Original Article

Processed and Unprocessed Red Meat Consumption and Risk of Heart Failure

Prospective Study of Men

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Background—Epidemiological studies of red meat consumption in relation to risk of heart failure (HF) are scarce. We examined the associations of unprocessed and processed red meat consumption with HF incidence and mortality in men.

Methods and Results—The population-based prospective Cohort of Swedish Men included 37 035 men, aged 45 to 79 years, with no history of HF, ischemic heart disease, or cancer at baseline. Meat consumption was assessed with a self-administered questionnaire in 1997. During a mean follow-up of 11.8 years, 2891 incidences and 266 deaths from HF were ascertained. Consumption of processed meat was statistically significant positively associated with risk of HF in both age- and multivariable-adjusted models. Men who consumed ≥75 g/d processed meat compared with those who consumed <25 g/d had a 1.28 (95% confidence interval, 1.10–1.48, *P* trend=0.01) higher risk of HF incidence and 2.43 (95% confidence interval, 1.52–3.88, *P* trend<0.001) higher risk of HF mortality. The consumption of unprocessed meat was not associated with increased risk of incidence of HF or mortality from HF.

Conclusions—Findings from this prospective study of men with low to moderate red meat consumption indicate that processed red meat consumption, but not unprocessed red meat, is associated with an increased risk of HF. **(*Circ Heart Fail*. 2014;7:552-557.)**

Key Words: heart failure ■ processed meat ■ prospective cohort study ■ red meat

Around 5.7 million people in the United States have heart failure (HF); the mortality within 5 years of diagnosis is ≈50%,[1] and the nation's cost for medical care, medications, and loss of productivity is estimated to $34 billion each year.[2] Thus, preventing development of this disease and identification of factors that affect the risk of HF are of great relevance from a public health point of view.

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Among many factors that affect the risk of cardiovascular diseases (CVD) including HF, diet has an important role.[3–5] The results of recent systematic reviews and meta-analyses indicate that high consumption of red and processed meat is related to increased risk of coronary heart disease[6] and stroke,[7] as well as increased CVD mortality.[8] Although only 2 prospective studies[3,9] have examined total red meat consumption in relation to HF incidence, showing inconsistent results, there are no data on the consumption of unprocessed and processed red meat analyzed separately in relation to HF risk.

Therefore, we conducted a prospective study to investigate the associations of both unprocessed and processed red meat consumption with HF incidence in the large population-based prospective Cohort of Swedish Men with 12 years of follow-up.

Methods

Study Population

The Cohort of Swedish Men was established in the late autumn of 1997, when all men 45 to 79 years old who lived in central Sweden (Västmanland and Örebro Counties) completed a questionnaire on foods intake and other lifestyle factors. Of the 48 850 men who returned a completed questionnaire, we excluded those with missing or incorrect national identification number, blank questionnaires, or previous diagnosis of cancer (other than nonmelanoma skin cancer) (n=2944). Moreover, men with a history of HF or ischemic heart disease at baseline (n=5841) and those with implausible values for total energy intake (>3 SDs from the mean value for log-transformed energy) or missing data on red meat or processed red meat consumption (n=3030) were excluded. Participants were classified as having diabetes mellitus if they had a diagnosis of diabetes mellitus recorded in the Swedish National Inpatient Register or the Swedish National Diabetes Register before baseline or self-reported diabetes mellitus in the questionnaire. Thus, the final cohort included 37 035 participants. The study was approved by the Regional Ethical Review Board at the Karolinska Institutet (Stockholm, Sweden).

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Assessment of Diet and Other Exposures

Diet was assessed with a 96-item food-frequency questionnaire (FFQ), including 7 questions on unprocessed and processed red meat intake, and questions on whole grain products, dairy products, fruit, vegetables, poultry, and fish (FFQ is available as Data Supplement). Unprocessed meat included 3 food items: pork, beef/veal, and minced meat, whereas processed meat included 4 food items: sausages, cold cuts (ham/salami), blood pudding/sausages, and liver paté. Minced meat dishes (hamburger/ground beef, etc) are generally prepared without food additives such as nitrates or phosphate in Sweden and were considered as unprocessed red meat. Participants were asked to indicate how often, on average, they had consumed various foods over the previous year. Frequency of consumption was 8 predefined categories ranging from never/seldom to ≥3 times per day. The frequencies of red meat consumption were converted to gram per day by multiplying the frequency of consumption of each food item by an appropriate age-specific portion sizes (based on 7-day weighted food records completed twice 6 months apart by 161 men from the study area; A. Wolk, personal communication, 2013).

