancer, although several studies have suggested that aspirin use may lower breast cancer risk.

We investigated this question in the California Teachers Study comparing breast cancer risk among regular users of aspirin and ibuprofen, with women in the study who do not take them regularly. Unlike some other studies, we did not find an association between regular use (at least once a week) of aspirin or ibuprofen and a reduced risk of breast cancer. We also investigated different subtypes of breast cancer and it appeared that long-term daily use of ibuprofen was associated with an increased risk of breast cancer, particularly of more advanced tumors. However other research studies have yet to confirm our findings, so much more investigation is needed before we can be clear on how to interpret this result. We do not believe that women should change their use of these medications based on these results.

Journal of the National Cancer Institute, Volume 97, pages 805-12, 2005.

Geographical Variations in Breast Cancer Among California Teachers

The rate of breast cancer is known to vary tremendously around the world, with the disease 10 times more common in some places than in others.

Within the US, it has long been observed that breast cancer rates are higher in some places like California's San Francisco Bay area. The reasons for the varying breast cancer rates in California are not clear but, if known, could provide us some valuable clues to understanding and preventing this disease.

We studied breast cancers that occurred between 1996 and 1999, according to where women in the California Teachers Study lived in California. Rates were higher for participants in the San Francisco Bay area and Southern Coastal area (Los Angeles, Orange and San Diego Counties) compared with those

Study links pain relievers and breast cancer

Findings contradict earlier studies

By Rita Rubin USA TODAY

A new study of California teachers finds the debate about whether aspirin, ibuprofen or other related pain relievers affect breast cancer risk. Although research has consistently linked use of aspirin and other anti-inflammatory pain relievers with a lower risk of colon cancer, findings about



researcher Sarah Marshall. Allied Neugai, a Columbia University scientist, says Marshall's ibuprofen findings "is totally at odds with every other paper" on the subject. Neugai co-wrote a study published last year that linked the use of anti-inflammatory pain relievers to at least a 20% reduction in breast cancer risk.

When regular aspirin and ibuprofen use — once daily once a week — were lumped together, researchers found no link to breast cancer risk. But when the scientists broke their findings down by pain reliever or type of breast cancer, clear trends emerged. Women who took ibuprofen daily

CNN.com logo and "PRINT THIS" button.

Cancer Study Focuses on Teachers

The California Teachers Study examines cancer among women

By Alex O. Hahn

THE NATIONAL Cancer Institute has pledged \$12.8 million to continue the California Teachers Study an expansive examination of cancer among female school-teachers that is led by USC's Norris Comprehensive Cancer Center researchers. Begun in 1996, the statewide study of nearly 135,000 current and former educators will now continue until at least 2009.



Teachers have long been suspected to be at high risk for breast cancer, and earlier results from the California Teachers Study confirmed it. California's teachers also have significantly higher than expected rates of endometrial, ovarian and several other cancers. Women in the study most likely share certain risk factors that contribute to their increased cancer risk. As researchers gather more information over the decade they hope to gain more insight

Study examines smokers' breast cancer link

Bulletin logo and "Teachers Health Study Yields Findings" text.

in the rest of California. Factors related to women's economic status and personal characteristics as well as the degree of urbanization of where they lived would cause us to expect the higher breast cancer rates that we see in these two areas of California. However, even after we took these factors into account, differences in breast cancer rates remained. Thus, regional differences in breast cancer incidence in California are not easily explained by known breast cancer risk factors, economic status or degree of urbanization.

Epidemiology, Volume 15, pages 746-754, 2004.

Active Smoking, Household Second Hand Smoke and Breast Cancer

While the role of smoking has been well-established for lung cancer, its relationship to breast cancer has been unclear. The Teachers Study is one of only a few large cohort studies that have been able to examine this question. Fortunately, participants in the study smoke much less than the general public, with only about 5% reporting that they are active smokers. This fact creates an excellent opportunity to also examine the role of second hand smoke.

Over 116,000 members of the study with no previous breast cancer diagnosis reported their smoking status. The subsequent diagnosis of breast cancer among active smokers was higher than that among lifetime non-smokers, particularly among women who started smoking at a younger age, those who began smoking at least 5 years before their first full-term pregnancy, or those who had longer duration or greater intensity of smoking. Interestingly, this association was not found among women with a family history of breast cancer.

Breast cancer risk among lifetime non-smokers with household second hand smoking exposure was not higher than among non-smokers without second hand smoke exposure. This study provides evidence that active smoking may play a role in breast cancer but no evidence that exposure to other people's smoke is related to a woman's breast cancer risk. Risks associated with second hand smoke exposure from other sources are currently being evaluated. Further research into the connection is warranted, especially with respect to understanding how genetic differences influence the metabolism of tobacco carcinogens.

Journal of the National Cancer Institute, Volume 96, pages 29-37, 2004. ❖

Need to Contact Us? www.CalTeachersStudy.org or call toll-free at (800) 568-9471