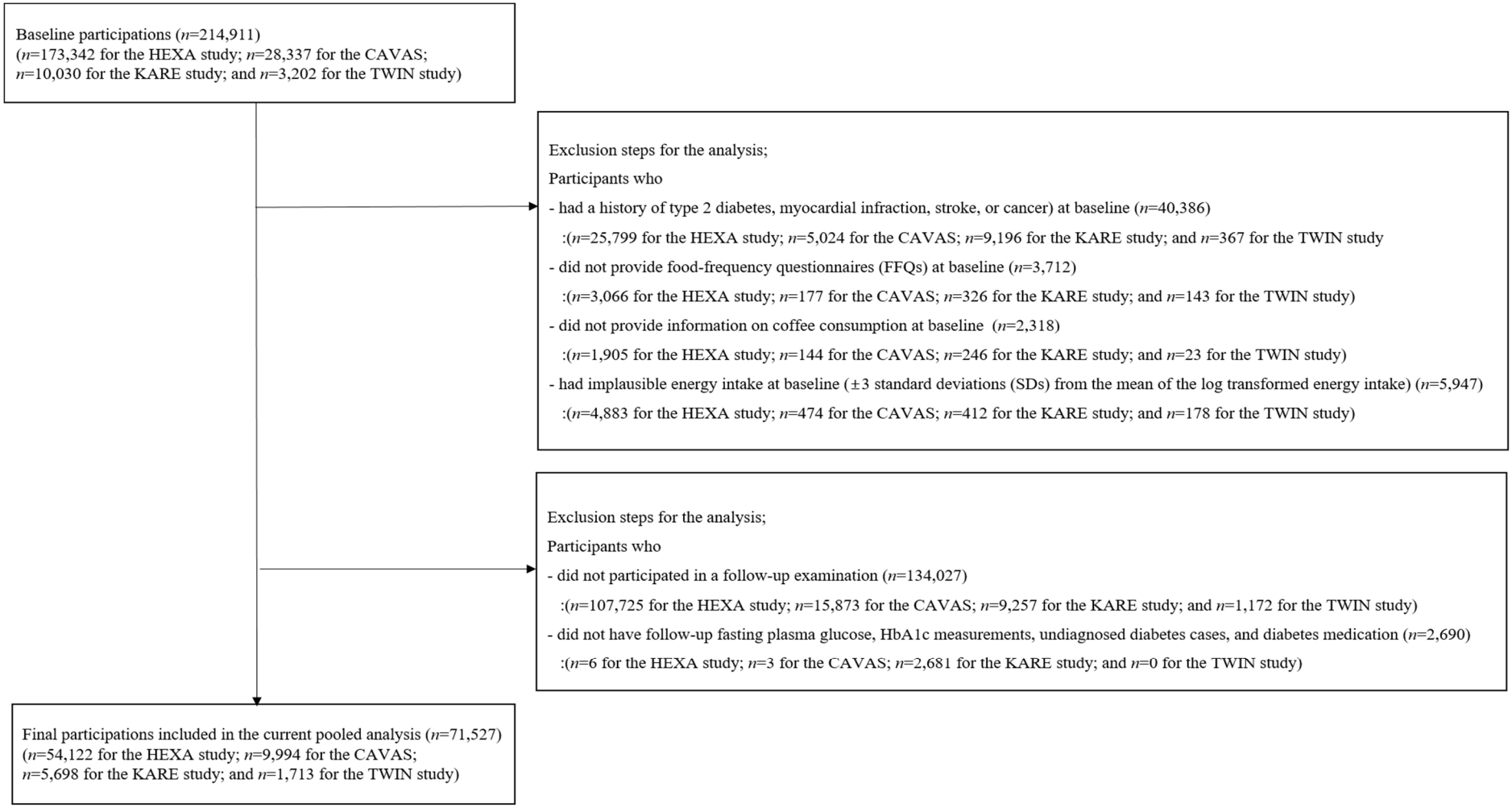


**Figure S1.** Flow diagram of study population included in the analysis.

**Table S1.** Subgroup analysis on the association of coffee consumption with type 2 diabetes stratified by type 2 diabetes-related SNPs.