The FFQ has been validated for nutrients among 248 Swedish men aged 40 to 74 years from the study area.[10] The mean Spearman correlation coefficients between estimates from the FFQ and the mean of fourteen 24-hour recall interviews were 0.65 for macronutrients and 0.62 for micronutrients.

From the questionnaire, we also obtained information on education, smoking status, body height and weight, physical activity, history of hypertension and high cholesterol levels, aspirin use, dietary supplement use, family history of myocardial infarction before age 60 years, and alcohol drinking habits. Assessment of total physical activity score, measured as metabolic equivalents (MET h/d), was created as described previously by Norman et al.[11] Pack-years of smoking history were calculated as the number of packs of cigarettes smoked per day multiplied by the number of years of smoking. Body mass index was calculated by dividing the weight (kg) by the square of height (m).

Case Ascertainment

Date of the first registered incident HF and date of death from HF were ascertained by linkage of the study cohort with the Swedish Patient Register and the Cause of Death Register at the Swedish National Board of Health and Welfare, which are considered almost 100% complete.[12] Events of HF were defined according to the *International Classification of Diseases and Related Health Problems, 10th Revision* (ICD code I50 and I11.0). In the present study, we included the first HF event recorded in the registers listed either as the primary diagnosis or at any diagnosis position.[13]

Statistical Analysis

Study participants were followed from January 1, 1998, to the date of HF diagnose, death (Swedish Death Register at Statistics Sweden), or the end of the study follow-up period (December 31, 2010), whichever came first. Cox proportional hazards regression models were used to estimate incidence and mortality hazard ratios (HRs) with 95% confidence intervals (CIs) of HF by 4 categories of unprocessed and processed red meat consumption (<25, 25–49.9, 50–74.9, and ≥ 75 g/d) and 4 categories of total red meat consumption (<50, 50–99.9, 100–149.9, and ≥ 150 g/d) and by 50-g/d increment of consumption of unprocessed, processed, and total red meat. This categorization simplifies the interpretation in relation to portion sizes and facilitates communication of results. Results for quintiles (HF incidence) and tertiles (HF mortality) of meat consumption are given for comparison.

The multivariate models were adjusted for age, education, smoking status and pack-years of smoking, body mass index, total physical activity, aspirin use, dietary supplement use, family history of myocardial infarction before 60 years of age, and intake of energy and consumption of alcohol, whole grain products, fruit, vegetables, and fish. Results for unprocessed and processed red meat consumption were based on mutually adjusted models. All covariates were prespecified and included in the models because they are known risk of CVD including HF or potentially related to HF and red meat consumption.

The proportional hazards assumption was evaluated by regressing scaled Schoenfeld residuals against survival time. There was no evidence of departure from the assumption. To calculate *P* values for trend, the continuous values of unprocessed, processed, and total red meat consumption were used. Using the likelihood ratio test, we tested statistical interactions between unprocessed, processed, and total red meat consumption in predicting incidence of HF according to body mass index, smoking status, level of physical activity, and alcohol consumption.

The statistical analyses were performed by using SAS version 9.2 (SAS Institute Inc, Cary, NC). All reported *P* values were 2-sided, and *P* values ≤0.05 were considered statistically significant.

Results

Over a mean of 11.8 years of follow-up (436 628 person-years, 1998–2010), we ascertained 2891 cases of first event of HF diagnosis and 266 deaths from HF. Although the consumption of unprocessed and processed red meat differed 5 and 6 times, respectively, between the lowest (<25 g/d) and highest (≥75 g/d) consumption categories, the corresponding differences in grams per day of unprocessed (66 g) and processed (74 g) red meat were modest. The Spearman correlation between unprocessed and processed meat consumption was 0.29. Unprocessed, processed, and total red meat consumption were negatively associated with age and dietary supplement use and positively associated with intake of energy, alcohol, whole grain products, fruit, vegetables, and fish consumption (Table 1). Moreover, more men in the highest category of processed meat consumption compared with those in the lowest category were less likely to have university education.

