

## People Who Eat Lots Of Red And Processed Meat Die Earlier

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New US research that followed over half a million people for ten years found that those who ate the most red and processed meat had a higher overall risk of dying, especially from heart disease and cancer, compared to those who ate the least. In contrast, eating more white meat appeared to be linked to a slightly lower risk for overall death and cancer death.

The study was the work of Dr Rashmi Sinha and colleagues from the National Cancer Institute in Rockville, Maryland and is published in the 23 March issue of the *Archives of Internal Medicine*.

The authors noted that while meat intake varies widely around the world, we don't know for sure how eating different amounts of different types of meat affects our chances of dying early, the current evidence is somewhat "ambiguous", they wrote.

For the study, Sinha and colleagues used data covering over 500,000 people taking part in the National Institutes of Health-AARP Diet and Health Study whose participants were between 50 and 71 years old at the start of the study in 1995.

The data included demographic information and food frequency questionnaires that enabled the researchers to assess participants' intake of white, red and processed meat. The follow up comprised searching the Social Security Administration Death Master File and National Death Index databases to track which participants died over the subsequent 10 years and what they died of.

When analyzing the links between meat consumption and death rates, the researchers ruled out the effect of potential confounders such as smoking and physical exercise.

The results showed that:

- 47,976 men and 23,276 women died over the 10 year follow up period.
- The one fifth of men and women who ate the most red meat had a higher risk of overall death and death from cancer and heart disease than the one fifth who ate the least red meat.
- This was the same for the one fifth who ate the most processed meat compared to those who ate the least.
- The one fifth of men and women who ate the most red meat consumed a median (the midpoint) of 62.5 (2.2 ounces) grams per 1,000 calories of food intake per day.
- The one fifth of men and women who ate the least red meat ate a median of 9.8 grams (0.4 ounces) per 1,000 calories per day.
- The one fifth of men and women who ate the most processed meat consumed a median of 22.6 (0.8 ounces) grams per 1,000 calories per day.
- The one fifth of men and women who ate the least processed meat ate a median of 1.6 grams (0.1 ounces) per 1,000 calories per day.
- Conversely, the one fifth of men and women who ate the most white meat (eg fish, poultry) had a slightly lower risk of total death, death from cancer, and death from causes other than cancer or heart disease, compared to the one fifth who ate the least white meat.
- 11 per cent of deaths in men and 16 per cent of deaths in women could be prevented if they reduced their consumption of red meat to that of the one fifth who ate the least (median of 9.8 grams or 0.4 ounces per 1,000 calories per day).
- This would also translate to 11 per cent fewer deaths in men and 21 fewer deaths in women from cardiovascular causes if everyone's red meat consumption dropped to that of the one fifth who ate the least.
- For women, this would also reduce deaths from cardiovascular disease by around 20 per cent.

The researchers concluded that:

"Red and processed meat intakes were associated with modest increases in total mortality, cancer mortality, and cardiovascular disease mortality."

"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," they added, suggesting that more studies are needed to look at the links between particular types of meat and risk of death from particular causes.

Speculating on the underlying biology behind their findings, the researchers suggested that cooking meat at high temperatures produces cancer-causing compounds. Meat also contains a lot of saturated fat, which has been linked to higher risk of breast and colorectal cancers. Also, several studies have shown that eating less red meat is associated with lower blood pressure and cholesterol, both risk factors for heart disease.

In an accompanying editorial titled "*Reducing Meat Consumption Has Benefits Beyond Better Health*", Dr Barry M. Popkin from the University of North Carolina, Chapel Hill, suggested this study has come at the right time from another point of view:

"There is a global tsunami brewing, namely, we are seeing the confluence of growing constraints on water, energy and food supplies combined with the rapid shift toward greater consumption of all animal source foods."

Popkin wrote that not only are some foods of animal origin linked to cancer, as this study shows, but:

"Many other researchers have linked saturated fat and these same foods to higher rates of cardiovascular disease."

Popkin asks, "What do we do?"

Since there are benefits from eating some red and white (but not processed) meats, it appears that it is not a complete shift to becoming vegetarians or vegans that is needed, he suggested, but:

"Rather, the need is for a major reduction in total meat intake, an even larger reduction in processed meat and other highly processed and salted animal source food products and a reduction in total saturated fat."

The Editor notes that Popkin is not a vegetarian and "has no financial conflict of interest related to any food product as it affects health".

***"Meat Intake and Mortality: A Prospective Study of Over Half a Million People."***

Rashmi Sinha; Amanda J. Cross; Barry I. Graubard; Michael F. Leitzmann; Arthur Schatzkin.

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