| SNP (Risk/Other) | Chr | Locus | | Coffee Consumption (cups/day) | | | | *p* for trend | *p* for interaction | *p* for heterogeneity[1)] |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 to <0.5 | 0.5 to <1 | 1 to <3 | ≥3 | | | |
| **rs7756992(G/A)** | 6 | CDKAL1 | | | | | | | 0.18 | |
| GG | | | Case/Total no. | 156/983 | 43/257 | 168/1,061 | 71/469 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 1.16 (0.77-1.73) | 1.00 (0.77-1.31) | 1.04 (0.72-1.51) | 0.79 | | 0.53 |
| AA+AG | | | Case/Total no. | 379/2,384 | 90/693 | 397/2,702 | 132/1,048 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 0.83 (0.63-1.09) | 0.93 (0.78-1.10) | 0.78 (0.61-1.00) | 0.05 | | 0.40 |
| **rs10811661(T/C)** | 9 | CDKN2A/B | | | | | | | | |
| TT | | | Case/Total no. | 171/1,055 | 49/312 | 171/1,183 | 73/489 | | 0.31 | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 1.12 (0.76-1.66) | 0.87 (0.67-1.13) | 0.99 (0.69-1.42) | 0.96 | | 0.66 |
| CC+CT | | | Case/Total no. | 363/2,312 | 84/638 | 394/2,580 | 131/1,029 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 0.84 (0.64-1.11) | 0.98 (0.83-1.17) | 0.79 (0.62-1.02) | 0.09 | | 0.73 |
| **rs5215(C/T)** | 11 | KCNJ11 | | | | | | | | |
| CC | | | Case/Total no. | 94/517 | 20/128 | 102/565 | 33/224 | | 0.60 | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 1.15 (0.62-2.11) | 1.02 (0.71-1.47) | 0.85 (0.49-1.45) | 0.61 | | 0.79 |
| TT+CT | | | Case/Total no. | 440/2,838 | 112/815 | 463/3,187 | 170/1,284 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 0.90 (0.71-1.15) | 0.95 (0.81-1.11) | 0.86 (0.69-1.08) | 0.21 | | 0.97 |
| **rs163184(G/T)** | 11 | KCNQ1 | | | | | | | 0.80 | |
| GG | | | Case/Total no. | 105/574 | 20/167 | 114/634 | 38/251 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 0.76 (0.42-1.37) | 1.09 (0.76-1.55) | 0.81 (0.50-1.33) | 0.55 | | 0.71 |
| TT+TG | | | Case/Total no. | 430/2,793 | 113/780 | 451/3,130 | 166/1,266 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 0.96 (0.75-1.22) | 0.94 (0.81-1.10) | 0.87 (0.70-1.09) | 0.23 | | 0.96 |
| **rs3786897(A/G)*** | 19 | PEPD | | | | | | | 0.80 | |
| AA | | | Case/Total no. | 165/855 | 32/215 | 183/973 | 63/352 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 0.74 (0.48-1.16) | 0.91 (0.70-1.18) | 0.89 (0.61-1.29) | 0.63 | | 0.46 |
| GG+GA | | | Case/Total no. | 325/1,868 | 85/469 | 344/2,018 | 120/757 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 1.02 (0.76-1.35) | 1.04 (0.86-1.25) | 0.92 (0.71-1.20) | 0.64 | | 0.10 |

Abbreviations: ORs, Odds ratios; CIs, Confidence intervals; SNP, Single nucleotide polymorphisms; Chr, Chromosome. MV adjusted: age (years, continuous), sex (men, women), BMI (<23 and ≥23 kg/m$^2$), alcohol intake (never, ever for men; never, ever for women), smoking status (never, ever for HEXA, CAVAS, TWIN, never, pack-years <10, 10-<20, 20–<30, 30–<40 ≥40 for men; never, pack-years <5, 5–<10, ≥10 for women for KARE), education level (middle school or less, and high school or above), green tea intake (0-<2, and ≥2 cups/day), and total energy intake (kcal/day, continuous) [1)] *p* for heterogeneity of odds ratios for top vs bottom categories in MV adjusted model was presented * Only the CAVAS and the KARE studies were included in analysis.

