Postmenopausal women's intake of antioxidant vitamins and CHD

This study focuses on the role of dietary antioxidant vitamins in prevention of coronary heart disease (CHD) because it is known that oxidative modification of low-density lipoprotein cholesterol may promote atherosclerosis.

In 1986, a total of 34,486 postmenopausal women with no history of cardiovascular disease completed a questionnaire that assessed, among other factors, their intake of vitamins A, E, and C from food sources and supplements. During the 7-year follow-up ending in 1992, 242 of the women died of CHD.

Analyses adjusted for age and dietary energy intake showed what appeared to be an inverse association between vitamin E consumption and the risk of death from CHD. This association was particularly striking in the subgroup of 21,809 women who did not consume vitamin supplements. There was little evidence that the intake of vitamin E from supplements was associated with a decreased risk of death from CHD, but the effects of high-dose supplementation and the duration of supplement use could not be definitively addressed. Intake of vitamins A and C did not appear to be associated with the risk of death from CHD.

These results suggest that in postmenopausal women, the intake of vitamin E from food is inversely associated with the risk of death from CHD and that such women can lower the risk without using vitamin supplements. By contrast, the intake of vitamins A and C was not associated with lower risks of dying of coronary disease.

Kushi LH, Folsom AR, Prineas RJ, et al: Dietary antioxidant vitamins and death from coronary heart disease in postmenopausal women. *N Engl J Med* 1996;334:1156-1162.

Low-dose heparin for prevention of fatal pulmonary embolism in patients with infectious diseases

Fatal pulmonary and other thromboembolic complications are common in hospital inpatients. However, there is little evidence on the routine use of pharmacologic thromboprophylaxis in nonsurgical patients. In a study using the postrandomization consent design, the authors assessed the efficacy and safety of low-dose heparin sodium in the prevention of hospital-acquired, clinically relevant, fatal pulmonary embolism in patients with infectious diseases.

A total of 19,751 consecutive patients, aged 55 years or older, admitted to departments of infectious diseases in six Swedish hospitals, were screened for inclusion in the randomized, controlled, unblinded, multicenter trial. Of the eligible patients, 5776 were assigned to receive subcutaneous standard heparin sodium, 5000 IU every 12 hours until hospital discharge or for a maximum of 3 weeks; 5917 were assigned to receive no prophylactic treatment (control group). Consent was sought only from the heparin-treated group. Follow-up was for 3 weeks after discharge from the hospital or for a maximum of 60 days from randomization. The primary endpoint was necropsy-verified pulmonary embolism of predefined clinical relevance.

By intention-to-treat analysis, mortality was similar in the heparin-treated and control groups and the median time from admission to death was 16 days in both groups. Necropsy-verified pulmonary embolism occurred in 15 heparin-treated and 16 control-group patients. There was a significant difference between the heparin-treated and the control group in median time from randomization to fatal pulmonary embolism (28 [range, 24 to 36] days vs 12.5 [range, 10 to 20] days, respectively; $P=.007$). This difference corresponds to the duration of heparin prophylaxis. Nonfatal thromboembolic complications occurred in more of the control than of the heparin-treated group (116 vs 70, respectively; $P=.0012$).

These findings do not support the routine use of heparin prophylaxis for 3 weeks or less in large groups of nonsurgical patients. Further studies are needed to investigate whether heparin prophylaxis of longer duration may prevent fatal pulmonary embolism.

Gardlund B for the Heparin Prophylaxis Study Group: Randomised, controlled trial of low-dose heparin for prevention of fatal pulmonary embolism in patients with infectious diseases. *Lancet* 1996; 347:1357-1361.

Diet and risk of non-Hodgkin's lymphoma in older women

A prospective cohort study with a 7-year follow-up period was conducted to test whether high dietary intakes of fat, protein, and milk are associated with the development of non-Hodgkin's lymphoma in older women.

The sample from the general community comprised 35,156 Iowa women aged 55 to 69 years with no prior history of cancer who returned the 1986 baseline questionnaire.

