

What cures your aches might prevent cancer

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Mayo Clinic Cancer Center has begun three clinical studies looking at the use of nonsteroidal anti-inflammatory drugs (NSAIDs) to prevent cancer -- colon, esophageal or lung. These studies are part of the ongoing Cancer Center chemoprevention program, using medications to prevent cancer, especially for people with increased cancer risk.

“While searching for the cure is important, even more so is finding effective ways to prevent cancer,” says Paul Limburg, M.D., M.P.H., Mayo Clinic gastroenterologist and lead researcher on the colon cancer prevention study. “We have observed that some of the same biological processes that cause inflammation may also be involved in developing cancer, so the next step was to see if drugs that prevent inflammation also serve to lessen the risk of cancer.”

The colon cancer study is looking at the NSAID sulindac (Clinoril®), and its ability to inhibit inflammation and subsequent transformation of damaged cells into cancer cells. Sulindac’s preventive effect will be measured against that of two other potential prevention agents: atorvastatin (Lipitor®), a cholesterol-lowering drug with some reported cancer prevention aspects (Cancer Research, April and July 2006); and Raftilose®Synergy1, a food supplement derived from chicory, also with some supporting research conducted overseas (The British Journal of Nutrition, April 2005).

Dr. Limburg’s team will treat patients at increased risk for developing colon cancer, specifically individuals age 40 or older who have advanced colorectal adenoma (precancerous tissues) or a history of colon cancer

with treatment completed more than one year prior to entering the study. Tissues and blood samples will be tested pre-treatment and post-treatment to determine the preventive effects of the different medications.

Other gastroenterologists at Mayo are looking at NSAID use for patients with Barrett's esophagus. "There is evidence to support the idea that taking an NSAID will slow or reverse precancerous conditions such as Barrett's esophagus," Dr. Limburg says. "Prognosis for esophageal cancer patients is poor. We are continually looking for ways to prevent this and other cancers from ever starting, and NSAIDs provide a promising avenue for our research."

Individuals eligible for the esophageal cancer prevention study will receive esomeprazole (Nexium®), an acid reflux medication, and aspirin, an NSAID. Mayo's doctors hope that using the acid reflux medication will diminish inflammation caused by acid reflux and that the aspirin will continue the healing and prevention process. Tissue in the esophagus will be tested before and after treatment to determine the benefits, if any.

The lung cancer prevention study is directed at current or former heavy smokers, age 45 or older, who are in generally good health. Those in cancer remission may be eligible to participate, if their last treatment was at least one year ago. This study is also using sulindac, which will be administered to patients with abnormal, precancerous tissues in their lungs. Pre-drug and post-drug treatment tests will determine effectiveness by reviewing the degree of abnormality of the patients' lung tissues after treatment.

"We have high hopes for all of these studies," says Dr. Limburg. "Previous work has shown that these are promising prevention avenues to pursue, and, if positive, the findings could result in substantial benefit

to patients and society from a decreased cancer burden.”

Mayo Clinic Cancer Center is offering the clinical studies under the auspices of membership in the Cancer Prevention Network (CPN). Dr. Limburg is the primary investigator for CPN, which is a consortium of 35 community clinics, hospitals and medical centers throughout the United States and Canada. Mayo is the lead organization and research data center for the Cancer Prevention Network, which focuses much of its research efforts on the most wide-spread and deadliest cancers.

Source: Mayo Clinic

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