HARVARD
MEDICAL
SCHOOL

NURSES' HEALTH STUDY II

HARVARD
SCHOOL
of
PUBLIC HEALTH

•Harvard School of Public Health/Dept. of Epidemiology•677 Huntington Avenue•Boston, Massachusetts 02115•(617) 732-1480•

Dear Colleague:

We are asking you and other female nurses to participate in a prospective study of lifestyle practices, nutritional factors and the occurrence of breast cancer and other major illnesses. This research is being funded on a high priority by the National Institutes of Health. For 13 years we have been conducting the Nurses' Health Study, which continues to provide invaluable information on factors that influence the health of women. However, the youngest members of that group are currently 43 years of age and many important questions relate to early life-style practices.

Exercise and diet seem to play important roles (both preventive and causative) in cancer, but it is unclear which foods or nutrients confer benefit or risk. The long-term health effects of oral contraceptives are also not fully resolved, and can be answered only with information from younger women. We therefore are inviting female R.N.'s 25 to 42 years of age to enroll in Nurses' Health Study II. Because of your level of education and awareness of health issues, you can provide the accurate and complete information needed in this study.

To participate, please complete the attached questionnaire and return it in our prepaid envelope. We plan to send follow-up questionnaires of about this length every two years. The 1991 questionnaire will include a detailed dietary component. On alternate years you will receive a newsletter about the progress of the study and summaries of the latest findings. We may request permission to obtain relevant medical records in the event of a serious health problem.

Instructions for completing the questionnaire are on the reverse side of this letter. For efficient processing, we use an optical scanning system which requires an ordinary pencil. Additional notes should be made on a separate piece of paper; we will read them all. All information you provide will be held in strictest medical confidence, identified by ID number only and used solely for medical statistical purposes. We have obtained your name from your state Board of Nursing or Nurses Association with the understanding that we will not release it to any other organization.

We hope that you will collaborate with us on this long-term study. The results will have important public health implications in determining risk factors for cancer and other illnesses as well as the diet and lifestyle practices which lead to optimal health.

Sincerely,

Walter Willett

Walter Willett, M.D.
Professor of Epidemiology and Nutrition

RESEARCH GROUP

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INSTRUCTIONS

Please use an ordinary pencil to answer all questions by completely filling in the appropriate response bubble, or by writing the requested information if a space is provided. This form is meant to be read by optical-scanning equipment; it is important that you make no stray marks and keep any write-in responses within the provided spaces. Should you need to change a response, erase the incorrect mark completely. If you have comments, please write them on a separate piece of paper.

Note: THIS STUDY IS FOR FEMALE RN's ONLY.

EXAMPLE 1: Have you **EVER** used oral contraceptives? ● Yes ○ No

Fill response bubbles completely, do not mark this way: ✓ ⊗ ◒

EXAMPLE 2: Type of cigarette?

What specific brand and type? (e.g. Marlboro Lights 100's)

MARLBORO LIGHTS 100S

Keep handwriting within borders of the response box.

EXAMPLE 3: Date of birth and weight:

a) Write in birthdate and weight in the boxes at the top of each grid. For example, May 12, 1964 would be

b) Below each number, fill in the bubble that corresponds to that number

1. Date of Birth

	DAY		YEAR 19__	
	1	2	6	4
Jan	0	0	0	0
Feb	1	1	1	1
Mar	2	2	2	2
Apr	3	3	3	3
May		4	4	●
Jun		5	5	5
Jul		●	6	6
Aug		7	7	7
Sep		8	8	8
Oct		9	9	9
Nov				
Dec				

2. Current Weight (lbs)

1	4	3	
0	0	0	
●	1	1	
2	2	2	
3	3	●	← and 143 pounds:
4	●	4	← and fill response bubbles that correspond to 143
	5	5	
	6	6	
	7	7	
	8	8	
	9	9	

Thank you for completing the Questionnaire.

Please tear off the cover letter (to preserve confidentiality) and return the questionnaire (pages 1-4) in the enclosed prepaid envelope.

