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Any Exposure to Tobacco Smoke During Pregnancy Is Risky

After reexamining data from earlier studies, researchers now believe that exposure to secondhand smoke during pregnancy can be just as detrimental to a developing fetus as maternal smoking.

Active maternal smoking and secondary maternal exposure resulted in similarly increased rates of genetic mutation that basically are indistinguishable. Three previous studies looking at the potential effects of tobacco smoke exposure to babies in the womb found a different conclusion. The studies largely discounted the effects of secondary smoke (and sometimes even direct exposure through maternal smoking) or produced contradictory results. The original studies looked at mutation rates in the HPRT gene located on the X chromosome in cord blood samples from newborns. The current study analysis pooled the original studies' data and looked for the frequency of induced mutation and the resulting molecular spectrum of mutations. In particular, the new analysis redefined the "nonsmokers" used as controls to consider their secondhand exposure to tobacco smoke. The researchers found increased mutations in women who had secondhand smoke exposure that were similar to the number of mutations in women who had smoked but quit when they found out they were pregnant. Based on this result, the researchers suggested that healthcare providers recommend that women quit smoking not only if they become pregnant but also if they are likely to become pregnant.

The study was reported in *BMC Pediatrics* (Vol. 5, p. 20).

Study Offers Benchmark Data for Colorectal Cancer Screening Tool

Results from the largest study to date on the early detection of colorectal cancer offer benchmark data for what could be expected from large-scale use of flexible sigmoidoscopy (FSG) as a screening tool for colorectal cancer. During FSG, a doctor uses a lighted scope to examine the inside of the large intestine from the rectum through the descending colon, where most colon polyps develop.

The study enrolled 154,942 men and women aged 55–74 years who had no prior history of prostate, lung, colorectal, or ovarian cancers from November 1993–July 2001. Study participants were randomly assigned either to a control group that did not receive FSG or an intervention group that received FSG. Of those assigned to the intervention group, 84% agreed to undergo an initial FSG examination. Among the individuals who underwent screening, 23% had at least one polyp or mass, and 74% of those received follow-up lower endoscopic procedures. Findings indicated that women were more likely to decline FSG than men, 19% and 14%, respectively, and that nonacceptance of FSG increased with age among women but not men. The rate of cancer detected was 2.9 per 1,000 individuals screened.

The study was reported in the *Journal of the National Cancer Institute* (Vol. 97, pp. 989–997).

Researchers Find Conflicting Evidence of Aspirin's Effect on Breast Cancer Risk

Results of a hospital-based, case-controlled study support the growing body of evidence that regular use of aspirin may reduce the risk of breast cancer. The study documented dose-response effects for frequency and duration of aspirin use that appear to enhance this protective effect.

The researchers evaluated the aspirin use patterns of 1,478 patients with breast cancer who were newly diagnosed from 1982–1998 and 3,383 cancer-free controls. Patients and controls largely conformed to established risk factor profiles for breast cancer. Patients tended to be younger at menarche, be older at first birth, be older at menopause, have fewer children, often have a first-degree relative with breast cancer, and have a personal history of benign breast disease.

The researchers found that regular aspirin users (at least one tablet per week for at least one year) had a modest reduction in breast cancer risk (18%). They also observed that the association was stronger among those who took seven or more tablets per week, compared with those who did not use aspirin regularly.

Although the study supports that aspirin can protect against breast cancer, the researchers cautioned that they are not endorsing aspirin as a preventive treatment for breast cancer until data from controlled clinical trials are available. They also recommended that the health risks of regular aspirin use be taken into consideration.

The study was reported in *Oncology* (Vol. 68, pp. 40–47).

Another study reported in *JAMA* (Vol. 294, pp. 105–106), however, found that women who took low doses (100 mg) of aspirin every other day for 10 years did not have a reduced incidence of several types of cancer, including breast and colon. Researchers from this study believe that higher doses may have some effect, but the side effects of such dose levels must be taken into consideration. They reported that low-dose aspirin may protect against lung cancer, but supporting evidence still is conflicting.

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