

Red Meat and Processed Meat Consumption and Nasopharyngeal Carcinoma Risk: A Dose-response Meta-analysis of Observational Studies.

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Abstract

The purpose of this study is to clarify and quantify the potential dose-response association between the intake of total red and total processed meat and risk of nasopharyngeal carcinoma (NPC). Relevant studies were identified by searching PubMed, EMBASE, and Chinese databases (CNKI and Wanfang). The summary relative risk (RR) with 95% confidence interval (95%CI) was calculated. A total of 15 independent studies with 12,735 subjects were identified. Compared with the low-rank intake, the summary RR of NPC was 1.35 (95%CI, 1.21-1.51) for total red meat and 1.46 (95%CI, 1.34-1.64) for total processed meat. For the moderate-rank intake, the summary RR of NPC was 1.54 (95%CI, 1.36-1.79) for total red meat and 1.59 (95%CI, 1.3-1.90) for total processed meat. The summary RR for high-rank intake was 1.71 (95%CI, 1.14-2.55) for total red meat and 2.11 (95%CI, 1.31-3.42) for total processed meat. The combined estimates showed obvious evidence of statistically significant association between total red and total processed meat consumption dose and risk of NPC ($P_{trend} < 0.01$). In conclusion, our data suggest that a high intake of total red or total processed meat is associated with a significantly increased risk of NPC.

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