Please do NOT return ORAL CONTRACEPTIVE PHOTO BOOKLET because of Postal Weight restrictions.

PLEASE USE PENCIL ONLY.

1. Date of Birth

Month: ○ Jan ○ Feb ○ Mar ○ Apr ○ May ○ Jun ○ Jul ○ Aug ○ Sep ○ Oct ○ Nov ○ Dec

DAY: 0 1 2 3 | 0 1 2 3 4 5 6 7 8 9

YEAR 19__: 0 1 2 | 0 1 2 3 4 5 6 7 8 9

2. Current Weight (lbs)

0 1 2 3 4 | 0 1 2 3 4 5 6 7 8 9 | ○ 0 1 2 3 4 5 6 7 8 9

3. Weight at Age 18

0 1 2 3 4 | 0 1 2 3 4 5 6 7 8 9 | ○ 0 1 2 3 4 5 6 7 8 9

4. Your Height

FEET: 0 1 2 3 4 5 6 7 ○

INCHES: 0 1 | 0 1 2 3 4 5 6 7 8 9

5. Place of Birth (State)

6. Which best describes your current employment status?

- ○ Inpatient or E.R. Nurse
- ○ Outpatient/Community Nurse
- ○ Operating Room Nurse
- ○ Nursing Education
- ○ Nursing Administration
- ○ Other Nursing
- ○ Non-Nursing Employment
- ○ Fulltime Homemaker

7. Your Major Ancestry (you may mark more than one)

○ Southern European/ Mediterranean ○ Scandinavian ○ Other Caucasian ○ African-American ○ Hispanic ○ Asian ○ Other

8. What is the total number of years during which you worked rotating night shifts (at least 3 nights/month in addition to days or evenings in that month)?

○ Never ○ 1–2 yrs ○ 3–5 ○ 6–9 ○ 10–14 ○ 15–19 ○ 20 years or more

9. What is your current marital status?

○ Never Married ○ Married ○ Divorced ○ Separated ○ Widowed

10. Age your menstrual periods began?

○ 9 or less ○ 10 ○ 11 ○ 12 ○ 13 ○ 14 ○ 15 ○ 16 ○ 17 or more

11. How many years after the onset of your menstrual periods did your cycles become regular? (Your cycle is the interval from first day of period to first day of next period.)

○ <1 Year ○ 1–2 years ○ 3–4 years ○ 5 years or longer ○ Never

12. Have you ever tried to become pregnant for more than one year without success?

○ Yes → a) How old were you when this first occurred? → Age: 1 2 3 4 | 0 1 2 3 4 5 6 7 8 9

○ No

b) What was the cause? (Mark all that apply.)

○ Tubal Blockage ○ Ovulatory Disorder ○ Endometriosis ○ Cervical mucous factors ○ Spouse ○ Not investigated ○ Not found ○ Other

13. In the past 2 years have you had:

a) A physical exam? ○ No ○ Yes, for symptoms ○ Yes, for screening

b) A breast exam by health provider? ○ No ○ Yes, for symptoms ○ Yes, for screening

14. Current usual blood pressure (if checked within 2 years):

Systolic ○ Unknown/Not checked within 2 years ○ <105 mmHg ○ 105–114 ○ 115–124 ○ 125–134 ○ 135–144 ○ 145–154 ○ 155–164 ○ 165–174 ○ 175+

Diastolic ○ Unknown/Not checked within 2 years ○ <65 mmHg ○ 65–74 ○ 75–84 ○ 85–89 ○ 90–94 ○ 95–104 ○ 105+

15. Your Serum Cholesterol (if checked within 5 years):

○ Unknown/Not checked within 5 years

○ <140 mg/dl ○ 140–159 ○ 160–179 ○ 180–199 ○ 200–219 ○ 220–239 ○ 240–269 ○ 270–299 ○ 300–329 ○ 330+ mg/dl

16. Have you ever had a mammogram?

○ Yes →

1) At what age did you have your first mammogram?

○ <30 ○ 30–34 ○ 35–39 ○ 40+

2) How many years has it been since your most recent mammogram?

