

A test of risk in a "benign" disease

The term "benign breast disease" covers a welter of tissue abnormalities, from cysts to noncancerous tumors. Although the name suggests a harmless problem, researchers believe that some women with benign breast disease face an increased threat of breast cancer.

A new study's findings may lead to a screening test that would give women with benign breast disease a better estimate of their risk of cancer. Women at high risk of breast cancer could then undergo more frequent breast exams in order to catch a tumor at an earlier—and thus more treatable—stage, says epidemiologist Thomas E. Rohan of the University of Toronto.

Rohan and his colleagues studied tissue samples taken from nearly 5,000 women with benign breast disease. They found that women with an excess of a protein called p53 in their breast tissue were more likely to develop breast cancer. The protein is thought to play a role in regulation of cell growth.

The team details its findings in the Sept. 2 *JOURNAL OF THE NATIONAL CANCER INSTITUTE*.

A p53 screening test for cancer in women with benign breast disease is "not something that would be implemented now," Rohan says. Other researchers must confirm the findings before such a test is developed, he adds. —K.F.

Jet lag: A cancer-hazard sleeper?

Epidemiologist Anthony R. Mawson of the Carolinas Health Care System in Charlotte, N.C., hypothesizes that jet lag leads to an increased risk of breast cancer. In the Aug. 22 *LANCET*, Mawson describes his unusual, untested theory.

A 1995 study showed that Finnish flight attendants had an increased risk of breast cancer, Mawson points out. He wonders if that risk might be attributable to jet lag, as flight attendants frequently cross time zones and suffer a disruption in sleep-wake cycles as a result.

Jet lag interferes with the normal workings of the brain's pineal gland, which produces the hormone melatonin. Indeed, people who try to sleep during daylight hours decrease the gland's secretion of melatonin. Mawson suggests that a drop in melatonin may boost the threat of breast cancer.

"There's quite a bit of data linking melatonin to breast cancer," Mawson says. For example, some studies show that melatonin inhibits the growth of breast cancer cells in the laboratory.

The theory would be easy to test in a large study of female flight attendants, Mawson says. Until such a study is conducted, however, the relationship between this hormone and breast cancer remains cloudy. —K.F.

Forecasting heart risk in women

A new study suggests that a protein in the blood may predict a woman's future risk of suffering a heart attack.

In 1997, Paul M. Ridker of the Harvard Medical School in Boston and his colleagues reported that C-reactive protein foretells a healthy man's risk of suffering a heart attack (SN: 6/14/97, p. 374).

The same team wanted to find out if this link would hold true for healthy women. They measured the concentration of C-reactive protein in the bloodstream of 366 postmenopausal women. In the Aug. 25 *CIRCULATION*, they report that women with the highest concentrations of this protein in the blood had seven times the risk of suffering a heart attack or stroke during a 3-year period as women with the lowest concentrations.

Concentrations of C-reactive protein may indicate the amount of fatty plaque built up in a patient's arteries, according to the researchers.

C-reactive protein is a marker for chronic inflammation, a healing response run wild. The findings underscore the idea that inflammation plays a role in the genesis of heart disease in both men and women. —K.F.

Can selenium avert prostate cancer?

A large study of men indicates that intake of the mineral selenium may help ward off prostate cancer.

Researchers examined questionnaire data and analyzed toenail clippings from 33,737 men, ages 40 to 75. A person's toenails serve as "10 little time capsules" storing records of mineral intake, says study coauthor and epidemiologist Walter C. Willett of Harvard University School of Public Health in Boston.

After accounting for confounding factors such as smoking history and age, the researchers found that men with advanced prostate cancer were likely to have lower selenium concentrations in their bodies than men without the disease. The scientists matched 181 prostate-cancer patients with 181 similar men without prostate cancer—all within the large study group. This comparison revealed that the healthy men had 0.96 micrograms of selenium per gram of toenail, compared with 0.82 micrograms for the cancer group, Willett and his colleagues report in the Aug. 19 *JOURNAL OF THE NATIONAL CANCER INSTITUTE*.

Selenium is an essential nutrient, although toxic in large doses. It is present in many meats, grains, and legumes, but amounts vary according to the soil content in which the food and livestock feed was grown (SN: 1/4/97, p. 6).

The mineral plays a key role in cell functions and may protect DNA and other cellular molecules against damage. Still, how it might work against cancer remains unclear, Willett says. A follow-up study could entail giving some men selenium and others an inactive substance to discern any differences in prostate cancer occurrence, he says. —N.S.

Antiviral suppresses genital herpes

The antiviral drug famciclovir, taken orally, imparts strong protection against genital herpes, scientists report in the Sept. 9 *JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*.

The researchers gave the drug to 341 people with genital herpes, using three dosages. Another 114 received an inactive substance. None of the participants knew which pills were placebos. Participants had the option of quitting the study if they had at least two outbreaks of herpes while taking the pills. These people then were offered famciclovir that was clearly labeled.

Only 21 percent of the 211 famciclovir recipients who stayed throughout the 12-month study suffered a recurrence of herpes. About 7 in 10 of the people getting placebos had an outbreak.

The famciclovir recipients, taken altogether, reported only 1.0 to 1.8 outbreaks in the year. The highest dose protected best. Untreated participants who chose to stay in the study the full year averaged 5.1 recurrences. Participants getting the highest dose of the drug stayed free of outbreaks for an average of 11 months. Those getting the placebo averaged only 7 weeks before an outbreak.

Genital herpes, also called herpes simplex 2, infects roughly 22 percent of adults in the United States and between 7 and 28 percent of Europeans, depending on the country.

Unpublished findings from this study indicate that famciclovir may also work against herpes simplex 1, the virus that causes cold sores, says study coauthor Francisco Diaz-Mitoma, a clinical virologist at the Children's Hospital of Eastern Ontario in Ottawa. —N.S.

FDA approves morning-after pill kit

For the first time, the Food and Drug Administration has approved an emergency contraceptive. The so-called morning-after pill is really a kit made up of four birth-control pills—two taken together within 72 hours of unprotected intercourse, followed by two more 12 hours later (SN: 08/15/98, p. 101).

The morning-after treatment is widely used in Europe but had not been marketed in the United States. On Sept. 2, Gynetics of Belle Mead, N.J., secured FDA's approval to sell the pills for emergency contraception. The kit will be called Preven. —N.S.