Nurses' Health Study Newsletter

Volume 6
June 1993

This edition of our annual Newsletter will bring you up to date on the findings of the Nurses' Health Study, which are based on the information you and your colleagues have provided. You may already have heard about many of our results since the study has received widespread attention from the national and international media. In 1992, 19 reports were published in major medical and public health journals, and our investigators were featured on many local and national news programs such as the *Today Show*, *Good Morning America,* and National Public Radio's *Morning Edition*. Your continued enthusiasm and participation have made it possible for us to move forward with our research efforts. Our findings are proving beneficial to people around the world by helping the medical community understand how diet and lifestyle influence women's health.



"...the nurses have become like 120,000 members of our team"
- Frank Speizer,MD

[Dr. Speizer with NHS Participant Miriam Walsh, RN]

* Photograph by Lou Jones

Because of the suggestions made by some of you, we included on the 1992 questionnaire questions of how stress, job satisfaction, and quality of life influence your health. Thank you for suggesting these questions. We look forward to continuing input from you, the participants.

RESEARCH HIGHLIGHTS

<u>Trans</u>-fatty acids intake: relation to coronary heart disease.

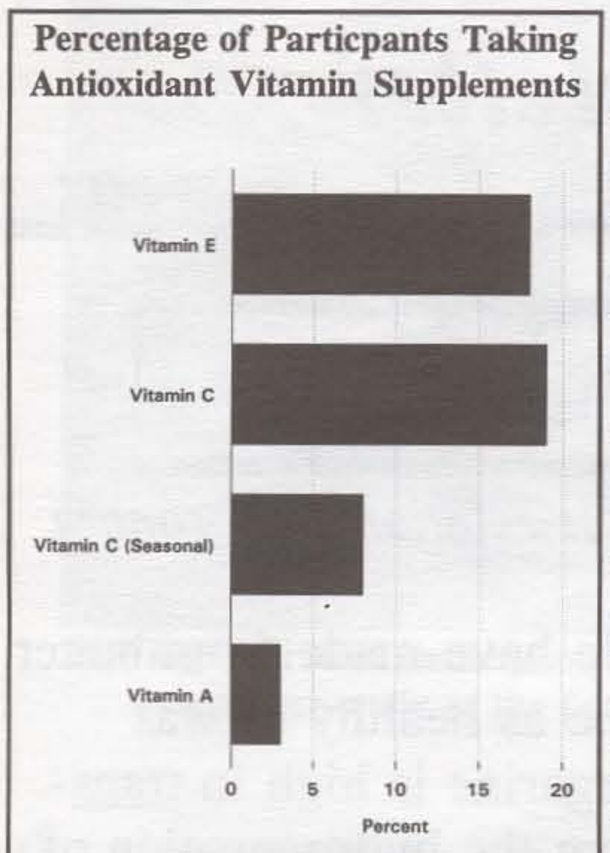
The switch many people have made from butter to margarine may not be as healthy as was originally thought. Margarine is high in <u>trans</u>-fatty acids resulting from the hydrogenation of vegetable oil. The risk of coronary heart disease (CHD) was 50% higher among women who had high levels of intake of <u>trans</u>-fatty acids than among women with low intake levels. Women with a consistently high level of margarine intake over a 10-year period had a 67% increase in the risk of CHD whether or not they had other CHD risk factors such as high levels of intake of saturated fats and cholesterol. Other major sources of <u>trans</u>-fatty acids besides margarine are commercially baked cookies, cake, and white bread.

Food Frequencies for Some Foods High in Trans-Fatty Acids Among Participants in the Nurses' Health Study.

Food	Never	≤1 per week	2-6 per week	1-3 per day	≥3 per day
Margarine	24%	6%	31%	35%	2%
White Bread	46%	10%	25%	15%	3%
Ready-Made Cookies	60%	12%	19%	7%	1%
Ready-Made Cake	92%	5%	2%	.2%	-

Dietary fat and fiber: relation to risk of breast cancer.

Neither intake of dietary fat nor intake of dietary fiber appears to be associated with increased risk of breast cancer. Specifically, a higher level of dietary fat intake did not increase women's risk of developing breast cancer, and dietary fiber was not protective.



Vitamin E intake and risk of coronary heart disease.
Women with daily intakes of vitamin E over 100 I.U. had a 41% lower risk of CHD than women with lower intakes. Most of the reduction of risk was observed among women who took vitamin E supplements, since it is difficult to consume over 25 I.U. per day from food sources alone. The women who fared best were those who used vitamin E supplements for 2 years or more, suggesting that consistent long-term use is necessary for the greatest benefit.

