

1. Red and Processed Meat Intake Linked to Mortality

Eating red and processed meat is associated with modest increases in total mortality, cancer mortality, and cardiovascular disease mortality rates, according to the results of a large, prospective study reported in the March 23 issue of the *Archives of Internal Medicine*.

Half a million people aged 50 to 71 years were enrolled in the study. A food frequency questionnaire administered at baseline allowed estimation of meat intake.

Red meat included all types of beef and pork such as bacon, beef, cold cuts, hamburgers, hotdogs, steak, and meats in pizza, lasagna, and stew. White meat included chicken, turkey, and fish along with poultry cold cuts, canned tuna, and low-fat hotdogs. Processed meats could include either red or white meats in the form of sandwich meats or cold cuts as well as bacon, red meat and poultry sausages, and regular hotdogs and low-fat hotdogs made from poultry. The authors note that some of the meats may overlap in the 3 categories, but they were not duplicated or used in the same models in the study analysis.

The models considered covariates of age, education, marital status, presence or absence of family history of cancer (for cancer mortality only), race, body mass index, smoking history, physical activity, energy intake, alcohol drinking, use of vitamin supplements, fruit consumption, vegetable consumption, and use of menopausal hormone therapy in women. Primary endpoints of the study were total mortality and deaths caused by cancer, cardiovascular disease, injury and sudden deaths, and all other causes.

During 10 years of follow-up, 47,976 men and 23,276 women died. Overall mortality risks were increased for men and women in the highest vs. the lowest quintile of red meat intake and processed meat intake. Men and women with higher intake also had increased risks for cancer mortality for red meat and processed meat.

These results complement the recommendations by the American Institute for Cancer Research and the World Cancer Research Fund to reduce red and processed meat intake to decrease cancer incidence.

Arch Intern Med. 2009;169:543-545, 562-571