

A+ CALIFORNIA TEACHERS STUDY Report Card

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Diet and Breast Cancer: Some Good News

UNLIKE MANY CANCER RESEARCH studies from which just one or two reports of research results are published, the design of the California Teachers Study creates the opportunity for many important reports on factors which are (and are not) more commonly associated with certain cancers. In the Teachers Study many questions are being examined that have been raised regarding the causes of breast and other cancers as well as other important women's health issues such as asthma and Alzheimer's disease.

One of the most obvious of these is diet. Participants in the Teachers Study may recall completing a detailed inventory of their dietary habits. That information has been carefully analyzed and the dietary profiles of women who developed breast cancer within two years of completing the survey have been compared with the diets of women who did not develop the disease. We examined several aspects of diet – fat, fiber, alcohol, calories, and a couple of very specific items of particular interest: certain antioxidant vitamins (e.g., beta-carotene and vitamins C and E) and phytoestrogens, (i.e., naturally-occurring estrogens that are present in low levels in soy and some other foods). We found that, with the exception of alcohol, recent eating patterns were not associated with the risk of breast cancer. An increased risk for breast cancer was seen for women consuming two or more glasses of an alcoholic beverage a day. Consuming one glass a day, which research has found is good for a woman's heart, does not increase breast cancer risk. These results were published in the medical journal *Cancer Causes and Control*. ❖

TEACHERS STUDY IN THE NEWS

RECENT RESEARCH RESULTS FROM the California Teachers Study published in medical journals have also caught the attention of the news media (see page 4). The latest results were published in a research article in a medical journal in September 2002. It is an important milestone in our effort to understand the causes of cancer, and this publication will allow researchers across the world to be informed of these findings. It's an accomplishment only made possible with your help.

Some California teachers have been questioning whether the numbers of teachers who develop cancer is unusual. The California Teachers Study is providing answers to at least some of their questions. By gathering information from the nearly 133,500 teachers participating in the study across the state, we've confirmed that teachers have higher-than-expected rates of some cancers and lower-than-expected rates of others.

Continued on page 2

HAVE YOU MOVED?

SAVE THIS CARD! The California Teachers Study is a long-term research project. To assure that you receive future newsletters containing study updates, please save this postcard and return it to us if your name or address changes. Thank you!

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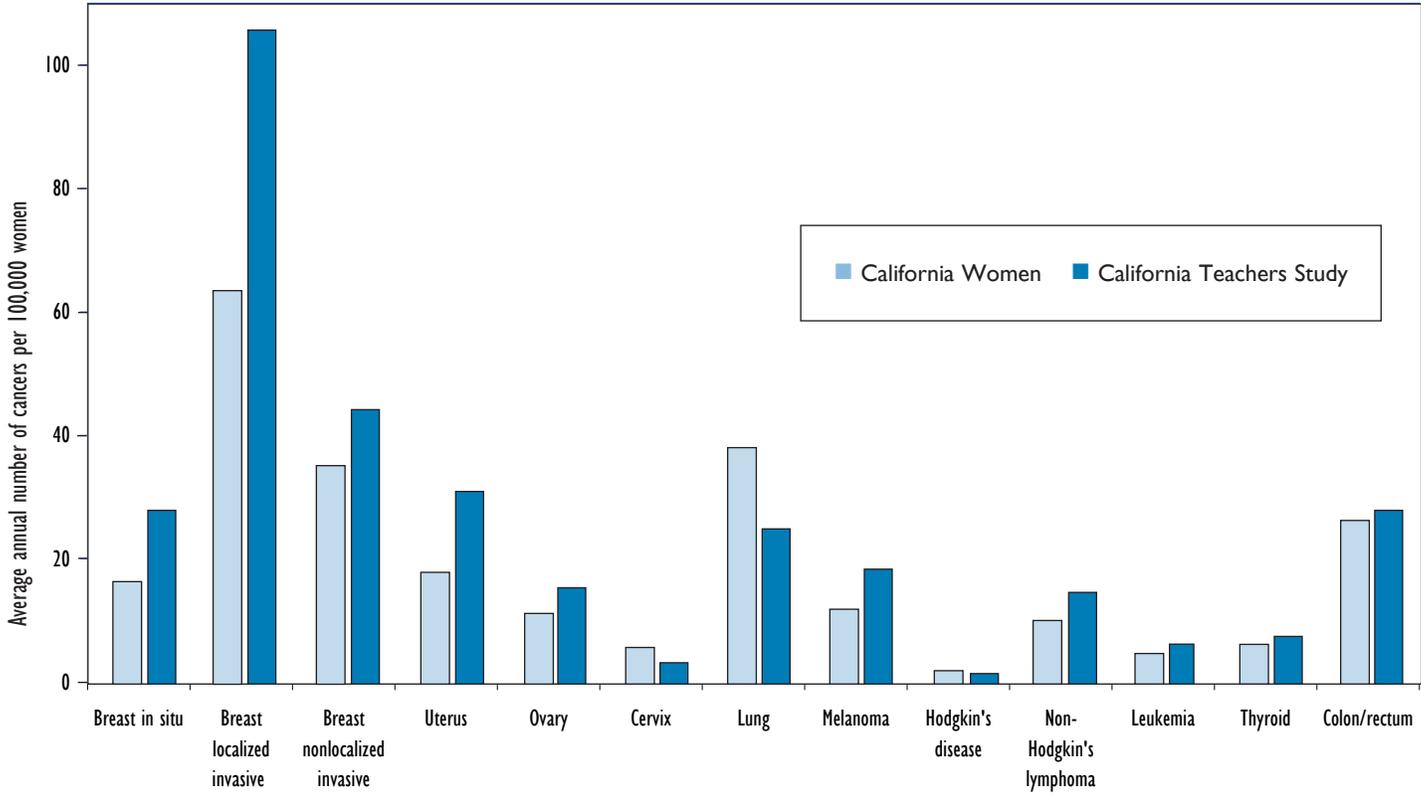
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FIGURE 1