○ <1 Year ○ 1 Year ○ 2 Years ○ 3+ Years

3) Reason for last mammogram:

○ Routine screening ○ Follow-up of abnormality

○ No

17. In how many months did you practice breast self-examination in the past year?

○ None ○ One ○ 2–3 ○ 4–6 ○ 7–11 ○ 12

GO TO QUESTION 18

18. Have you smoked 20 packs of cigarettes or more in your lifetime?

○ No

○ Yes, currently smoke

What specific brand and type? (e.g. Marlboro Lights 100's) ○

○ Yes, smoked in past, but quit

○ Quit <1 year ago

○ Quit 1+ years ago

At each age: average number of cigarettes per day

	None	1–4	5–14	15–24	25–35	36–44	45+
Age <15	○	○	○	○	○	○	○
Age 15–19	○	○	○	○	○	○	○
Age 20–24	○	○	○	○	○	○	○
Age 25–29	○	○	○	○	○	○	○
Age 30–35	○	○	○	○	○	○	○
Current	○	○	○	○	○	○	○

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19. As a child or adolescent, once you had been exposed to the sun several times, what kind of reaction would your skin have after 2 or more hours in the sun without sunscreen on a bright sunny day?

○ Practically none ○ Some redness only ○ Burn ○ Painful burn ○ Painful burn with blisters

20. Between the ages 15–20, how many times did you have severe sunburns which blistered?

○ Zero ○ One ○ Two ○ 3–4 ○ 5–9 ○ 10 or more

21. Have you EVER used oral contraceptives (OC's) for any reason (contraception, acne, menstrual irregularity, etc.)?

○ Yes ○ No

22. Do you CURRENTLY use any of these forms of contraception? (Mark all that apply.)

○ None ○ Oral Contraceptive ○ Sponge ○ Diaphragm/Cervical Cap ○ Tubal Ligation ○ Foam or Jelly
○ Condom ○ Intrauterine Device ○ Rhythm ○ Vasectomy ○ Other

23. Have you ever given birth to twins? ○ No ○ Yes → Please indicate your age(s) at their birth(s).

24. Have you ever had more than one birth (separate pregnancies) during the same year of age? ○ No ○ Yes → At what age?

25. Have you ever had toxemia/pre-eclampsia (raised blood pressure and proteinuria) with any pregnancy? ○ No ○ Yes → At what age(s)?

26a. Pregnancy History

For each year of age listed below, please fill in a response bubble for each age at which you completed a pregnancy lasting six months or more, OR had a pregnancy lasting less than six months (including miscarriages and abortions).

Mark here if you are currently pregnant → ○
Mark here if you never had any pregnancies → ○

Your Age	Mark each age you completed a pregnancy lasting 6 months or more	Mark your age at the end of each pregnancy lasting less than 6 months
13 or less	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
26	26	26
27	27	27
28	28	28
29	29	29
30	30	30
31	31	31
32	32	32
33	33	33
34	34	34
35	35	35
36	36	36
37	37	37
38	38	38
39	39	39
40	40	40
41	41	41
42	42	42

GO TO QUESTION 26b

26b. Oral Contraceptive (OC) Use History

*If you **NEVER** used OC'S for **any** reason, skip to Page 3.*

For each year of age listed below, please fill in a response bubble if you used oral contraceptives for at least 2 months. Also, indicate the 3-digit code for brand and type using the alphabetic list and photobooklet provided. Include OC usage for any reason.

Mark each age of OC use for 2 months or more	Mark if used for full year (10+ months)	Type of oral contraceptive used (write in 3 digit brand code from Photo-Booklet)
13 or less	Y	
14	Y	
15	Y	
16	Y	
17	Y	
18	Y	
19	Y	
20	Y	
21	Y	
22	Y	
23	Y	
24	Y	
25	Y	
26	Y	
27	Y	
28	Y	
29	Y	
30	Y	
31	Y	
32	Y	
33	Y	
34	Y	
35	Y	
36	Y	
37	Y	
38	Y	
39	Y	
40	Y	
41	Y	
42	Y	

If more than one type of OC was used at any age, indicate type used the longest at that age.

