



APPENDIX 3c
1980 Questionnaire

PLEASE REPLY TO:

Channing Laboratory
180 Longwood Ave.
Boston, Mass. 02115
617-732-2279

It is now four years since you responded to the first Nurses' Health Study questionnaire, and I am most gratified at the exceptional continuing support given to this major research project. Over 108,000 (90%) of nurses who replied in 1976 did so again in 1978. Since a continued high level of response is necessary to assure the validity of the scientific findings from the study, we are maintaining our efforts to trace those nurses who did not respond or could not be contacted in 1978.

Since I wrote to you last year, a number of papers from the study have been published.* The principal findings relate to the possible carcinogenic effects of hair dyes, the relationship of oral contraceptive use with myocardial infarction, and the role of family history in breast cancer. In summary, we found a slight overall excess of cancers associated with use of permanent hair dyes, but we must continue to gather more information, especially on long-term use, before we can reach any firm conclusions about cause and effect. Our findings of a positive association between current use of oral contraceptives and risk of myocardial infarction extend to a large U.S. population a relationship previously reported in England. We have also noted a tendency to an overall increased risk of breast cancer among women in families where a mother or sister has had breast cancer.

This year's questionnaire is a little longer than previous ones. Because of the need to evaluate the role of nutritional factors in the origins of cancer and heart disease (as some of you pointed out to us), and the desire of the National Institutes of Health to pursue research concerning these possible associations, we have expanded the dietary section of the form. We would greatly appreciate your taking the extra few minutes to complete these questions. In addition, one optional question has been added, where we ask you to provide your full first name. This will help enable us to maintain contact with you for the duration of the study.

As always, the information you provide will be held in strictest professional confidence, identified by study number only, and used solely for medical statistical purposes. We will continue to keep you informed of the progress of this study on an annual basis as we did last year, and will mail a further brief questionnaire to you in 1982.

Yours sincerely,

Frank E. Speizer, M.D.
Principal Investigator

- *References: 1. Lancet, 1979, Vol. 1, p. 1390 (Use of Permanent Hair Dyes and Cancer Among Registered Nurses)
2. Am J Epidemiol, 1980, Vol. 111, p. 59 (Oral Contraceptive Use and Non-fatal Myocardial Infarction)
3. Am J Epidemiol, 1980, Vol. 111, p. 301 (Family History of Breast Cancer as a Risk Indicator for the Disease)

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HARVARD MEDICAL SCHOOL

NURSES' HEALTH QUESTIONNAIRE

Please answer all questions by filling in the appropriate box or writing in the information requested. Please note that some questions ask for information since June 1978, some ask for current status, and some ask about events over longer periods. All information will be regarded as strictly confidential and will be used only for medical research purposes.

1. What is your date of birth? (15) / (17) / (19) 2. What is your current weight? (21) (pounds)

3. Since June 1978, have you had a pregnancy lasting six months or more? (24) yes no

If yes, delivery date was: (25) month / (27) year

4. Have you ever tried to become pregnant for more than two years without success? (29) yes no

If yes, was a cause found in: (30) yourself spouse not found not investigated

5. Have your menstrual periods ceased permanently? (31) yes no or don't know

If yes, at what age? (32) (years of age)

If yes, for what reason? (34) naturally radiation surgery

If due to surgery, were your ovaries removed? (35) yes, both one only no don't know

If you had a natural (non-surgical) menopause, have you subsequently had surgery to remove:

(a) (36) both ovaries OR one ovary (37) year removed

(b) (39) uterus (40) year removed

6. (a) Do you currently use female hormones other than oral contraceptives? (42) yes no

(b) Since June 1978 have you used female hormones at any time? (43) yes no

If yes, please state brand name (eg Premarin, DES) (44) Dose (46) mg

Number of months used since June 1978? (48) (months)

7. (a) Do you use any method of contraception currently? (50) yes no

If yes, which method:

- (51) oral contraceptives (birth control pills) (52) rhythm (53) diaphragm (54) condom (55) intrauterine devices (loop or coil) (56) foam or jelly (57) tubal ligation (58) husband's vasectomy (59) other (specify)

(b) Have you used oral contraceptives at any time since June, 1978? (60) yes no

8. If you are currently using or since June 1978 have used oral contraceptives at any time, please indicate intervals of oral contraceptive use starting from June 1978 and continuing until the present time. If applicable, please indicate reasons for stopping.

11 (7)

(9)

Table with columns: Interval of use (month, year), Reason for stopping. Rows (10) and (20) for recording data.