We observed positive associations between processed meat, but not unprocessed red meat consumption, and risk of HF (Table 2). The highest category of processed meat (≥75 g/d) compared with the lowest (<25 g/d) was associated with multivariable-adjusted HR 1.28 (95% CI, 1.10–1.48). The corresponding result based on quintiles was HR 1.12 (95% CI, 0.99–1.26) comparing those in the highest quintile of processed red meat consumption (≥55.8 g/d) with to those in the lowest quintile (<20.0 g/d). In the dose–response analysis, the risk of HF increased statistically significantly by 8% (95% CI, 2%–15%) for each 50-g/d increment in processed meat consumption. We additionally adjusted for potential intermediate factors (history of hypertension, high cholesterol, and diabetes mellitus) on the causal pathway of red meat consumption with risk of HF. The results for consumers ≥75 g/d remained essentially the same: HR 1.23 (95% CI, 1.06–1.43) for processed meat and HR 1.01 (95% CI, 0.88–1.15) for unprocessed meat.

Exclusion of the first year of follow-up did not change the results substantially. Compared with men in the lowest category, those in the highest category of processed meat consumption had a 29% (95% CI, 11%–51%; *P* trend=0.01) higher risk of HF.

We observed no significant interaction between total, processed, or unprocessed red meat consumption and body mass index, smoking status, physical activity, and alcohol consumption in relation to risk of HF (all *P* values for interaction ≥0.3).

In analysis of mortality from HF, we observed that men in the highest category of processed meat consumption (≥75 g/d) compared with men in the lowest category had a

Table 1. Age-Standardized Characteristics of 37 035 Men in the Cohort of Swedish Men by Categories of Unprocessed, Processed, and Total Red Meat Consumption

	Unprocessed Red Meat, g/d (Median)				Processed Red Meat, g/d				Total Red Meat, g/d			
Characteristic	<25 (17.0)	25–49.9	50–74.9	≥75 (83.2)	<25 (15.5)	25–49.9	50–74.9	≥75 (89.7)	<50 (37.2)	50–99.9	100–149.9	≥150 (175)
No. of men	3866	12769	9254	11146	10549	16790	6502	3194	4911	15190	12971	3963
Age, y	67.1 (9.4)*	59.7 (9.2)	60.3 (9.8)	55.9 (8.0)	61.3 (10.0)	58.8 (9.5)	58.9 (9.1)	58.0 (8.4)	63.0 (9.8)	60.8 (9.9)	57.2 (8.7)	57.3 (8.3)
Education, university, %	16.4	15.7	17.3	18.9	22.4	16.5	15.1	11.9	18.1	17.9	17.1	15.8
Current smoker, %	25.5	23.6	24.3	25.8	24.6	24.2	23.6	26.3	26.8	23.2	24.0	27.4
Body mass index, kg/m^2	25.9 (3.5)	25.7 (3.2)	25.7 (3.2)	25.8 (3.4)	25.6 (3.3)	25.7 (3.2)	25.7 (3.3)	26.1 (3.6)	25.7 (3.4)	25.6 (3.2)	25.7 (3.3)	26.0 (3.5)
Total physical activity (MET×h/d)†	42.1 (4.8)	41.7 (4.8)	41.6 (4.8)	41.5 (5.0)	41.4 (4.7)	41.6 (4.8)	41.7 (4.9)	42.2 (5.2)	41.9 (4.8)	41.6 (4.8)	41.6 (4.9)	41.8 (5.2)
History of hypertension, %	21.1	20.7	20.0	19.3	19.6	20.1	21.3	21.4	21.1	19.9	20.6	19.8
History of high cholesterol level, %	10.6	10.9	11.2	11.8	11.1	11.1	11.3	11.7	11.4	10.9	11.2	11.6
Diabetes mellitus, %	7.8	5.2	5.5	4.9	5.1	5.2	5.5	7.8	6.1	5.2	5.0	7.3
Aspirin use, %	27.9	30.3	31.0	30.6	29.2	30.6	30.3	33.2	27.9	30.6	30.2	32.8
Regular dietary supplement use, %	17.1	15.3	14.1	14.4	15.9	14.4	15.3	13.6	16.1	15.1	14.4	14.0
Family history of myocardial infarction at <60 y, %	9.9	10.5	10.4	10.6	10.6	10.2	11.2	9.7	10.1	10.7	10.1	10.7
Alcohol, g/d	7.9 (10.1)	9.6 (9.3)	10.7 (10.2)	11.7 (10.7)	10.0 (10.2)	10.6 (9.9)	10.9 (10.0)	10.9 (11.2)	8.7 (10.0)	10.1 (9.7)	11.2 (10.0)	11.9 (11.7)
Energy, kcal/d	2334 (719)	2544 (734)	2728 (736)	2931 (777)	2402 (732)	2653 (723)	2900 (753)	3212 (793)	2253 (720)	2544 (702)	2825 (727)	3226 (793)
Whole grains, g/d	196 (127)	201 (120)	207 (121)	211 (125)	188 (123)	202 (117)	218 (126)	231 (136)	185 (121)	199 (119)	210 (121)	227 (136)
Fruit, g/d	136 (117)	134 (107)	142 (108)	153 (114)	138 (117)	137 (105)	145 (107)	160 (125)	129 (117)	137 (107)	144 (108)	163 (124)
Vegetables, g/d	128 (101)	133 (89)	147 (89)	166 (102)	141 (99)	142 (89)	151 (90)	168 (120)	127 (101)	137 (88)	152 (90)	179 (120)
Fish, g/d	26.7 (42.2)	29.4 (27.3)	31.8 (22.8)	37.4 (32.3)	29.4 (33.1)	30.8 (25.1)	33.5 (26.1)	40.8 (43.8)	26.4 (38.0)	29.9 (26.7)	32.8 (23.7)	42.5 (43.0)