GO TO PAGE 3

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27. Have your menstrual periods ceased permanently?

- ○ No: Premenopausal
- ○ Yes: No menstrual periods → **a) Age periods ceased?** Age ☐☐ → **b) For what reason did your periods cease?**
  - ○ Surgery: If due to surgery were your ovaries removed?
    - ○ Yes, both ○ One only
    - ○ Only uterus removed
  - ○ RADIATION or CHEMOTHERAPY
  - ○ NATURAL: If natural (non-surgical) menopause, have you had subsequent surgery to remove ovaries or uterus?
    - ○ No ○ One ovary removed
    - ○ Uterus removed ○ Both ovaries removed
- ○ Yes: Had menopause but now have periods induced by hormones → **a) Age periods ceased?** Age ☐☐ → **b) For what reason did your periods cease?**
  - ○ Surgery: If due to surgery were your ovaries removed?
    - ○ Yes, both ○ One only
    - ○ Only uterus removed
  - ○ RADIATION or CHEMOTHERAPY
  - ○ NATURAL: If natural (non-surgical) menopause, have you had subsequent surgery to remove ovaries or uterus?
    - ○ No ○ One ovary removed
    - ○ Uterus removed ○ Both ovaries removed
- ○ Not sure

28. Have you EVER used replacement sex hormones (e.g. estrogen)?

- ○ Never
- ○ Past Only → **a) For how many years?**
  - ○ <1 year ○ 1 year ○ 2 years
  - ○ 3–4 years ○ 5–7 years ○ 8 or more years
- ○ Currently → **a) For how many years?**
  - ○ <1 year ○ 1 year ○ 2 years
  - ○ 3–4 years ○ 5–7 years ○ 8 or more years

b) Type of hormone used most recently?

- ○ Oral Premarin or other conjugated estrogen alone
- ○ Oral progesterone (e.g. Provera) alone
- ○ Oral conjugated estrogen and progesterone
- ○ Patch estrogen alone
- ○ Patch estrogen and progesterone
- ○ Vaginal estrogen
- ○ Other (e.g. non-conjugated estrogen) Please specify: ☐

c) Progesterone use pattern: ○ Not used ○ Continuous ○ <2 weeks/month

29. During ages 18-22 what was the usual length of your menstrual cycle (interval from first day of period to first day of next period)?

○ <21 days ○ 21–25 days ○ 26–31 days ○ 32–39 days ○ 40–50 days ○ 50+ days or too irregular to estimate

30. What was the pattern of your menstrual cycles (excluding time around pregnancies or when using oral contraceptives):

During high school:	○ Very regular (±3 days)	○ Regular	○ Usually irregular	○ Always irregular	○ No periods
During ages 18–22:	○ Very regular (±3 days)	○ Regular	○ Usually irregular	○ Always irregular	○ No periods

31. How often did you participate in strenuous (aerobic) physical activity or sports at least twice per week (e.g. swimming, aerobics, field hockey, basketball, cycling, running):

During high school (please average):	○ Never	○ 1–3 months/yr	○ 4–6 months/yr	○ 7–9 months/yr	○ 10–12 months/yr
During ages 18–22 (please average):	○ Never	○ 1–3 months/yr	○ 4–6 months/yr	○ 7–9 months/yr	○ 10–12 months/yr

32. During the past year, what was your average time per week spent at each of the following recreational activities?

	Zero	1–4 Min.	5–19 Min.	20–59 Min.	One Hour	1–1.5 Hrs.	2–3 Hrs.	4–6 Hrs.	7–10 Hrs.	11+ Hrs.
Walking or hiking outdoors (include walking to work)	○	○	○	○	○	○	○	○	○	○
Jogging (slower than 10 minutes/mile)	○	○	○	○	○	○	○	○	○	○
Running (10 minutes/mile or faster)	○	○	○	○	○	○	○	○	○	○
Bicycling (include stationary machine)	○	○	○	○	○	○	○	○	○	○
Calisthenics/Aerobics/Aerobic Dance/Rowing Machine	○	○	○	○	○	○	○	○	○	○
Tennis, Squash, or Racquetball	○	○	○	○	○	○	○	○	○	○
Lap swimming	○	○	○	○	○	○	○	○	○	○
Other aerobic recreation (e.g. lawn mowing)	○	○	○	○	○	○	○	○	○	○

