

Clue II Active
Follow-up

Health Letter

JOHNS HOPKINS RESEARCH CENTER

February, 1998

Thank You, Clue II Participants

The Johns Hopkins Research Center staff would like to thank you for taking part in the Clue II program in 1989 and again in 1996. You and the other 32,897 participants have helped greatly in our continuing efforts to solve some of the puzzles of cancer and heart disease. Using serum samples from the CLUE programs of 1974 and 1989, we have had 49 papers published in medical journals. Some of the most exciting findings of the past year are:

- Persons with low serum concentrations of beta-carotene and alpha-tocopherol in 1974 were at higher risk of developing rheumatoid arthritis than persons with high concentrations. Although this was a small study, it gains credence because it duplicated the findings of another small study in Finland. The safest recommendation at the moment is to eat fruits and vegetables rather than to take supplements.
- We have led the efforts to find other protective substances in fruits and vegetables. Some, especially some carotenoids, offer hope of being protective against cancer. In a recent study using CLUE serum samples it was found that beta-carotene is probably just

a marker for other protective factors against lung cancer.

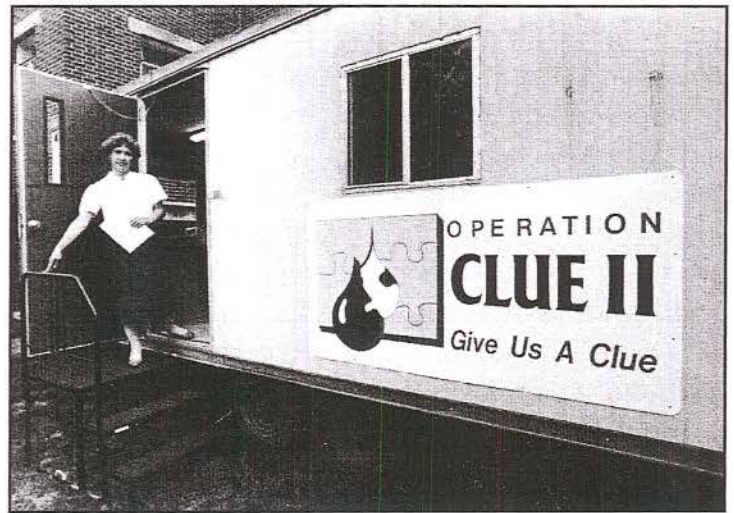
Our major research activities at present involve studies of breast and prostate cancer. The Research Center has been funded by the Department of Defense in response to the National Breast Cancer

Coalition's effort to increase breast cancer research. The blood sample and health information will be used to investigate environmental

and behavioral factors which may be associated with the development of breast cancer. We have also been funded by the National Cancer Institute to examine the association between exposure to pesticides and the development of prostate cancer.

The information you have provided has enabled us to continue this valuable research. We have carefully reviewed all the items that might be related to the

development of disease to find what information appears most promising in the near future. After much consultation, we have developed a new questionnaire to obtain information about diet, exercise and other risk factors for cancer and heart disease. This



questionnaire will be mailed in early March of 1998. We have changed this questionnaire to make it easier to read and complete. Your response will help us solve some of the puzzles of cancer and heart disease. With your continued help more pieces will be tried, some will fit, and the goal will come closer. So when your questionnaire arrives, please spare a little time to give us some more clues.

Aspirin Turns 100

August 10, 1997 marked the 100th anniversary of aspirin - one of the most widely used medications in the world. In 1897 Felix Hoffmann, a German chemist, first synthesized aspirin in a commercially producible form. Salicylic acid, the precursor for aspirin, is found in willow bark and other plants and had been used since the time of Hypocrites (400 BC) for the treatment of fever, pain, and inflammation.

Aspirin is a member of the class of compounds known as non-steroidal anti-inflammatory drugs (NSAIDs). Ibuprofen (Advil) and sodium naproxen (Aleve) are also in this class. NSAIDs are used to reduce fever, inflammation, and the pain associated with injury, menstrual cramps, arthritis and other conditions. Aspirin inhibits the blood clotting process by preventing the aggregation (clumping) of the blood cells involved in clotting.

Americans consume an estimated 40 tons of aspirin daily. Among the Clue II follow-up survey participants 49 percent of the women and 62 percent of the men reported using aspirin. Twenty-eight percent of the men and 18 percent of the women reported taking one or more tablets daily.

Continuing research into aspirin and the other NSAIDs has led to new applications for these drugs.

- Taking one aspirin at the first sign of a heart attack reduces

Colorectal Cancer

Colorectal cancer is the third most diagnosed cancer, and the second leading cause of cancer death in the United States. If it is detected early and treated immediately, colorectal cancer is one of the most curable kinds of cancer. Among Clue II follow-up participants 149 (1 percent) reported having colorectal cancer. The average age at diagnosis for men was 63 years and 60 years for women.