9. Do you smoke cigarettes currently? (30) yes no

If yes, how many cigarettes do you usually smoke per day? (1 pack = 20 cigarettes) (31) (cigarettes per day)

If yes, what brand do you smoke currently? (Please be as specific as you can: e.g. "Marlboro Lights 100's") (33) (brand)

Is it a filter cigarette? (36) yes no

Do you inhale? (37) into your mouth only into the back of your throat into the top of your lungs deep into your lungs

QUESTIONNAIRE (continued)

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(7) 10. Since June 1978 have you been diagnosed to have any of the following conditions? If yes, please specify date of diagnosis and whether you were hospitalized.

| Condition | Diagnosed | | Hospitalized | | Date of Diagnosis | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|-------------------|-------|
| | YES | NO | YES | NO | MONTH | YEAR |
| (9) High blood pressure (except while pregnant) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |
| (15) Diabetes mellitus | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |
| (21) Elevated cholesterol | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |
| (27) Myocardial infarction (heart attack) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |
| (33) Angina pectoris | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |
| (39) Fibrocystic breast disease | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |
| (45) Other benign breast disease | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |
| (51) Breast cancer | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |
| (57) Cancer of the cervix - in situ only | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |
| (63) Cancer of the cervix - all other | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |
| (69) Cancer of the uterus (endometrium) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |
| (9) Cancer of the ovary | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |
| (15) Cancer of the colon (large bowel) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |
| (21) Cancer of the rectum | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |
| (27) Cancer of the lung | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |
| (33) Other cancer (please specify site) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |
| (42) Other major illness (please specify) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |

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(7) 11. Do you currently use permanent hair dyes? (9) yes no If yes, how often? (10) Every _____ weeks
(Please do not include temporary rinses)

(7) 12. Do you currently take any of the following vitamins or medications in most weeks?

| (a) Vitamins | YES | NO | Used for how many years? | Number of pills or capsules per week | Size |
|--|--------------------------|--------------------------|--------------------------|--------------------------------------|------------------|
| Multiple vitamins (12) Brand (17) _____ | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ | _____ |
| Vitamin A (20) | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ | (25) _____ units |
| Vitamin C (27) | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ | (32) _____ mgm |
| Vitamin E (36) | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ | (41) _____ units |
| (b) Medications | YES | NO | Years of use | Number/week | |
| Tagamet (cimetidine) (45) | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ | |
| Thyroid hormone (extract, Synthroid) (50) | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ | |
| Aldomet (methyldopa) (55) | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ | |
| Aspirin (includes Bufferin, Anacin, etc.) (60) | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ | |
| Other non-steroidal analgesics (Circle: Motrin/Indocin/Tolectin/Clinoril) (65) | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ | |
| Valium (71) | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ | |
| Thiazide diuretics (Diuril, Hydrodiuril) (9) | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ | |
| Phenothiazines (eg. Thorazine, Stelazine, Compazine, Mellaril) (14) | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ | |

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(7) 13. Physical Activity Assessment: On an average weekday and weekend day during the past month, how much time did you spend on each of the following activities?

| | Weekday (hours per day) | Weekend day (hours per day) |
|--|-------------------------|-----------------------------|
| (a) Vigorous activity (digging in garden, vigorous sports, jogging, brisk walking or striding, bicycling on hills, heavy housework, etc.) (19) | _____ | _____ |
| (b) Moderate activity (light housework, light sports, walking, yard work, ward nursing, painting, bicycling on level ground etc.) (23) | _____ | _____ |

At least once a week, do you engage in any regular activity similar to brisk walking, jogging, bicycling, etc. long enough to work up a sweat? (27) yes no

If yes, how many times per week? (28) _____ What activity is this? (30) _____

14. Do you regularly spend time outdoors in the summer (at least 8 hours/week)? (33) yes, usually use sunscreen yes, little/no protection no

15. What is your current marital status? (34) married widowed separated/divorced

16. What is your first name? (35) _____

DIET ASSESSMENT

For each food listed, check the box indicating how often, on average, you have used the amount specified during the past year. If your intake of a food item has greatly increased or decreased during the past 10 years, indicate this in the last 2 columns.