CANCER INCIDENCE IN CALIFORNIA WOMEN AND CALIFORNIA TEACHERS STUDY



Increases are seen for breast, endometrial and ovarian cancers, melanoma and lymphoma. Teachers have lower rates of cancers of the lung and cervix, and they have about the same rates of

colon cancer as other California women (Figure 1).

The published article describes how questionnaires answered by teachers in the study and follow-up with the state's cancer registry have

provided information on women diagnosed with cancer between 1995 and 1998. We have now received reports of cancers diagnosed through 2000 as well, and will report on those in the future.

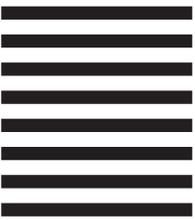
Breast cancer is the most common cancer among American women, followed by lung cancer. With so many women participating in the study, it was expected that many women would be diagnosed with breast cancer, but comparing breast cancer among teachers to breast cancer among other California women revealed the higher rate. Although teachers had higher rates of cancer of the endometrium (lining of the uterus) and ovaries, both diseases are still relatively rare.

The causes of cancer among teachers are probably the same as in women in general. Teachers may have higher risk of these

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cancers because of their behaviors which we also see in other special groups of women. We know that women who delay having their first child until they complete their college education or start a career, as many teachers do, are at increased risk. We also know that women who have fewer children have higher breast cancer risk.

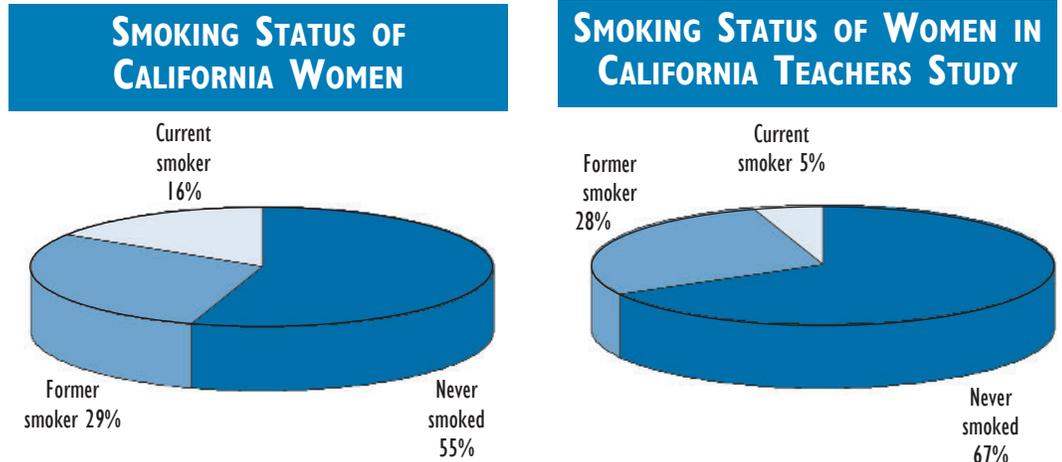
Teachers also use hormone replacement therapy for menopause symptoms more often than other California women. This therapy may be linked to the higher-than-expected breast cancer rates.

