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Meat consumption and risk of ischemic heart disease and stroke: results from the UK Biobank

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Abstract

Introduction: Meat consumption may be associated with a higher risk of cardiovascular diseases, but the evidence remains inconclusive. We prospectively examined the association between meat (total meat, red and processed meat, red meat, processed meat and poultry) intake and risk of ischemic heart disease (IHD) and stroke, including ischemic and haemorrhagic subtypes, in a large British cohort.

Materials and methods: Data were from UK Biobank participants who were free of IHD, stroke and cancer at recruitment (2006–2010), with available information on meat intake in the baseline touchscreen survey, and linked hospital admissions and death data for IHD, stroke, and stroke subtypes over follow-up ($n = 441,700$). We used multivariable Cox proportional hazards models to assess associations between meat consumption and risk of IHD, total stroke and ischemic and haemorrhagic stroke subtypes.

Results: Over a mean of 8.1 years of follow-up, 13,590 incident cases of IHD, 5,441 cases of total stroke, 2,258, cases of ischaemic stroke, and 949 cases of haemorrhagic stroke occurred. The risk of IHD was positively associated with intakes of total meat (Hazard ratio (HR) = 1.18, 95% Confidence Interval (CI) 1.09, 1.27 per 100 g/day higher intake), red and processed meat (HR = 1.15, 95% CI 1.08, 1.24 per 70 g/day higher intake), red meat (HR = 1.15, 95%, CI 1.07–1.24 per 50 g/day higher intake), processed meat (HR = 1.11, 95% CI 1.05, 1.16 per 20 g/day higher intake), and poultry (HR = 1.07, 95% CI 1.01, 1.13 per 30 g/day higher intake). The risk of total stroke was positively associated with intakes of total meat (HR = 1.15, 95% CI 1.02–1.29 per 100 g/day higher intake) and red and processed meat (HR = 1.14, 95% CI 1.03–1.27 per 70 g/day higher intake). Meat intake was not associated with ischaemic or haemorrhagic stroke.

Discussion: This large prospective study found that any meat consumption was associated with an increased risk of IHD and that red and processed meat consumption was associated with an increased risk of total stroke. Our findings for IHD and total stroke in relation to red and processed meat are in line with previous studies but our positive findings for poultry and IHD and null findings for red meat and ischaemic stroke are not, thus warranting further study.

Conflict of Interest

There is no conflict of interest