

Conclusions About Meat and Poultry Nutrition and Cancer From Leading Scientists and Researchers

The Benefits of a Balanced Diet

“Humans evolved as omnivores and it has been proposed that cooking meat allowed for evolution of larger brains that has led to our success as a species. Meat is one of the most nutrient dense foods, providing high-quality protein, heme iron, zinc, and vitamins B6 and B12. Despite these advantages, epidemiologic studies have linked consumption of red or processed meat with obesity, type 2 diabetes, cardiovascular diseases, and cancers of multiple organs. Most observational studies report small, increased relative risks. However, there are many limitations of such studies...Accepting small, statistically significant risks as ‘real’ from observational associations, the field of nutrition has a long list of failures including beta-carotene and lung cancer, low-fat diets and breast cancer or heart disease that have not been confirmed in randomized trials. Moderate intake of a variety of foods that are enjoyed by people remains the best dietary advice.”

--David Klurfeld, Ph.D., U.S. Department of Agriculture Research Service, “Research gaps in evaluating the relationship of meat and health,” Meat Science, 2015

Lack of Association Between Meat/Saturated Fat and Colon Cancer

“The available epidemiologic data are not sufficient to support an independent and unequivocal positive association between red meat intake and CRC. This conclusion is based on summary associations that are weak in magnitude, heterogeneity across studies, inconsistent patterns of associations across the subgroup analyses, and the likely influence of confounding by other dietary and lifestyle factors.”

--Meta-analysis of prospective studies of red meat consumption and colorectal cancer, European Journal of Cancer Prevention, 2011

“It has been proposed that high intakes of iron might increase the risk for colorectal cancer by promoting oxidation, 16 but previous studies of total iron intake have not supported this hypothesis^{1,17} and we did not observe any association of total iron intake with risk. It is possible that heme iron might be more important, but in a previous publication from this dataset we reported no association of red meat, the main source of heme iron, with colorectal cancer risk.”

--“Vitamins, minerals, essential fatty acids and colorectal cancer risk in the United Kingdom Dietary Cohort Consortium,” International Journal of Cancer, 2011

“The currently available epidemiologic evidence is not sufficient to support a clear and unequivocal independent positive association between processed meat consumption and colorectal cancer.”

--“Processed meat and colorectal cancer: a quantitative review of prospective epidemiologic studies,” European Journal of Cancer Prevention, 2010

“In this study, a low-fat dietary pattern intervention did not reduce the risk of colorectal cancer in postmenopausal women during 8.1 years of follow-up.”

Low-Fat Dietary Pattern and Risk of Colorectal Cancer, The Women’s Health Initiative Randomized Controlled Dietary Modification Trial, Journal of the American Medical Association, 2006

“Intakes of total, saturated, monounsaturated, and polyunsaturated fats were not appreciably associated with colorectal cancer risk. In conclusion, these prospective data do not support a positive association between higher red meat and fat intake and colorectal cancer risk.”

--“Meat and fat intake and colorectal cancer risk: A pooled analysis of 14 prospective studies,” Proceedings of the American Association for Cancer Research, 2004

Meat’s Nutrient Density

“Dietary recommendations to reduce intakes of saturated fat and solid fats may result in dietary guidance to reduce intakes of commonly consumed food sources of protein, in particular animal-based protein. We propose that following such dietary guidance would make it difficult to meet recommended intakes for a number of nutrients, at least without marked changes in dietary consumption patterns. These apparently conflicting pieces of dietary guidance are hard to reconcile; however, we view it as prudent to advise the intake of high-quality dietary protein to ensure adequate intakes of a number of nutrients, particularly nutrients of concern.”

--“Commonly consumed protein foods contribute to nutrient intake, diet quality, and nutrient adequacy,” American Journal of Clinical Nutrition, 2015

Quality of Life/Health for Meat-Eaters Compared to Vegetarians

“Our results showed that a vegetarian diet is associated with poorer health (higher incidences of cancer, allergies, and mental health disorders), a higher need for health care, and poorer quality of life. Therefore, public health programs are needed in order to reduce the health risk due to nutritional factors.”

“The Association between Eating Behavior and Various Health Parameters: A Matched Sample Study,” PloS One, 2014

“Relative risks for increasing quintiles of total meat and red meat consumption indicated no association with colorectal cancer (relative risk for high compared with low quintile = 1.10, 95% confidence interval: 0.83, 1.45) for red meat. For total fat, there was also no association with increasing quintiles of consumption (relative risk for high compared with low quintile = 1.14, 95% confidence interval: 0.86, 1.53). Additionally, none of the other subtypes of either meat or fat showed any association with colorectal cancer. This study provided no evidence of an association between either meat or fat (or any of their subtypes) and colorectal cancer incidence...”

