

Risk in Red Meat?

A new study adds to the evidence that eating red meat on a regular basis may shorten your lifespan. The findings suggest that meat eaters might help improve their health by substituting other healthy protein sources for some of the red meat they eat.

Past research has tied red meat to increased risks of diabetes, cardiovascular disease and certain cancers. The studies have also pointed to an elevated risk of mortality from red meat intake. But most of these studies were done over limited periods of time, had design flaws, or were done in populations with diets other than that of the typical American.

A research team led by Dr. Frank Hu of the Harvard School of Public Health set out to learn more about the association between red meat intake and mortality. They studied over 37,000 men from the Health Professionals Follow-up Study (beginning in 1986) and over 83,000 women from the Nurses' Health Study (beginning in 1980). All the participants were free of cardiovascular disease and cancer at the start of the study.

The participants filled out food frequency questionnaires every 4 years. The scientists also gathered information every 2 years on a variety of other health factors, including body weight, cigarette smoking and physical activity level. The study was supported by NIH's National Heart, Lung and Blood Institute (NHLBI), National Cancer Institute (NCI) and National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). It appeared online in *Archives of Internal Medicine* on March 12, 2012.

Almost 24,000 participants died during the study, including about 5,900 from cardiovascular disease and about 9,500 from cancer. Those who consumed the highest levels of both unprocessed and processed red meat had the highest risk of all-cause of mortality, cancer mortality and cardiovascular disease mortality. After adjusting for other risk factors, the researchers calculated that 1 additional serving per day of unprocessed red meat over the course of the study raised the risk of total mortality by 13%. An extra serving of processed red meat (such as bacon, hot dogs, sausage and salami) raised the risk by 20%.

The researchers estimated that substituting 1 serving per day of other foods—like fish, poultry, nuts, legumes, low-fat dairy and whole grains—for red meat could lower the risk of mortality by 7% to 19%. If the participants had all consumed fewer than half a serving per day (about 1.5 ounces) of red meat, the scientists calculated, 9.3% of the deaths in men and 7.6% of the deaths in women could have been prevented.

“Our study adds more evidence to the health risks of eating high amounts of red meat, which has been associated with type 2 diabetes, coronary heart disease, stroke and certain cancers in other studies,” says lead author Dr. An Pan.

Since this was an observational study in which people reported their own food intake, it's possible that the associations seen may be due to other factors. When the researchers accounted for known risk factors in red meat—like saturated fat, dietary cholesterol and iron—they still couldn't account for all of the risk associated with eating red meat. Other mechanisms may be involved, or other unknown factors may affect the results. Further study will be needed to fully understand the connection between red meat consumption and health.

—by Harrison Wein, Ph.D.