Red Meat Consumption and Risk of Frailty in Older Women

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Objectives: The aim of this study was to examine the prospective association between the consumption of total, unprocessed, and processed red meat and the risk of frailty in older adults.

Methods: We analyzed data from 85,870 women aged ≥60 participating in the Nurses’ Health Study. Consumption of red meat was obtained from repeated food frequency questionnaires administered between 1980 and 2010. Frailty was defined as having at least three of the following five criteria from the FRAIL scale: fatigue, low strength, reduced aerobic capacity, having ≥5 chronic illnesses, and weight loss ≥5%. The occurrence of frailty was assessed every four years from 1992 to 2014.

Results: During follow-up we identified 13,279 incident cases of frailty. Women with a higher intake of red meat showed an increased risk of frailty after adjustment for lifestyle factors, medication use, and dietary factors. The relative risk (95% confidence interval) for one serving/day increment in consumption was 1.13 (1.08, 1.18) for total red meat, 1.08 (1.02, 1.15) for unprocessed red meat, and 1.26 (1.15, 1.39) for processed red meat. Replacing one serving/day of unprocessed red meat with other protein sources was associated with significantly lower risk of frailty; the risk reduction estimates were 21% for fish and 14% for nuts, while for replacement of processed red meat the percentages were 32% for fish, 26% for nuts, 13% for legumes, and 16% for dairy.

Conclusions: Habitual consumption of red meat was associated with a higher risk of frailty. Replacement of red meat by other protein sources might reduce the risk of frailty.

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