

Diet high in processed meat—Level 3 risk

Summary In 2019, a diet high in processed meat was responsible for 8·56 million (95% UI 5·29–12·7) DALYs and 304 000 deaths (154 000–486 000). It was the tenth-leading dietary risk factor for attributable DALYs.

Definition Diet high in processed meat is defined as any intake (in grams per day) of meat preserved by smoking, curing, salting, or addition of chemical preservatives.

Total sources

Exposure	737
Relative risk	41

Table 1: Total sources used in GBD 2019 estimation

What is new in GBD 2019?

- The method of bias adjustment for non-dietary recall surveys was updated using MR-BRT, generally increasing estimates of processed meat intake.
- We updated the dose–response curve of relative risks for processed meat and all outcomes based on the most recent epidemiological evidence and a newly developed method for characterising the risk curve.
- The processed meat TMREL changed from 2 to 0 grams/day.

	Deaths		YLLs		YLDs		DALYs	
	Number (millions)	Rate (per 100 000)	Number (millions)	Rate (per 100 000)	Number (millions)	Rate (per 100 000)	Number (millions)	Rate (per 100 000)
2019								
Both sexes	0·304 (0·154 to 0·486)	3·9 (2·0 to 6·2)	6·21 (3·17 to 9·95)	76·0 (38·7 to 121·9)	2·35 (1·44 to 3·43)	28·4 (17·4 to 41·4)	8·56 (5·29 to 12·7)	104·3 (64·3 to 154·3)
Females	0·145 (0·0762 to 0·230)	3·3 (1·7 to 5·2)	2·57 (1·43 to 4·02)	59·1 (32·8 to 92·5)	1·17 (0·713 to 1·72)	27·0 (16·4 to 39·6)	3·74 (2·39 to 5·36)	86·1 (55·1 to 123·3)
Males	0·159 (0·0781 to 0·255)	4·6 (2·2 to 7·3)	3·64 (1·72 to 5·96)	93·8 (44·5 to 153·7)	1·18 (0·709 to 1·71)	29·9 (18·0 to 43·5)	4·81 (2·85 to 7·29)	123·7 (73·6 to 186·9)
Percentage change 2010–19								
Both sexes	11·8% (4·9 to 23·1)	–15·2% (–20·2 to –6·5)	7·6% (–0·2 to 19·9)	–15·3% (–21·3 to –6·0)	35·4% (31·1 to 39·7)	6·6% (3·3 to 10·2)	14·0% (7·1 to 25·9)	–10·3% (–15·8 to –1·2)
Females	12·8% (5·2 to 23·4)	–15·0% (–20·7 to –6·5)	10·6% (2·3 to 22·2)	–13·7% (–20·1 to –4·6)	34·4% (29·7 to 39·0)	6·2% (2·2 to 9·8)	17·1% (9·9 to 27·2)	–8·3% (–14·1 to –0·1)
Males	10·9% (3·4 to 23·2)	–14·9% (–20·1 to –6·2)	5·5% (–2·7 to 18·8)	–16·1% (–22·4 to –6·2)	36·3% (31·4 to 41·3)	7·2% (3·2 to 11·3)	11·7% (4·0 to 25·2)	–11·5% (–17·3 to –1·6)

Numbers in parentheses are 95% uncertainty intervals.

Table 2: Attributable global deaths, YLLs, YLDs, and DALYs in counts and age-standardised rates for both sexes combined, females, and males, 2019, with percentage change between 2010 and 2019

	Deaths	YLLs	YLDs	DALYs
1990	32nd	36th	34th	37th
2010	37th	38th	31st	37th
2019	37th	38th	31st	36th

Table 3: Rank among attributable Level 3 risks plus most detailed Level 2 risks of global deaths, YLLs, YLDs, and DALYs in 1990, 2010, and 2019 for both sexes combined

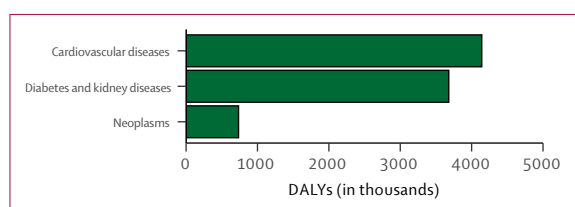


Figure 1: Composition of attributable global DALYs by constituent Level 2 causes for both sexes combined, 2019