33. On average, how many hours per week do you spend:

	Zero Hours	One Hour	2–5 Hrs.	6–10 Hrs.	11–20 Hours	21–40 Hrs.	41–60 Hrs.	61–90 Hrs.	Over 90 Hrs.
Standing or walking around at work?	○	○	○	○	○	○	○	○	○
Standing or walking around at home?	○	○	○	○	○	○	○	○	○
Sitting at work or while driving?	○	○	○	○	○	○	○	○	○
Sitting at home?	○	○	○	○	○	○	○	○	○

34. What is your usual walking pace outdoors?

○ Easy, casual (less than 2 mph) ○ Normal, average (2–2.9 mph) ○ Brisk pace (3–3.9 mph)
○ Very brisk/striding (4 mph or faster) ○ Unable to walk

35. How many flights of stairs (not individual steps) do you climb daily?

○ 2 flights or less ○ 3–4 ○ 5–9 ○ 10–14 ○ 15 or more flights

36. Please count the number of moles on your lower legs (knees to ankles, both legs).

○ Inconvenient to count ○ None ○ 1–2 moles ○ 3–5 ○ 6–9 ○ 10–14 ○ 15–20 ○ 21 or more moles

37. In a typical week during the past year, on how many days did you consume an alcoholic beverage of any type?

○ No days ○ 1 day ○ 2 days ○ 3 days ○ 4 days ○ 5 days ○ 6 days ○ 7 days

38. In a typical month during the past year, what was the largest number of drinks of beer, wine, and/or liquor you may have had in one day?

○ None ○ 1–2 ○ 3–5 ○ 6–9 ○ 10–14 ○ 15 or more

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39a. During these age intervals, what was your usual number of drinks of alcohol? (Number of drinks equals total of bottles/cans of beer, plus 4 oz. glasses of wine, plus shots of liquor.)

39b. **During the past year**, what was your usual consumption of these alcoholic beverages?

Number of Drinks	None or Less Than One Per Month	1–3 Per Mo.	1 Per Week	2–4 Per Week	5–6 Per Week	7–13 Per Week	14–24 Per Week	25–39 Per Week	40+ Per Week
Age 15–17	○	○	○ (W)	○	○	○	○	○	○
Age 18–22	○	○	○ (W)	○	○	○	○	○	○
Age 23–30	○	○	○ (W)	○	○	○	○	○	○
Age 31–40	○	○	○ (W)	○	○	○	○	○	○
Beer (1 glass, bottle, can)	○	○	○ (W)	○	○	○	○	○	○
Wine (4 oz. glass)	○	○	○ (W)	○	○	○	○	○	○
Liquor (1 drink or shot)	○	○	○ (W)	○	○	○	○	○	○

40. Have you had any of the following physician-diagnosed conditions?

Mark here for Yes →

	Year Of Diagnosis: Before 1980	1980 Thru 1984	1985 to Present
High blood pressure (excluding during pregnancy) (Y) →	○	○	○
Diabetes: Gestational (Y) →	○	○	○
Diabetes: Not during pregnancy (Y) →	○	○	○
Elevated cholesterol (Y) →	○	○	○
Fibrocystic or other benign breast disease (Y) →	○	○	○
→ Confirmed by biopsy? (Y) Yes (N) No			
→ Confirmed by aspiration? (Y) Yes (N) No			
MI or angina (Y) →	○	○	○
Stroke (CVA) or TIA (Y) →	○	○	○
Melanoma (Y) →	○	○	○
Basal or squamous cell skin cancer (Y) →	○	○	○
Breast Cancer (Y) →	○	○	○
Other Cancer: (Y) →	○	○	○
→ Specify site of other cancer →			
Venous Thrombosis/Pul. Emb. (Y) →	○	○	○
Migraine headaches (Y) →	○	○	○
Premenstrual syndrome (PMS) (Y) →	○	○	○
Severe teenage acne (Y) →	○	○	○
Gall stones (Y) →	○	○	○
Thyroid disease (Y) →	○	○	○
Polycystic ovaries (Y) →	○	○	○
Other major illness (Y) →	○	○	○
→ Specify illness →			