--“Meat, Fat, and Their Subtypes as Risk Factors for Colorectal Cancer in a Prospective Cohort of Women,” American Journal of Epidemiology, 2003

Meat’s Role in Preventing Anemia

“The shift toward reduced red meat consumption and higher poultry consumption in developed countries may result in increasing the risk of iron deficiency.”

--“Anemia and iron deficiency in children: association with red meat and poultry consumption,” Journal of Pediatric Gastroenterological Nutrition, 2013

“These findings indicate that beef protein increases both non-heme iron and zinc absorption compared to soy protein. The effect of protein source on non-heme iron and inorganic zinc absorption should be one of the factors taken into account when designing diets for children. The inhibitory effect of the soy based meal on iron and zinc absorption could be overcome by fortifying the soy protein with these minerals during the production process.”

--“Effect of beef and soy proteins on the absorption of non-heme iron and inorganic zinc in children,” Journal of the American College of Nutrition, 2006

Meat’s Role in Promoting Healthy Brain Function

“Higher protein, particularly animal protein, was associated with lower risk of decline in higher level functional capacity in older men. Animal protein intake may be a modifiable indicator for early detection and prevention of higher level functional decline in elderly adults.”

Animal Protein Intake is Associated With Higher Level Functional Capacity in Elderly Adults: The Osahama Study, Journal of the American Geriatric Society, 2014

“Restriction or exclusion of all animal foods may therefore result in low intake of certain micronutrients such as Vitamin B-12, thereby affecting Vitamin B-12 status and elevating plasma homocysteine concentration...although early noticeable symptoms of B12 deficiency are non—specific (unusual fatigue, digestion problems, frequent upper respiratory infections) the best-known clinical manifestations of cobalmin malabsorption are hematological (pernicious anemia) and neurologic symptoms.... Overall, the studies we reviewed showed reduced mean vitamin B-12 status and elevated mean homocysteine concentrations.”

“Vitamin B-12 and homosysteine status among vegetarians: a global perspective,” American Journal of Clinical Nutrition, 2009

“The lack of a comprehensive initiative to protect vegetarians from Vitamin B-12 deficiency can lead to a whole generation of cabalmin-deficient children (and adults) who are incapable of making good decisions because the additional burden of neurologic deficits induced by cobalmin deficiency.”

--Vegetarianism and vitamin B12 (cobalmin) deficiency, American Journal of Clinical Nutrition, 2003

Meat’s Role in Preventing Vitamin Deficiencies that Contribute to Osteoporosis

“On balance, there is evidence that vegetarians, and particularly vegans, may be at greater risk of lower bone mass density (BMD) and fracture.”

--“Vegetarian diets and bone status,” American Journal of Clinical Nutrition, 2014

Meat's Role in Weight Control and Weight Loss

“An energy-restricted, high-protein, low-fat diet provides nutritional and metabolic benefits that are equal to and sometimes greater than those observed with a high-carbohydrate diet.”

Effect of an energy-restricted, high-protein, low-fat diet relative to a conventional high-carbohydrate, low-fat diet on weight loss, body composition, nutritional status, and markers of cardiovascular health in obese women, American Journal of Clinical Nutrition, 2005

“In this large European study, a modest increase in protein content and a modest reduction in the glycemic index led to an improvement in study completion and maintenance of weight loss.”

--“Diets with High or Low Protein Content and Glycemic Index for Weight-Loss Maintenance,” New England Journal of Medicine, 2010

Meat's Role Preventing Muscle Loss

“The age-related loss of muscle mass begins in our 5th decade of life. Higher protein intakes may be able to offset the loss of muscle mass as we age. Nutrient-rich protein from meat contains a package of nutrients: iron, zinc, B-12. Meat proteins may be more effective in preventing sarcopenia than soy.”

--Nutrient-rich meat proteins in offsetting age-related muscle loss, Meat Science, 2012

“A vegetarian diet is associated with a lower muscle mass index than is an omnivorous diet at the same protein intake. A good indicator of muscle mass index in women seems to be animal protein intake.”

--Relationship between animal protein intake and muscle mass index in healthy women, British Journal of Nutrition, 2009