Colon cancer begins as small benign growths known as polyps. Reducing death from colorectal cancer depends on detecting and removing polyps before they become cancerous and on early treatment once cancer develops. Three screening tests are currently available. The Fecal Occult Blood Test detects blood in the stool. Sigmoidoscopy uses a flexible, hollow, lighted tube to look at the wall of the rectum and colon. The Digital Rectal Exam, the most commonly used procedure, detects tumors only within 4 inches of the anus. Current American Cancer Society recommendations for routine screening are:

- Fecal Occult Blood Test-annually after age 50
- Sigmoidoscopy-every 3 to 5 years after age 50
- Digital Rectal Exam-annually after age 40

Results from the Clue II follow-up survey demonstrate that participants are aware of the importance of colon cancer screening. One-third of participants over age 50 reported having had a sigmoidoscopy.

Among the risks factors for colorectal cancer are older age, family history of the disease, prior cancer of the endometrium, ovary, or breast, and a history of ulcerative colitis or colon polyps. Large differences in colon cancer rates among countries point to diet as another important risk factor for colon cancer. People who eat diets that are high in fiber, fruits, and vegetables and low in fat and meat tend to have a lower risk of colon cancer. The risk of colon cancer may also be reduced by non-steroidal anti-inflammatory drugs, increased physical activity, and by weight control. If you are concerned about colorectal cancer, have a health checkup and talk to your physician.

the risk of death. Aspirin therapy is also useful in preventing heart attacks and the reoccurrence of a stroke or mini-stroke (TIA) and in preventing blood clots following coronary bypass surgery or angioplasty.

- A recent Johns Hopkins study found a lower risk of Alzheimer's disease among those

who took aspirin and other NSAIDs.

- Several studies have shown a 40-50 % reduction in cancer of the rectum and colon among those who regularly took aspirin and other NSAIDs.

Whether all healthy individuals should take aspirin to prevent car-

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Osteoporosis

Osteoporosis is a skeletal condition in which the bones become brittle and more susceptible to fractures. Often osteoporosis is not diagnosed until a bone is fractured—usually the hip, spine, or wrist. An estimated 25 million Americans are affected by osteoporosis at a cost of 5-10 billion dollars annually. In the Clue II follow-up survey 12 percent of women age 50 or over reported a diagnosis of osteoporosis. The lifetime risk of fractures due to osteoporosis is nearly four times higher in women (40 percent) than men (13 percent).

Osteoporosis is caused by the loss of bone mineral mass which occurs with aging. For both men and women a gradual decline in bone mass begins around age 30. In women the decline in the hormone estrogen during menopause accelerates the bone loss and the effects of the disease begin to appear around ages 55-60. Men are affected by osteoporosis approximately 5 years later in life than women are. Factors which increase risk for osteoporosis are:

- advanced age
- menopause in women
- low level of testosterone in men
- low calcium diet
- family history of osteoporosis
- low level of physical activity
- cigarette smoking
- excessive alcohol consumption
- certain medications
- anorexia nervosa or bulimia
- small, thin frame

Osteoporosis can be diagnosed before a fracture occurs with a Bone Density Test. Treatment options for osteoporosis include hormone replacement therapy for postmenopausal women, calcium and vitamin D supplementation and bone building medications such as calcitonin.

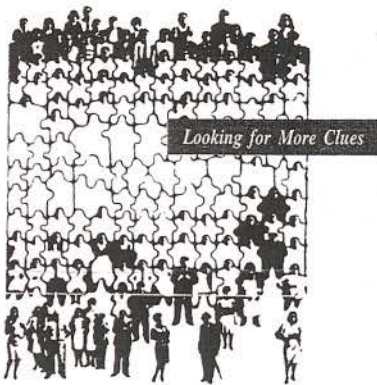
Prevention of osteoporosis begins early in life by practicing good nutrition and engaging in weight bearing exercise in order to build bone density and strength. Calcium, a mineral required for bone growth and density, is the most important dietary requirement in preventing osteoporosis. Vitamin D, which helps the body absorb and utilize calcium, is also important. For healthy men and women over 50 the recommended amount of calcium per day is 1,200 milligrams. Important dietary sources of calcium are dairy products, tofu, green leafy vegetables, and calcium fortified cereals and juices. Supplements such as calcium tablets are often used to obtain the recommended calcium intake for older individuals. Before taking any nutritional supplement consult with your doctor.

Calcium Content of Common Foods and Supplements in Milligrams

Broccoli, 1 stalk	150
Kale, 1/2 cup	103
Celery	50
Orange	50
Grapes	25
Squash, 1/2 cup	40
Whole wheat bread	22
Canned salmon	167
Tofu, 4 oz.	145
1% milk, 8 oz.	297
Cheddar cheese, 1 oz.	204
Cottage cheese, 1/2 cup	63
Yogurt, low fat	389
Cheese pizza	332
Chile, 1 cup	82
Taco, beef	174
Centrum	162
TUMS	400

Aspirin, continued

Cardiovascular disease is still a subject for research. Aspirin can occasionally have side effects which must be weighed against the potential benefits. Aspirin can interfere with other medications, and should not be used by children and those with certain medical conditions. Consult with your doctor before beginning a regimen of aspirin or any other medication.



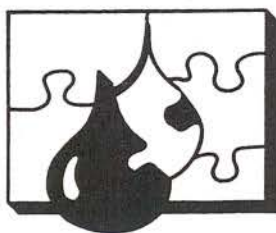
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CLUE II

Give Us A Clue

Campaign Against Cancer and Heart Disease