41. Do you currently take a multiple vitamin preparation?

○ Yes →
- a. How many do you take per week?
  ○ 2 or less ○ 3–5 ○ 6–9 ○ 10 or more
- b. For how many years?
  ○ 0–1 years ○ 2–4 ○ 5–9 ○ 10+ years

○ No ↓

42. Current Medication (mark if used regularly)

- ○ Acetaminophen, 2+ times/week (e.g. Tylenol)
- ○ Aspirin, 2+ times/week (e.g. Anacin, Bufferin, Alka-Seltzer etc.)
- ○ Other anti-inflammatory, 2+ times/week (e.g. Ibuprofen, Indocin, Naprosyn, Advil)
- ○ Thiazide diuretic (e.g. Hygroton, Dyazide, HCTZ, Diuril)
- ○ Any anti-hypertensive medication
- ○ Furosemide-like diuretics (e.g. Lasix, Bumex)
- ○ Beta-blocker (e.g. Inderal, Lopressor, Tenormin, Corgard)
- ○ Thyroid hormone replacement (e.g. Synthroid, Levothroid)
- ○ Insulin
- ○ Oral Hypoglycemic Agent

If you regularly take any medications not included on this questionnaire, please list them on a separate sheet. (DESCRIBE DOSE, FREQUENCY, AND DURATION.) (42) (N)

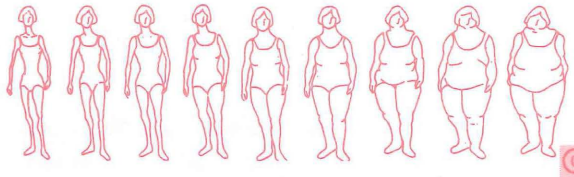
GO TO QUESTION 43a

43a. Did any of these relatives have . . .

	Age At First Diagnosis: Before Age 40	Age 40 to 49	Age 50 to 59	Age 60+	Age Unknown
Myocardial Infarction?					
Mother →	○	○	○	○	○
Father →	○	○	○	○	○
Breast Cancer?					
Mother →	○	○	○	○	○
Sister →	○	○	○	○	○
Maternal Grandmother →	○	○	○	○	○
Paternal Grandmother →	○	○	○	○	○

43b.
- Hypertension? ○ Mother ○ Father ○ Brother ○ Sister
- Melanoma? ○ Mother ○ Father ○ Brother ○ Sister
- Diabetes? ○ Mother ○ Father ○ Brother ○ Sister
- Colon or Rectal Cancer? ○ Mother ○ Father ○ Brother ○ Sister

44. Which diagram best depicts your outline at each age?



	1	2	3	4	5	6	7	8	9
Currently	○	○	○	○	○	○	○	○	○
Age 5	○	○	○	○	○	○	○	○	○
Age 10	○	○	○	○	○	○	○	○	○
Age 20	○	○	○	○	○	○	○	○	○
Age 30	○	○	○	○	○	○	○	○	○
Age 40	○	○	○	○	○	○	○	○	○

45. Is your last name, as printed on this questionnaire, your maiden name?

○ Yes ○ No → What is your maiden name?

↓

46. Your Social Security Number
(For positive identification in event of loss of contact or death.)

___ ___

47. Please indicate the name of someone at a different address that we might write to in the event we are unable to contact you: (SS) (A)

Name: _____

Address: _____

Thank You!
Please return the questionnaire in the enclosed postage-paid envelope to:

Walter Willett, M.D.
Nurses' Health Study II
Harvard School of Public Health
677 Huntington Avenue
Boston, MA 02115