

S4 Table. Population attributable fractions of deaths prior to age 65 given the distribution of covariates in the EPIC cohort, using waist-to-hip ratio to assess for obesity.

Covariate <sup>1</sup>	All participants		Never-smokers		Current-smokers	
	Overall <sup>2</sup>	Cumulative <sup>3</sup>	Overall <sup>2</sup>	Cumulative <sup>3</sup>	Overall <sup>2</sup>	Cumulative <sup>3</sup>
Women and Men						
Smoking	0.32 [0.31,0.32]	0.32 [0.31,0.32]	-	-	0.56 [0.55,0.57]	0.56 [0.55,0.57]
Diet	0.15 [0.12,0.17]	0.42 [0.40,0.43]	0.12 [0.10,0.15]	0.12 [0.10,0.15]	0.16 [0.14,0.19]	0.64 [0.62,0.65]
Overweight and obesity (WHR)	0.10 [0.09,0.12]	0.48 [0.46,0.49]	0.10 [0.08,0.11]	0.21 [0.19,0.23]	0.11 [0.09,0.12]	0.68 [0.66,0.69]
High blood pressure	0.10 [0.08,0.11]	0.53 [0.51,0.54]	0.10 [0.08,0.11]	0.28 [0.26,0.31]	0.09 [0.07,0.11]	0.71 [0.69,0.72]
Physical inactivity	0.07 [0.05,0.09]	0.56 [0.54,0.58]	0.08 [0.06,0.10]	0.34 [0.31,0.37]	0.07 [0.05,0.09]	0.73 [0.72,0.74]
Alcohol intake	0.04 [0.03,0.05]	0.58 [0.56,0.59]	0.02 [0.01,0.02]	0.35 [0.32,0.38]	0.06 [0.05,0.07]	0.74 [0.73,0.76]
<b>Combined</b>	0.58 [0.56,0.59]		0.35 [0.32,0.38]		0.74 [0.73,0.76]	
Women						
Smoking	0.25 [0.24,0.26]	0.25 [0.24,0.26]	-	-	0.53 [0.52,0.55]	0.53 [0.52,0.55]
Diet	0.14 [0.11,0.17]	0.35 [0.33,0.37]	0.12 [0.10,0.15]	0.12 [0.10,0.15]	0.16 [0.13,0.19]	0.61 [0.59,0.63]
Overweight and obesity (WHR)	0.07 [0.05,0.10]	0.40 [0.37,0.42]	0.07 [0.05,0.10]	0.19 [0.15,0.22]	0.08 [0.05,0.10]	0.64 [0.62,0.66]
High blood pressure	0.10 [0.08,0.12]	0.46 [0.43,0.48]	0.11 [0.08,0.13]	0.27 [0.24,0.30]	0.09 [0.07,0.11]	0.67 [0.65,0.69]
Physical inactivity	0.06 [0.03,0.09]	0.49 [0.46,0.52]	0.07 [0.04,0.10]	0.32 [0.28,0.36]	0.06 [0.03,0.09]	0.69 [0.67,0.71]
Alcohol intake	0.02 [0.01,0.03]	0.50 [0.47,0.53]	0.01 [0.01,0.02]	0.33 [0.29,0.36]	0.03 [0.02,0.04]	0.70 [0.68,0.72]
<b>Combined</b>	0.50 [0.47,0.53]		0.33 [0.29,0.36]		0.70 [0.68,0.72]	
Men						
Smoking	0.38 [0.37,0.39]	0.38 [0.37,0.39]	-	-	0.58 [0.57,0.60]	0.58 [0.57,0.60]
Diet	0.14 [0.10,0.18]	0.47 [0.44,0.49]	0.13 [0.09,0.17]	0.13 [0.09,0.17]	0.15 [0.11,0.19]	0.65 [0.63,0.67]
Overweight and obesity (WHR)	0.14 [0.12,0.16]	0.54 [0.52,0.57]	0.12 [0.10,0.14]	0.24 [0.20,0.27]	0.14 [0.12,0.17]	0.70 [0.68,0.72]
High blood pressure	0.09 [0.05,0.12]	0.58 [0.56,0.61]	0.09 [0.05,0.12]	0.30 [0.26,0.34]	0.08 [0.04,0.11]	0.73 [0.71,0.74]
Physical inactivity	0.08 [0.05,0.10]	0.62 [0.59,0.64]	0.07 [0.05,0.10]	0.35 [0.31,0.39]	0.08 [0.05,0.10]	0.75 [0.73,0.77]
Alcohol intake	0.06 [0.05,0.08]	0.64 [0.61,0.66]	0.04 [0.03,0.05]	0.37 [0.33,0.42]	0.08 [0.06,0.10]	0.77 [0.75,0.79]
<b>Combined</b>	0.64 [0.61,0.66]		0.37 [0.33,0.42]		0.77 [0.75,0.79]	

<sup>1</sup> Attributable fractions were calculated based on the difference in expected cumulative risk given the observed covariate distributions in EPIC and the expected cumulative risk under the following scenarios. **Smoking:** A population of never smokers. **Diet:** A population of people in the *healthy* category. **Blood pressure:** A population of people with normal blood pressure. **High alcohol intake:** A population who drink at most 1-2 drinks per day. **Physical Activity:** A population of people in the *active* category. **Overweight and obesity:** A population of people with WHR below the lowest sex-specific quintile. These attributable risks thus represent a best case, in that they are calculated based on a hypothetical reference population with risk factors removed entirely.

<sup>2</sup> Estimated using predictions from a model mutually adjusted for all listed covariates as well as age at baseline. Attributable fractions are based on modifying one covariate at a time, with the distribution of the remaining covariates left as observed in EPIC.

<sup>3</sup> The cumulative attributable fraction after the sequential addition of each covariate.