

2016	DIET, NUTRITION, PHYSICAL ACTIVITY AND STOMACH CANCER		
		DECREASES RISK	INCREASES RISK
STRONG EVIDENCE	Convincing		
	Probable		Body fatness (cardia)¹ Alcoholic drinks² Foods preserved by salting³
LIMITED EVIDENCE	Limited – suggestive	Citrus fruit (cardia)	Processed meat (non-cardia) ⁴ Grilled (broiled) or barbecued (charbroiled) meat and fish Low fruit intake
	Limited – no conclusion	Cereals (grains) and their products; dietary fibre; vegetables; pulses (legumes); potatoes, starchy roots, tubers and plantains; citrus fruit (non-cardia); nuts and seeds; herbs, chilli; spices and condiments; meat (unprocessed); processed meat (cardia); poultry; fish (unprocessed); eggs; milk and dairy products; total salt; added salt; fruit juices; coffee; tea; green tea; frying; drying or dried food; dietary nitrate and nitrite; N-nitrosodimethylamine; protein; fats and oils; total fat; fatty acid composition; cholesterol; sugars; beta-carotene; retinol; thiamin; riboflavin; vitamin C; vitamin D; multivitamin/mineral supplements; calcium; iron; selenium; body fatness (non-cardia); physical activity; sedentary behaviour; adult attained height; energy intake	
STRONG EVIDENCE	Substantial effect on risk unlikely		

1 Body fatness is marked by body mass index (BMI).

2 Based on evidence for alcohol intakes above approximately 45 grams per day (about 3 drinks a day).

3 Evidence comes from salt-preserved foods, salt-preserved vegetables and salt-preserved fish, and refers mainly to high-salt foods and salt-preserved foods, including pickled vegetables and salted or dried fish, as traditionally prepared in east Asia.

4 The term ‘processed meat’ in the CUP refers to meats transformed through salting, curing, fermentation, smoking or other processes to enhance flavour or improve preservation.

Non-linear dose-response estimates of fruit intake and stomach cancer

Fruit intake (grams per day)	RR (95% CI)
0	1.18 (1.11–1.26)
43	1.08 (1.05–1.11)
86	1.00
137	0.95 (0.93–0.97)
196	0.94 (0.92–0.97)
236	0.95 (0.92–0.98)

Summary of CUP 2015 stratified dose-response meta-analysis – citrus fruit and stomach cancer

Analysis	Increment	RR (95% CI)	I ²	No. Studies	No. Cases
Cardia Cancer	Per 100g/day	0.76 (0.58-0.99)	53%	3	555
Non-Cardia Cancer	Per 100g/day	1.04 (0.94-1.16)	1%	5	1,317

Summary of CUP 2015 stratified dose-response meta-analysis – salt-preserved vegetables and stomach cancer

Analysis	Increment	RR (95% CI)	I ²	No. Studies	No. Cases
Incidence	Per 20g/day	1.09 (1.02-1.16)	28%	6	2,701
Mortality	Per 20g/day	1.07 (0.97-1.18)	0%	3	820

Summary of published meta-analyses – salt-preserved vegetables

Analysis	Increment	RR (95% CI)	I ²	No. Studies	No. Cases
D’Elia (2012) [64]	Highest vs. lowest	1.27 (1.09-1.49)	25%	7	1,474
Ren (2012) [65]	Highest vs. lowest	1.32 (1.10-1.59)	70%	10	3,692

Non-linear dose-response estimates of alcohol (as ethanol) intake and stomach cancer

Alcohol intake (grams of ethanol/day)	RR (95% CI)
0	1.00
10	1.00 (0.98–1.03)
22	1.01 (0.97–1.06)
32	1.03 (0.98–1.08)
45	1.06 (1.01–1.11)
53	1.08 (1.03–1.13)
58	1.09 (1.04–1.14)
71	1.13 (1.05–1.21)
80	1.15 (1.06–1.26)
90	1.19 (1.07–1.32)
106	1.24 (1.08–1.42)
120	1.28 (1.08–1.52)

Summary of CUP 2015 stratified dose-response meta-analyses – alcohol

Analysis	Increment	RR (95% CI)	I ²	No. Studies	No. Cases
Men	Per 10g/day	1.03 (1.01-1.05)	37%	13	6,956
Women	Per 10g/day	1.02 (0.90-1.15)	19%	5	1,308
Asia	Per 10g/day	1.03 (1.01-1.04)	21%	14	7,282
Europe	Per 10g/day	1.02 (0.98-1.06)	46%	7	2,667
North America	Per 10g/day	0.98 (0.87-1.11)	0%	2	401
Never-smokers	Highest vs. lowest	1.23 (1.03-1.46)	0%	6	>807
Current and former smokers	Highest vs. lowest	1.84 (1.43-2.36)	51%	6	>621

Summary of CUP 2015 stratified meta-analyses – BMI

Analysis	Increment	RR (95% CI)	I ²	No. Studies	No. Cases
Europe	Per 5 kg/m ²	1.27 (1.01-1.60)	62%	3	505
North America	Per 5 kg/m ²	1.32 (1.18-1.48)	0%	2	406
Asia	Per 5 kg/m ²	1.08 (0.73-1.59)	54%	2	1,139
BMI self reported	Per 5 kg/m ²	1.39 (1.25-1.55)	0%	3	520
BMI measured	Per 5 kg/m ²	1.06 (0.92-1.23)	17%	3	1,417
BMI medical records	Per 5 kg/m ²	1.23 (0.94-1.62)	-	1	113
Smokers*	Highest vs. lowest	3.39 (1.21-9.50)	-	1	58
Non-smokers*	Highest vs. lowest	2.54 (1.58-4.10)	-	1	245

*Smokers: current smokers and those who quit less than 1 year before baseline.
Non-smokers: never-smokers and those who quit 1 year or more before baseline.

Non-linear dose-response estimates of BMI and cardia cancer

BMI (KG/M²)	RR (95% CI)
17.40	1.04 (0.96–1.13)
18.95	1.02 (0.97–1.07)
21.70	1.00
23.45	1.02 (1.00–1.04)
26.20	1.13 (1.08–1.18)
28.70	1.32 (1.24–1.40)
32.00	1.68 (1.54–1.84)