*Mean (SD)—all such values.

†MET, metabolic equivalent of energy expenditure (kcal/kg×h).

Table 2. Hazard Ratios (95% Confidence Intervals) of Heart Failure Incidence by Categories of Unprocessed, Processed, and Total Red Meat Consumption in 37 035 Swedish Men, 1998 to 2011

	Categories				*P* for Trend
Unprocessed red meat, g/d (median)	<25.0 (17.0)	25.0–49.9	50.0–74.9	≥75.0 (83.2)	
No. of men	3866	12 769	9254	11 146	
Person-years	41 209	151 319	108 115	135 985	
No. of cases	950	1236	459	246	
Age-adjusted	1.00	0.91 (0.82–1.02)	0.93 (0.84–1.04)	0.98 (0.87–1.11)	0.28
Multivariable model*,†	1.00	0.96 (0.86–1.07)	0.99 (0.88–1.11)	0.99 (0.87–1.13)	0.75
Processed red meat, g/d (median)	<25.0 (15.5)	25.0–49.9	50.0–74.9	≥75.0 (89.7)	
No. of men	10 549	16 790	6502	3194	
Person-years	122 437	199 448	76 989	37 755	
No. of cases	574	967	773	577	
Age-adjusted	1.00	1.05 (0.96–1.14)	1.05 (0.94–1.17)	1.34 (1.16–1.54)	0.01
Multivariable model*,†	1.00	1.09 (1.00–1.19)	1.09 (0.97–1.23)	1.28 (1.10–1.48)	0.01
Total red meat, g/d (median)	<50.0 (37.2)	50.0–99.9	100–149.9	≥150 (175)	
No. of men	4911	15 190	12 971	3963	
Person-years	55 622	176 959	156 838	47 211	
No. of cases	537	1321	752	281	
Age-adjusted	1.00	0.94 (0.85–1.03)	0.93 (0.83–1.04)	1.21 (1.04–1.40)	0.001
Multivariable model*	1.00	1.00 (0.90–1.11)	1.00 (0.89–1.13)	1.20 (1.03–1.41)	0.04

*Adjusted for age (continuous), education (less than high school, high school, or university), smoking status, and pack-years of smoking (never; past <20, 20–39, or ≥40 pack-years; or current <20, 20–39, or ≥40 pack-years), body mass index (<20, 20–24.9, 25–29.9, or ≥30 kg/m^2), total physical activity (quintiles, measured as metabolic equivalents), aspirin use (yes or no), supplement use (yes or no), family history of myocardial infarction at <60 y (yes or no), and intake of energy (kcal/d, quintiles) and consumption of alcohol, whole grain products, fruit, vegetable, and fish (g/d, quintiles).

†Unprocessed red meat and processed meat were included in the same multivariable model.