| FOOD AND AMOUNTS | Average use last year | | | | | | | | | My use during the past 10 years has: | | | |
|---|-----------------------|-------------------|-------------------|-----------------|--------------------|--------------------|------------------|---------------------|-----------------|--------------------------------------|----------------------|----------------------|------|
| | 6+ per day | 4-6 per day | 2-3 per day | 1 per day | 5-6 per week | 2-4 per week | 1 per week | 1-3 per month | Almost Never | (9) | Greatly Increased | Greatly Decreased | |
| Dairy Foods | | | | | | | | | | | | | |
| Skim or low fat milk (8 oz. glasses) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (9) | | | (42) |
| Whole milk (8 oz. glasses) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (10) | | | (43) |
| Yoghurt, (1 c.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (11) | | | (44) |
| Ice cream (1/2-c.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (12) | | | (45) |
| Cottage cheese (1/2-c.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (13) | | | (46) |
| Hard cheese, plain or as part of a dish (slice or servings) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (14) | | | (47) |
| Margarine (pats added to food or bread) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (15) | | | (48) |
| Butter (pats added to food or bread) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (16) | | | (49) |
| Fruits | | | | | | | | | | | | | |
| Fresh apples or pears (1) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (17) | | | (50) |
| Oranges (1) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (18) | | | (51) |
| Orange or grapefruit juice (small glass) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (19) | | | (52) |
| Peaches, apricots or plums (fresh, 1/2-c. canned, or dried) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (20) | | | (53) |
| Bananas (1) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (21) | | | (54) |
| Other fruits (fresh, or 1/2-c. canned) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (22) | | | (55) |
| Vegetables | | | | | | | | | | | | | |
| String beans (1/2-c.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (23) | | | (56) |
| Broccoli (1/2-c.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (24) | | | (57) |
| Cabbage, cauliflower, brussels sprouts (1/2-c.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (25) | | | (58) |
| Carrots (whole or 1/2-c. cooked) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (26) | | | (59) |
| Corn (ear or 1/2-c.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (27) | | | (60) |
| Spinach or other greens (1/2-c.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (28) | | | (61) |
| Peas or lima beans (1/2-c. fresh, frozen or canned) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (29) | | | (62) |
| Yellow (winter) squash (1/2-c.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (30) | | | (63) |
| Sweet potatoes (1/2-c.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (31) | | | (64) |
| Beans or lentils, dried (1/2-c.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (32) | | | (65) |
| Tomatoes (1) or tomato juice (4 oz.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (33) | | | (66) |
| Meats | | | | | | | | | | | | | |
| Chicken, without skin (6-8 oz.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (34) | | | (67) |
| Chicken, with skin (6-8 oz.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (35) | | | (68) |
| Hamburgers (1) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (36) | | | (69) |
| Hot dogs (1) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (37) | | | (70) |
| Processed meats (sausage, salami, bologna, etc.) (piece or slice) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (38) | | | (71) |
| Bacon (2 slice servings) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (39) | | | (72) |
| Beef, pork or lamb as a sandwich or mixed dish (stew, casserole, lasagne, etc.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (40) | | | (73) |
| Beef, pork or lamb as a main dish (steak, roast, ham, etc. 6-8 oz.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (41) | | | (74) |



| FOOD AND AMOUNTS | Average use last year | | | | | | | | | My use during the past 10 years has: | | |
|---|-----------------------|-------------|-------------|-----------|--------------|--------------|------------|---------------|--------------|--------------------------------------|-------------------|--|
| | 6+ per day | 4-6 per day | 2-3 per day | 1 per day | 5-6 per week | 2-4 per week | 1 per week | 1-3 per month | Almost Never | Greatly Increased | Greatly Decreased | |
| 17 Fish (6-8 oz.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (9) | | |
| (7) Eggs (1) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (10) | | |
| Sweets, Baked Goods, Cereals | | | | | | | | | | | | |
| Chocolate (1 oz.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (11) | | |
| Candy without chocolate (1 oz.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (12) | | |
| Pie, home made (slice) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (13) | | |
| Pie, ready made (slice) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (14) | | |
| Cake, (slice) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (15) | | |
| Cookies (1) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (16) | | |
| Cold breakfast cereal (1/2-c.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (17) | | |
| White bread (slice) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (18) | | |
| Dark or whole grain bread (slice) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (19) | | |
| Miscellaneous | | | | | | | | | | | | |
| Peanut butter (tbsps) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (20) | | |
| Potato or corn chips (small bag or 1 oz.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (21) | | |
| French fried potatoes (4 oz.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (22) | | |
| Nuts (1 oz.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (23) | | |
| Potatoes, mashed (1/2-c.) or baked (1) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (24) | | |
| Rice or pasta (1/2-c.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (25) | | |
| Coffee, not decaffeinated (cups) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (26) | | |
| Tea (cups) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (27) | | |
| Beer (bottles or cans) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (28) | | |
| Wine (glasses) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (29) | | |
| Liquor - whiskey, gin, etc. (drinks) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (30) | | |
| Coca Cola, Pepsi, other cola (glasses) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (31) | | |
| Low calorie carbonated drink (glasses) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (32) | | |
| Other carbonated beverage (root beer, ginger ale, 7-Up, etc.) (glasses) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (33) | | |
| Fruit-flavored punch or non-carbonated beverage (glasses) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (34) | | |
| Home-fried food, any type (servings) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (35) | | |
| Artificial sweetner (packet, tablets, etc.) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | (36) | | |

- 18 How often do you eat liver (3-4 oz. servings)? (9) 1 per week 2-3 per month 1 per month or less never
- (7) What do you do with the visible fat on your meat? (10) eat most of it eat some of it eat as little as possible
- What kind of fat do you usually use for baking? (11) lard or butter vegetable oil vegetable shortening margarine
- What kind of fat do you usually use for frying? (12) lard or butter vegetable oil vegetable shortening margarine
- What kind of cold breakfast cereal do you most often use? (specify exact brand) (13) _____
- Do you use a microwave oven? (15) Yes No If yes, for how many years? (16) _____
- Are you currently on a special diet? (18) Yes No If yes, (19) for _____ years: type of diet (21) _____
- How many teaspoons of sugar do you add to your food daily? (include for coffee, tea, cereal etc.) (23) _____ tsp.
- In what form do you usually use your margarine? (25) Stick form Tub form
- What percentage of the time do you eat your meat cooked well done? (26) _____ %
- What was your weight at age 18? (29) _____ pounds

THANK YOU. Please return completed questionnaire in the pre-paid envelope to: NURSES HEALTH STUDY, Frank E. Speizer, M.D., Harvard Medical School, 180 Longwood Avenue, Boston, Massachusetts 02115