Supplementary Table 1. Baseline characteristics of study participants according to the quartile of putrescine intake in the Takayama cohort

Basic characteristics Men Women

Q1 Q2 Q3 O4 P-trend Q1 Q2 Q3 Q4 P-trend

Men

Putrescine range, μmol/d <93.1 93.1-141.0 141.1-200.0 >200 <119.1 19.1-152.9 152.9-189.2 >189.2

Age, y 53.5 55.4 55.4 51.6 <0.0001 52.2 55.4 56.9 56.0 <0.0001

Married, % 90.4 91.2 91.1 93.1 0.0007 79.5 75.3 72.8 73.2 <0.0001

Years of education, %

≦11 58.3 59.8 57.6 52.8 61.2 65.5 68.9 69.1

12-14 31.3 28.9 30.1 33.9 33.3 29.4 27.1 26.7

≧15 10.4 11.3 12.3 13.3 <0.0001 5.4 5.0 4.1 4.3 <0.0001

Smoking, %

Never 12.8 17.7 18.9 18.2 81.2 84.6 84.9 79.8

Former 23.3 29.2 31.7 28.7 4.3 4.1 4.0 5.1

Current 63.9 53.1 49.8 53.1 <0.0001 14.5 11.7 11.1 15.2 <0.0001

History of hypertension, % 18.5 18.2 19.8 19.2 0.33 12.6 16.9 19.7 20.2 <0.0001

History of diabetes mellitus, % 4.5 6.2 6.5 6.6 0.0006 1.3 2.2 3.3 3.9 <0.0001

BMI, kg/m2  22.4 22.3 22.4 22.9 <0.0001 21.9 21.9 21.9 22.1 0.0006

Alcohol intake, g/d 40.8 31.0 37.2 58.8 <0.0001 6.0 5.0 5.9 14.1 <0.0001

Supplementary Table1 (continued)

Basic characteristics Men Women

Q1 Q2 Q3 O4 P-trend Q1 Q2 Q3 Q4 P-trend

Exercise, METs-h/wk 28.5 25.5 25.2 29.1 0.25 20.4 19.5 17.6 17.8 <0.0001

Daily dietary intake

Total energy, kcal 2,995 2,428 2,318 2,745 <0.0001 2,532 1,972 1,794 2,232 <0.0001

Polyunsaturated fat, g 17.6 14.4 13.9 15.8 <0.0001 16.3 13.3 12.2 15.8 <0.0001

Glycemic load 269.2 221.9 198.2 207.8 <0.0001 　 242.4 180.6 160.5 182.8 <0.0001

Vegetables, g 342.2 327.2 355.8 464.1 <0.0001 　 295.8 297.5 352.3 632.1 <0.0001

Salts, g/1000 kcal 15.3 13.1 13.1 15.3 0.03 13.8 12.0 11.5 15.1 <0.0001

Coffee, cups/d 0.98 0.80 0.75 0.89 0.003 0.81 0.63 0.58 0.66 <0.0001

MET, metabolic equivalent; Q, quartile.

Putrescine intake is adjusted for total energy.

Supplementary Table 2. Baseline characteristics of study participants according to the quartile of spermine intake in the Takayama cohort

Basic characteristics Men Women

Q1 Q2 Q3 O4 P-trend Q1 Q2 Q3 Q4 P-trend

Men

Spermine range, μmol/d <36.4 26.4-37.7 37.8-50.8 >50.8 <39.3 39.3-51.1 51.2-63.1 >63.1

Age, y 50.4 52.9 54.8 57.8 <0.0001 51.9 54.2 56.3 58.2 <0.0001

Married, % 90.3 91.4 91.8 92.3 0.02 76.8 76.4 73.3 74.3 0.0006

Years of education, %

≦11 58.0 56.5 54.2 59.9 64.7 65.1 64.9 70.0

12-14 32.1 32.5 32.0 27.6 31.1 30.1 29.6 25.8

≧15 9.9 11.1 13.8 12.5 <0.0001 4.2 4.8 5.6 4.2 <0.0001

Smoking, %

Never 14.1 14.6 18.3 20.2 77.2 81.6 85.1 86.3

Former 22.9 27.7 29.9 32.5 4.5 4.3 4.3 4.3

Current 63.0 57.7 51.9 47.3 <0.0001 18.3 14.2 10.6 9.4 <0.0001

History of hypertension, % 18.5 18.5 18.6 20.0 0.29 15.1 16.8 17.8 19.8 <0.0001

History of diabetes mellitus, % 5.1 5.9 5.6 7.3 0.001 1.9 2.4 3.1 3.3 0.0004

BMI, kg/m2  22.7 22.5 22.5 22.3 <0.0001 22.1 22.0 21.8 22.0 0.34

Alcohol intake, g/d 63.1 41.0 32.4 31.4 <0.0001 13.0 7.5 5.1 5.4 <0.0001

Supplementary Table 2 (continued)

Basic characteristics Men Women

Q1 Q2 Q3 O4 P-trend Q1 Q2 Q3 Q4 P-trend

Exercise, METs-h/wk 31.8 26.8 24.0 31.4 <0.0001 19.1 19.0 18.0 19.2 0.96

Daily dietary intake

Total energy, kcal 3,048 2,490 2,306 2,642 <0.0001 2,564 1,974 1,772 2,220 <0.0001

Polyunsaturated fat, g 15.4 14.0 14.1 18.2 <0.0001 15.4 12.9 12.3 16.3 <0.0001

Glycemic load 268.8 224.6 198.5 205.2 <0.0001 　 245.8 181.8 157.5 181.3 <0.0001

Vegetables, g 331.3 310.2 328.8 519.1 <0.0001 　 368.4 321.9 328.1 559.3 <0.0001

Salts, g/1000 kcal 14.1 12.7 12.9 17.0 <0.0001 13.5 11.7 11.2 15.8 <0.0001

Coffee, cups/d 1.02 0.87 0.82 0.70 <0.0001 0.85 0.72 0.58 0.54 <0.0001

MET, metabolic equivalent; Q, quartile.

Spermine intake is adjusted for total energy.