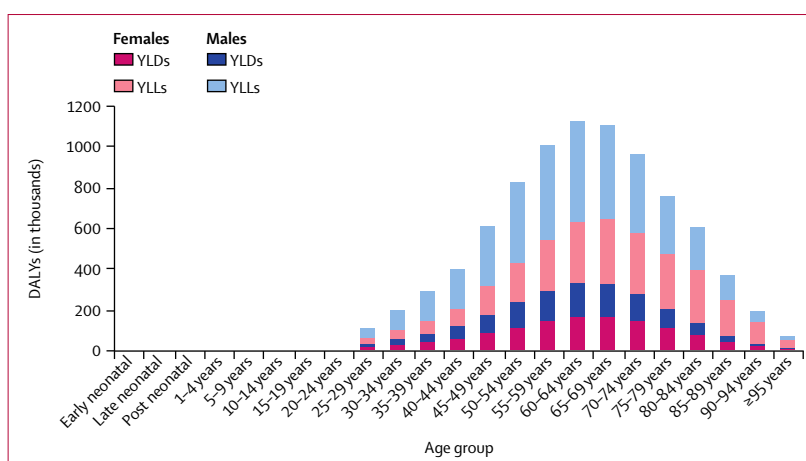


Figure 2: Composition of attributable global DALYs by YLLs and YLDs, age group, and sex, 2019