After controlling for age, marital status, residence, total energy intake, and transfusion history, the relative risks (RRs) for the highest tertile of

intake compared with the lowest were 2.00 (95% confidence interval [CI], 1.21-3.30; *P* for trend =.01) for animal fat, 1.69 for saturated fat, and 1.90 for monounsaturated fat, and there was no association with vegetable fat or polyunsaturated fat. Greater intake of animal protein, but not vegetable protein, was associated with elevated risk, and this was mainly explained by greater consumption of red meat and hamburger in particular. Milk and dairy product consumption were not associated with elevated risks. A decreased risk of non-Hodgkin's lymphoma was also associated with greater consumption of fruits.

These findings indicate that a high-meat diet and high intake of fat from animal sources is associated with an increased risk of non-Hodgkin's lymphoma in older women.

Chiu BCH, Cerhan JR, Folsom AR, et al: Diet and risk of non-Hodgkin lymphoma in older women. *JAMA* 1996; 275:1315-1321.

Once-daily versus 8-hour gentamicin dosing in treatment of postpartum endometritis

Postpartum women with endometritis were randomized to receive gentamicin, 5 mg/kg as a single daily dose, or 1.75 mg/kg every 8 hours to evaluate whether the once-daily dosing is as effective as the traditional regimen. All subjects also received clindamycin. Each participant had a peak serum gentamicin level of at least 5.0 μg/mL within the first 24 hours. The dosing regimens were compared by analyzing the number of hours that patients were febrile, the length of hospital stay, occurrence of complications, pharmacy costs, and nursing time required to administer the regimens.

The study group (n=62) and the control group (n=65) were similar in demographic characteristics and the presence of endometritis risk factors. No differences were found between the groups in the number of patients who completed therapy without complications, required changes in antibiotics, or required readmission for endometritis. The groups did not differ in the number of hours that patients remained febrile after the start of therapy or in the length of hospital stay. No patient in the study group had an initial peak serum concentration less than 5.0 μg/mL, whereas 24 patients in the control group had initial peak serum concentrations less than 5.0 μg/mL and required dose adjustment, a statistically significant difference ($P<.001$).

Pharmacy costs averaged $16.12±5.68 for the study group and $41.75±17.41 for the control group, also a significant difference ($P<.001$). Nurse tasking time averaged 13.62±2.56 minutes for the study group and 28.06±8.77 minutes for the control group ($P<.001$). Thus, in patients with postpartum endometritis, once-daily gentamicin dosing provides consistently high peak serum levels of gentamicin, requires less nurse tasking time, costs less, and is as effective as the 8-hour dosing regimen.

Del Priore G, Jackson-Stone M, Shim EK, et al: A comparison of once-daily and 8-hour gentamicin dosing in the treatment of postpartum endometritis. *Obstet Gynecol* 1996;87:994-1000.

Albendazole treatment of diarrhea in Zambians with AIDS

A randomized, double-blind, placebo-controlled trial examined the value of short-course, high-dose albendazole chemotherapy in the treatment of persistent diarrhea related to infection with the human immunodeficiency virus (HIV) in unselected patients received home care AIDS services in urban Lusaka and Ndola, Zambia.

Albendazole, 800 mg twice daily, was administered for 2 weeks. Patients were monitored intensively for 1 month and followed up for up to 6 months.

Subjects were 174 HIV-seropositive patients with persistent diarrhea (defined as loose but not bloody stools three or more times a day for 3 weeks or longer). No investigations were undertaken except HIV testing after counseling.

The patients taking albendazole had diarrhea on 29% fewer days than those taking placebo in the 2 weeks after treatment. The benefit of albendazole was maintained during a 6-month period. In patients with a Karnofsky score of 50 to 70 (needing help with activities of daily living and unable to work, but not needing admission to the hospital), diarrhea was reduced by 50%. Remission was obtained in 26% of all patients who received albendazole, and this difference was maintained for 6 months. Albendazole had no effect on mortality. Minimal adverse effects were noted.◆

Kelly P, Lungu F, Keane E, et al: Albendazole chemotherapy for treatment of diarrhoea in patients with AIDS in Zambia: a randomised double blind controlled trial. *BMJ* 1996;312:1187-1191.