2.43 times (95% CI, 1.52–3.88; *P* trend<0.001) higher risk of HF death (Table 3). The corresponding result for tertiles of processed red meat consumption was HR 1.58 (95% CI, 1.16–2.55), comparing the highest (≥49.8 g/d) with the lowest tertile (<27.9 g/d). In the dose–response analysis, the risk of HF mortality increased statistically significantly by 38%

Table 3. Hazard Ratios (95% Confidence Intervals) of Heart Failure Mortality by Categories of Unprocessed, Processed, and Total Red Meat Consumption in 37 035 Swedish Men, 1998 to 2011

	Categories				*P* for Trend
Unprocessed red meat, g/d (median)	<25.0 (17.0)	25.0–49.9	50.0–74.9	≥75.0 (83.2)	
Person-years	45 174	165 112	117 870	147 671	
No. of cases	64	93	82	27	
Age-adjusted	1.00	1.10 (0.79–1.51)	1.14 (0.82–1.58)	0.86 (0.54–1.37)	0.14
Multivariable model*,†	1.00	1.14 (0.81–1.60)	1.20 (0.85–1.71)	0.77 (0.47–1.27)	0.40
Processed red meat, g/d (median)	<25.0 (15.5)	25.0–49.9	50.0–74.9	≥75.0 (89.7)	
Person-years	133 561	217 360	83 790	41 118	
No. of cases	90	106	43	27	
Age-adjusted	1.00	1.11 (0.83–1.47)	1.27 (0.89–1.83)	2.26 (1.46–3.48)	<0.001
Multivariable model*,†	1.00	1.22 (0.91–1.63)	1.42 (0.97–2.07)	2.43 (1.52–3.88)	<0.001
Total red meat, g/d (median)	<50.0 (37.2)	50.0–99.9	100–149.9	≥150 (175)	
Person-years	60 852	193 228	170 334	51 415	
No. of cases	56	132	58	20	
Age-adjusted	1.00	0.97 (0.71–1.33)	1.04 (0.72–1.51)	1.28 (0.76–2.13)	0.003
Multivariable model*	1.00	1.07 (0.77–1.48)	1.19 (0.80–1.78)	1.30 (0.75–2.27)	0.003

*Adjusted for age (continuous), education (less than high school, high school, or university), smoking status and pack-years of smoking (never; past <20, 20–39, or ≥40 pack-years; or current <20, 20–39, or ≥40 pack-years), body mass index (<20, 20–24.9, 25–29.9, or ≥30 kg/m^2), total physical activity (quintiles, measured as metabolic equivalents), aspirin use (yes or no), supplement use (yes or no), family history of myocardial infarction at <60 y (yes or no), and intake of energy (kcal/d, quintiles) and consumption of alcohol, whole grain products, fruit, vegetable, and fish (g/d, quintiles).

†Unprocessed red meat and processed meat were included in the same multivariable model.

(95% CI, 17%–63%) for each 50-g/d increment in processed meat consumption. There was no association between unprocessed meat consumption and risk of death caused by HF. After including history of hypertension, high cholesterol, and diabetes mellitus in the models, the results did not change essentially: HR 2.34 (95% CI, 1.46–3.74) for processed red meat consumption and HR 0.80 (95% CI, 0.49–1.31) for unprocessed meat consumption.

In additional analyses, we addressed whether survival after acute myocardial infarction affected our results. During follow-up, 3493 cases of acute myocardial infarction were registered in the study cohort. Among them, 486 incident of HF (16.8% of all incidents) were diagnosed after acute myocardial infarction. In this subgroup analysis, the association of processed red meat consumption with HF incidence was materially not changed for the highest (≥75 g/d) versus the lowest category (<25 g/d): HR 1.27 (95% CI, 0.89–1.83).

Discussion

In this population-based prospective study of men, consumption of processed red meat, but not unprocessed red meat, was associated with an increased risk of HF. For each 50-g increase in daily consumption of processed meat, the risk of HF incidence increased statistically significantly by 8% and the risk of HF mortality by 38%.

To the best of our knowledge, there are no studies of HF incidence and HF mortality in relation to consumption of processed and unprocessed red meat separately. Two previous studies have examined the association between total red meat consumption and HF incidence.[3,9] Results from our study for total red meat consumption are consistent with those from the Physicians' Health Study.[9] In that cohort, men in the highest quintile of total red meat consumption compared with those in the lowest quintile had a statistically significant 24% higher risk of HF incidence.[9] The results from the Atherosclerosis Risk in Communities did, however, not indicate any association between total red meat intake and HF hospitalization (HR 1.07; 95% CI, 0.97–1.17).[3]