Cigarette smoking and the risk of diabetes.
Current smokers have an increased risk of developing diabetes, and the risk appears to be higher among heavier smokers. Women who smoke 25 or more cigarettes per day are at 42% greater risk than nonsmokers.

Cigarette smoking and risk of cataract.
The risk of cataracts increases with the amount of smoking. Women who smoke at least 35 cigarettes per day are 58% more likely than nonsmokers to develop cataracts.

Smoking cessation and decreased risk of stroke and coronary heart disease.
We found that smokers are at 2.5 times greater risk of stroke and at 4 times greater risk of CHD than women who have never smoked. Even among women who smoke only 1-4 cigarettes per day, the risk of CHD is nearly doubled. However, when women quit smoking, the increased risk of stroke largely disappears within 4 years. For CHD, excess risk drops by 23% within the first 2 years of cessation.

Answers to commonly asked

Q & A

questions about the NHS

Q: *Why do I sometimes get more than one questionnaire per year?*

A: The vast majority of participants in the study receive only one questionnaire every 2 years. Participants who do not return their questionnaires promptly are mailed additional forms. It is essential to the validity of our research that we maintain as high a follow-up rate as possible (over 90% in 1990).

Q: *How is this study funded? Do you sell the results to someone?*

A: Most of our funding is provided by grants from the National Cancer Institute, the National Institutes of Health, and from other federal agencies. Research papers containing results from the study are submitted to a variety of peer-reviewed scientific journals, including the New England Journal of Medicine, JAMA, and Lancet. We are not paid by the journals for these submissions. We do not sell our research findings to anyone.



The Nurses' Health Study Research Group

Q: *If I move or change my name, what information do you need to update my file?*

A: We will need your complete new address and your Nurses' Health Study identification number (your old address is helpful too). You will find your ID number next to your name and address on most of our correspondence to you. It is a six-digit number followed by a control number, i.e., 123456-7.

Sometimes it appears like this: *14
*25
*36

read vertically and without the control number. Please mention your ID number when you call or write to us.

Q: *Do you sell our names to junk mailers? I'm always getting solicitations from "medical" related offers.*

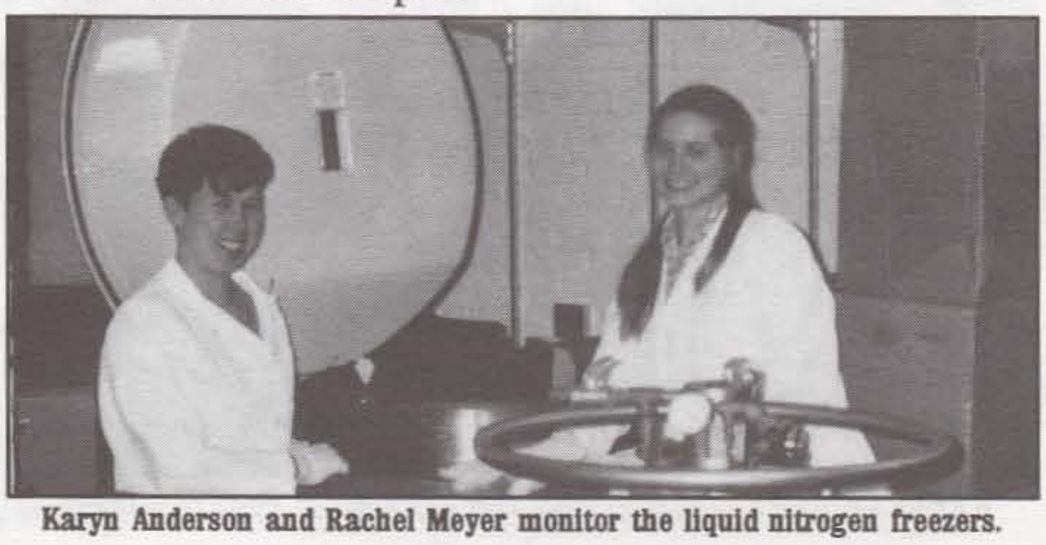
A: No, we do not! This **has never** and **will never** happen. It is your valued responses, which are kept strictly confidential, that make our research so successful. We would never betray your trust by releasing any individual data (including names and addresses) about any member of the study to anyone. If you have been receiving commercial mailings with a "health/medical" slant, the mailers may have gotten your name and address from the state nursing board list. You may want to check with the nursing board in your state to see what its policy is.