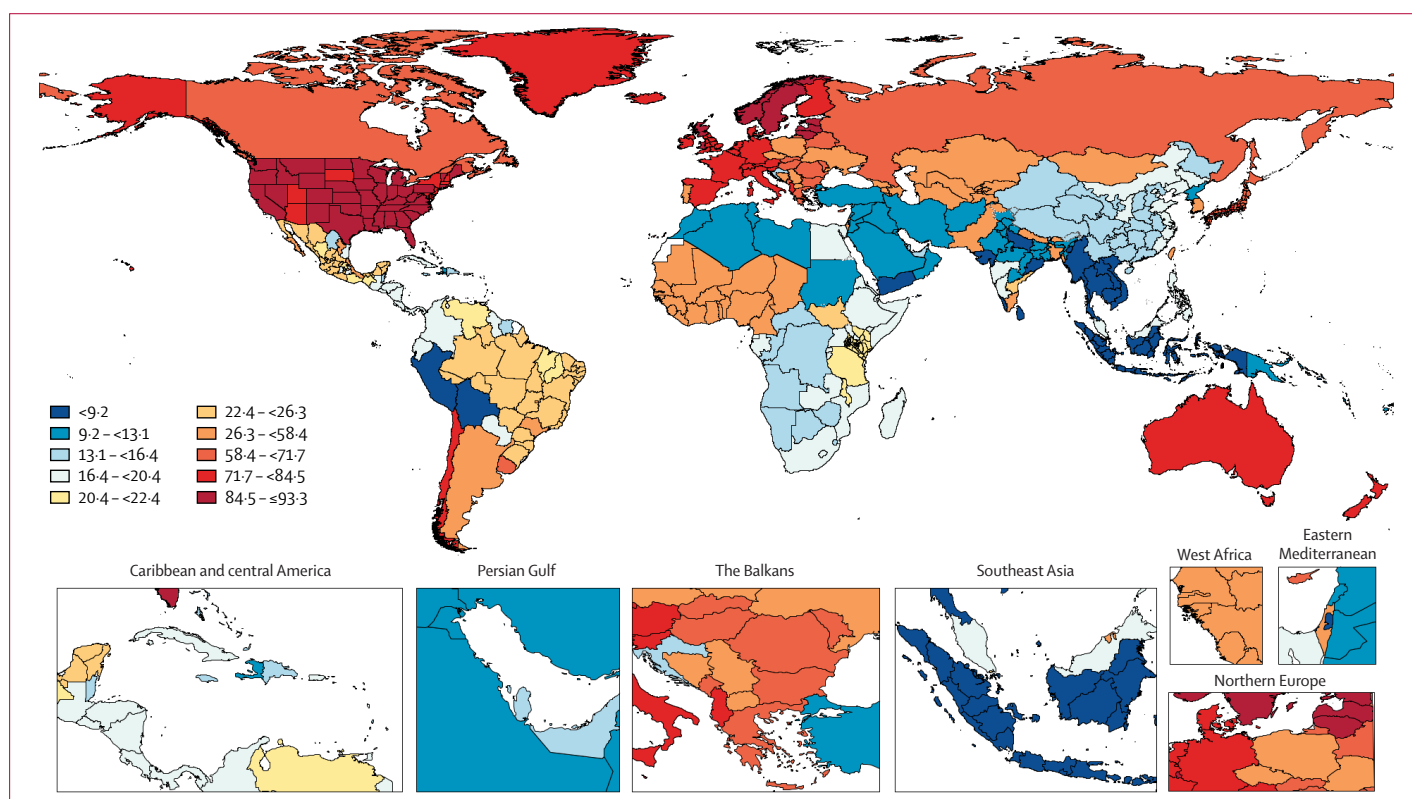


Figure 3: Age-standardised all-cause SEV by location, both sexes combined, 2019

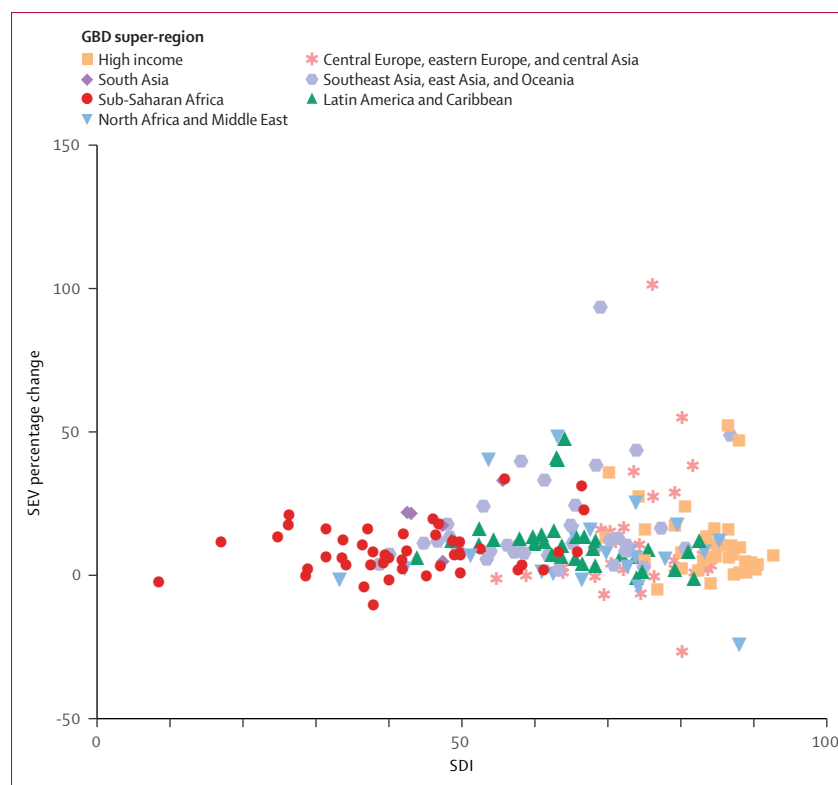


Figure 4: Percentage change in all-cause age-standardised SEV by SDI, both sexes combined, 1990–2019

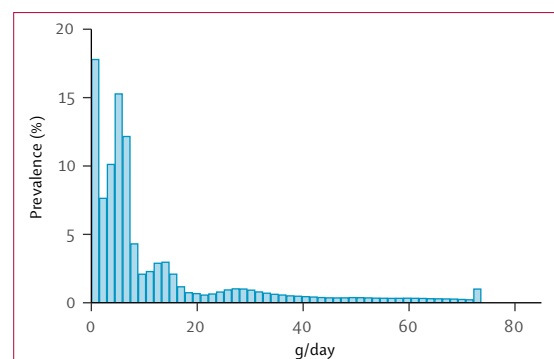


Figure 5: Percentage of population exposed to risk factor, both sexes combined, 2019

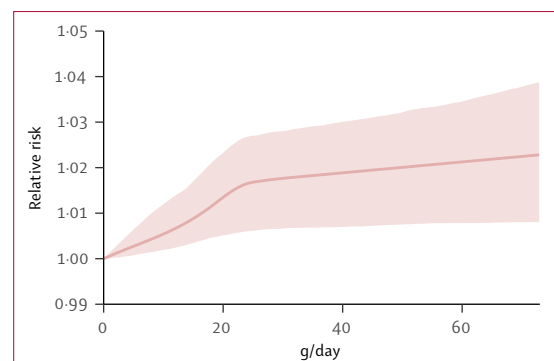


Figure 6: All-cause mortality relative risk, both sexes combined, 2019