The potential adverse effect of processed red meat on HF may be a result of sodium content and food additives. Generally, processed meat contains high amounts of sodium, which may increase HF risk through its effect on blood pressure. A recent published review of studies assessing the effects of sodium restriction in HF indicates that the low-sodium diet suggested for the general population would also improve outcomes in HF patients.[14] However, according to results, recently published review of 6 randomized trials, in patients with systolic HF, a low-sodium diet (1.8 g/d) compared with those with normal sodium diet (2.8 g/d) had a higher risk of all-cause mortality, sudden death, death due to HF, and HF readmissions.[15] During the manufacturing process of red meat, high amounts of food additives are added. Nitrites are frequently used in the preservation of processed meat (cured meats) and have been suggested to affect the risk of HF, but results are inconsistent—recent review articles highlighted that total dietary nitrite and nitrate may have cardiovascular protective properties[16] by hypotensive, antiplatelet, and cytoprotective effects.[17] In contrast, some studies indicated that high concentration of nitrites in diet is related to endothelial dysfunction and impaired insulin response in adults.[18] Phosphate-containing food additives can promote HF by impairment of the calcium phosphate metabolism. Among coronary heart disease patients, higher levels of serum phosphate were associated with increased risk of new HF and coronary heart disease events compared with participants with lower levels.[19] Also among ambulatory HF patients, serum phosphate level, even within the normal range, was associated with the disease severity, death from any cause, or heart transplantation.[20]

Moreover, smoked processed meat products and grilled meat are a source of polycyclic aromatic hydrocarbons. Results from a US population indicate that compared with the lowest tertile of urinary excretion of polycyclic aromatic hydrocarbon metabolites such as 2-hydroxyphennathrene (2-PHEN) and 2-hydroxyfluorene (2-FLUO), those in the highest tertile had a 45% (95% CI, 1%–107%; *P* trend=0.04) and 31% (95% CI, –3% to 76%; *P* trend=0.07) higher risk of CVD, respectively.[21]

Major strengths of the present study are the population-based and prospective design, detailed information on diet, and the nearly complete follow-up of study participants through linkage with various population-based registries in Sweden. In addition, this study included a large number of HF incidence, thus providing high statistical power in the analysis. The extensive data on potential risk factors for HF allowed extensive adjustment for confounders; however, our study was limited by the lack of information on use of β-blockers, statins, or other cardiovascular drugs. Although the FFQ used in this study had a relatively high validity for intake of macronutrients and micronutrients, it was based on rather limited number of questions on each specific food group, thus some misclassification of total, processed, and unprocessed red meat consumption was inevitable. Because of the prospective design, any misclassification of processed and unprocessed red meat consumption would be nondifferential and would most likely have attenuated rather than exaggerated the true associations. However, possible explanations for the lack of association observed between unprocessed red meat and HF are that the consumption was not high enough or that the range was too narrow to provide a sufficient exposure gradient. Assuming 100 g of unprocessed meat/serving, the number of servings varied from 1/week in the lowest to only 6/week in the highest category.

In conclusion, findings from this prospective cohort study of men with low to moderate red meat consumption indicate that high consumption of processed meat, but not unprocessed red meat, may increase the risk of HF. However, the observed associations merit further investigation. These results, if confirmed, are in accordance with the previously reported positive associations between processed red meat consumption and risk of other CVD and cancer and provide further support to the recommendation to limit consumption of processed red meat.

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Disclosures

None.

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CLINICAL PERSPECTIVE

As epidemiological studies of red meat consumption in relation to risk of heart failure (HF) are scarce, we examined the associations of unprocessed and processed red meat consumption with HF incidence and mortality in men. The population-based prospective Cohort of Swedish Men included >37 000 men with no history of HF, ischemic heart disease, or cancer at baseline. Meat consumption was assessed with a self-administered questionnaire in 1997, and incident HF evaluated over a mean follow-up of 11.8 years. Consumption of processed meat was associated with risk of HF. Men who consumed ≥75 g/d processed meat compared with those who consumed <25 g/d had a 1.28 (95% confidence interval, 1.10–1.48) higher risk of HF incidence and 2.43 (95% confidence interval, 1.52–3.88) higher risk of HF mortality. The consumption of unprocessed meat was not associated with increased risk of incidence of HF or mortality from HF. These results, if confirmed, are in accordance with the previously reported positive associations between processed red meat consumption and risk of other cardiovascular diseases and cancer and provide further support to the recommendation to limit consumption of processed red meat.