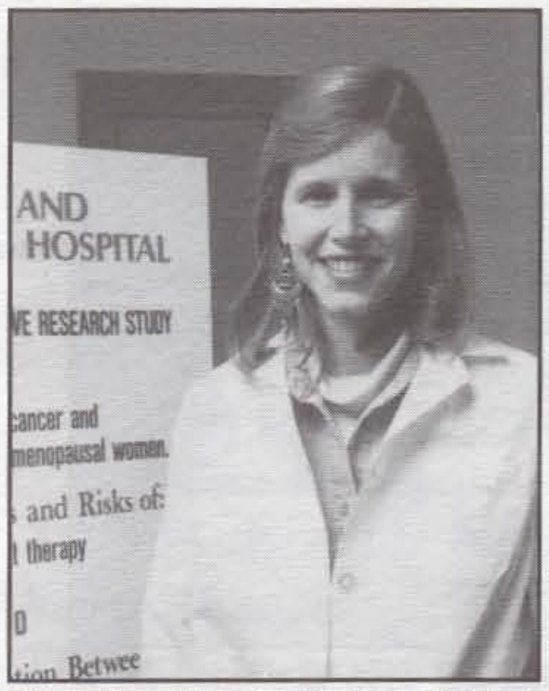
Drs. Manson, Hankinson and Colditz compare results.

Q: *What happened to the blood and water samples I sent in?*

A: The 33,000 blood samples we collected from members of the cohort in 1989-90 are currently being stored in liquid nitrogen freezers at -145°C. Over the next few years, we will be conducting analyses on some of the blood samples to determine the relationship between levels of antioxidants and the occurrence of breast cancer and heart attack. In addition, we will be examining the levels of other biochemical markers, such as serum lipids, and their relation to major diseases. The water samples returned with each blood kit have been acidified (to keep their contents stable), labelled, and logged into our retrieval system. At this time, we are still seeking appropriate funding to allow us to have each sample analyzed for its lead content. If we receive funding, we will send each participant the results for her sample.



Karyn Anderson and Rachel Meyer monitor the liquid nitrogen freezers.



Dr. JoAnn Manson, Co-Investigator of the Nurses' Health Study.

Q: *My daughter, who is an RN, would like to join the study. Is that possible?*

A: Unfortunately, this is not possible, as we cannot add any new members to the current cohort. The aim of the Nurses' Health Study is to follow a large group of women (121,701 women, to be precise) over a long period (now entering the 18th year) to study factors that contribute to the prevention or development of disease. If we added new members to the study group, we would not have the long and detailed histories that we are now tracking on the current members of the study.

Q: *Why do you have only one RN among your researchers?*

A: When the study was created, nurses were chosen because your high level of medical training gives you the expertise to answer our somewhat technical questionnaires. However, the NHS is not really an investigation of nursing as a profession. Rather, it is a study of women's health. Our research mainly requires expertise in epidemiology, biostatistics, and nutrition, while most nursing research is in the clinical and administrative domains. We are delighted that one nurse has joined our group and look forward to adding others.

Q: *Can you give us a free subscription to the Harvard Health Letter?*

A: For several reasons we cannot. First, it would be a breach of our confidentiality policy to release our mailing list to anyone other than NHS investigators. The Health Letter (on occasion) makes its name and address file available to outside vendors. We feel it would be unacceptable should these vendors attempt to solicit business from members of the Nurses' Health Study. Second, the cost to us of providing this publication to 100,000+ women would amount to many hundreds of thousands of dollars each year. With the reductions in research funding in recent years, we simply are not able to make a financial commitment that would reduce our research activity.

Physical Activity: How Often Do You Exercise?

No Activity	5.7%
≤ 1 hr/wk	22.8%
1-3 hrs/wk	28.2%
4-5 hrs/wk	18.2%
5+ hrs/wk	25.0%

(Results from the 1990 questionnaire)



Lois High, RN (NHS Participant) has her eyes examined for a small sub-study at the Cataract Research Center.

Q: *I am recently retired from nursing and have not worked as a nurse for 5 years. Does that mean I am finished participating in the Nurses' Health Study?*

A: No. Because our study evaluates how lifestyle influences the development of disease later in life, it is not only desirable, but in fact crucial, that all participants continue with the study. The Nurses' Health Study is internationally recognized as one of the largest resources of data on women's health. This is largely due to our high follow-up rate, which is totally dependent on your participation.



Gary Chase (second from right), hard at work with the coders.



Barbara Egan (left) with the Disease Follow-Up Group.

FRACTURE FACTS

- One of the most common cause of fractures in the Nurses' Health Study is roller skating!

NHS participants are certainly adventurous. The following are some of the more unusual reports of how nurses fractured their bones.

- " ... jumping on a pogo stick"
- " ... a sailing race in Mexico"
- " ... being a soccer goalie"
- " ... a fall off the wing of an airplane"
- " ... speed roller skating"
- " ... following mountain gorillas in Rwanda"
- " ... playing basketball"



The Main Office Staff.



Karen Corsano (seated) and the Computer Programmers.