Still, the more we learn about breast, endometrial and ovarian cancers, the more we need to know. We hope that the additional information we gather and analyze from the California Teachers Study will result in a better understanding of the causes of these cancers.

It's also important to note that teachers in the study have lower rates of lung cancer and cervical cancer. This is not surprising since we find that teachers smoke much less than their California peers (Figure 2), and they tend to get regular Pap tests, which can catch abnormal cells in the cervix before they turn into cervical cancer.

Teachers in the study have adopted some of the good health

FIGURE 2



habits that help keep their risk of breast and other cancers lower than they would be otherwise. Nearly seven of every 10 do at least an hour of exercise regularly, and 27% exercise at least four hours a week. And teachers stay trimmer and maintain a healthier weight than other California women (Figure 3).

Access to health care means more teachers have heard the message about the importance of regular mammograms and put it into practice. More than nine out of 10 teachers reported having at least one screening mammogram, and most of those 50 years of age and older had had a mammogram in the past year.

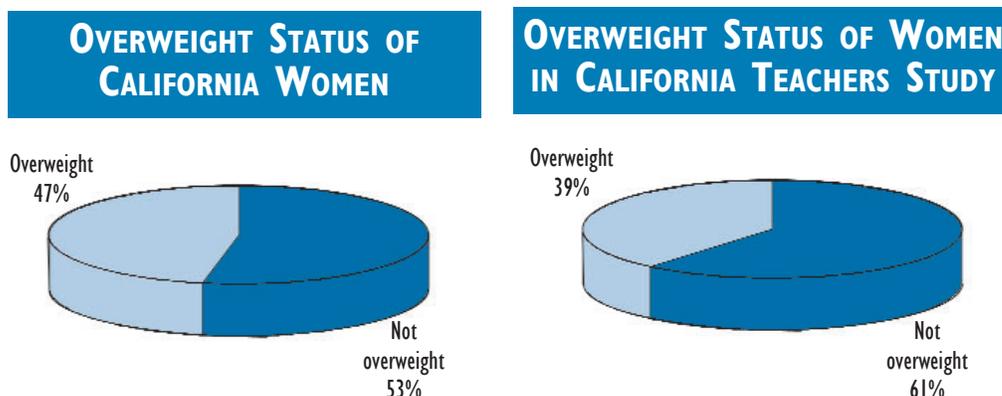
Many of the diagnosed breast cancers were very small malignancies, known as in-situ cancers. And a

significant number of the invasive breast tumors were localized when diagnosed, meaning that they had not spread to other parts of the body. Mammograms help catch these breast cancers at an early stage, when the greatest chance for cure exists.

Some rare cancers such as lymphoma and melanoma of the skin also seem to be more common among teachers. Little is known about the causes of non-Hodgkin's lymphoma and the California Teachers Study will provide some valuable information to help us learn more about factors that may predispose a woman to develop this type of cancer. The common lifestyle factor behind melanoma is excessive sun exposure without protective clothing or sunscreen but there are still many unanswered questions and the Teachers Study can also help us learn more about that disease.

We have much to learn from the Teachers Study about the causes of all types of cancer. We are confident that the participation of teachers in the study will help us understand better the role of diet, hormones, family history, tobacco and other factors on cancer risk, for teachers and non-teachers alike. ❖

FIGURE 3





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WIDESPREAD NEWS MEDIA attention followed publication of the California Teachers Study results. Television, radio and print media communicated study results to the public (see front page article) around California and from as far away as Great Britain.

At a press conference, CTS researchers presented the major findings in the recent report and fielded questions. A special acknowledgement was made of the California State Teachers Retirement System; without their participation the study would not have been possible. Researchers also thanked the 133,500 study participants who have taken the

time to contribute their health information to the study.

Finally, it was noted that this work has been performed through a collaboration of researchers from several research organizations across California: Drs. Hoda Anton-Culver, David Peel and Al Ziogas (University of California, Irvine), Drs. William Wright and Peggy Reynolds (California Department of Health Services), Drs. Dee West and Pam Horn-Ross (Northern California Cancer Center) and Drs. Leslie Bernstein, Dennis Deapen and

Ronald K. Ross (University of Southern California). ♦



California Teachers Study results were presented at a press conference October 2, 2002.