**Table S2.** Subgroup analysis on the association of coffee consumption with type 2 diabetes stratified by type 2 diabetes-related SNPs.

| SNP (Risk/Other) | Chr | Locus | | coffee consumption (cups/day) | | | | *p* for trend | *p* for interaction | *p* for heterogeneity[1)] |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 to <0.5 | 0.5 to <1 | 1 to <3 | ≥3 | | | |
| **rs7756992(G/A)** | 6 | CDKAL1 | | | | | | | 0.66 | |
| GG | | | Case/Total no. | 156/903 | 43/245 | 168/992 | 71/404 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 1.16 (0.77-1.73) | 1.00 (0.77-1.31) | 1.04 (0.72-1.51) | 0.80 | | 0.40 |
| AG | | | Case/Total no. | 268/1,627 | 69/501 | 280/1,896 | 94/759 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 0.83 (0.61-1.14) | 0.89 (0.72-1.09) | 0.74 (0.55-0.99) | 0.02 | | 0.14 |
| AA | | | Case/Total no. | 111/837 | 21/204 | 117/875 | 38/354 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 0.79 (0.45-1.38) | 1.03 (0.75-1.42) | 0.98 (0.61-1.59) | 0.96 | | 0.70 |
| **rs10811661(T/C)** | 9 | CDKN2A/B | | | | | | | 0.46 | |
| TT | | | Case/Total no. | 171/716 | 49/219 | 171/815 | 73/302 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 1.12 (0.76-1.66) | 0.87 (0.67-1.13) | 0.99 (0.69-1.42) | 0.96 | | 0.73 |
| CT | | | Case/Total no. | 266/1,195 | 64/341 | 281/1,319 | 97/536 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 0.90 (0.65-1.24) | 0.96 (0.78-1.18) | 0.75 (0.56-1.00) | 0.11 | | 0.77 |
| CC | | | Case/Total no. | 97/589 | 20/187 | 113/685 | 34/266 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 0.75 (0.43-1.31) | 1.03 (0.74-1.43) | 0.86 (0.52-1.41) | 0.50 | | 0.78 |
| **rs5215(C/T)** | 11 | KCNJ11 | | | | | | | 0.73 | |
| CC | | | Case/Total no. | 94/517 | 20/128 | 102/565 | 33/224 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 1.15 (0.62-2.11) | 1.02 (0.71-1.47) | 0.86 (0.50-1.47) | 0.49 | | 0.97 |
| CT | | | Case/Total no. | 253/1,613 | 57/438 | 269/1,775 | 98/734 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 0.79 (0.56-1.09) | 0.99 (0.81-1.22) | 0.88 (0.66-1.18) | 0.55 | | 0.62 |
| TT | | | Case/Total no. | 187/1,225 | 55/377 | 194/1,412 | 72/550 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 1.07 (0.73-1.54) | 0.90 (0.70-1.15) | 0.79 (0.56-1.12) | 0.08 | | 0.39 |
| **rs163184(G/T)** | 11 | KCNQ1 | | | | | | | 0.66 | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GG | | | Case/Total no. | 105/574 | 20/167 | 114/634 | 38/251 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 0.76 (0.42-1.37) | 1.09 (0.76-1.55) | 0.81 (0.50-1.33) | 0.55 | | 0.96 |
| TG | | | Case/Total no. | 276/1,629 | 65/466 | 285/1,794 | 95/749 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 0.85 (0.62-1.16) | 0.98 (0.80-1.20) | 0.83 (0.62-1.12) | 0.55 | | 0.34 |
| TT | | | Case/Total no. | 154/1,164 | 48/314 | 166/1,336 | 71/517 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 1.10 (0.74-1.62) | 0.89 (0.69-1.16) | 0.92 (0.64-1.33) | 0.52 | | 0.19 |
| **rs3786897(A/G)*** | 19 | PEPD | | | | | | | 0.52 | |
| AA | | | Case/Total no. | 165/855 | 32/215 | 183/973 | 63/352 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 0.74 (0.48-1.16) | 0.91 (0.70-1.18) | 0.89 (0.61-1.29) | 0.63 | | 0.46 |
| GA | | | Case/Total no. | 238/1,325 | 66/346 | 257/1,480 | 86/557 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 1.01 (0.73-1.40) | 0.98 (0.79-1.22) | 0.79 (0.58-1.08) | 0.26 | | 0.10 |
| GG | | | Case/Total no. | 87/543 | 19/123 | 87/538 | 34/200 | | | |
| | | | Pooled OR (CIs) | 1.00 (reference) | 0.94 (0.52-1.70) | 1.15 (0.79-1.65) | 1.31 (0.78-2.18) | 0.27 | | 0.30 |

Abbreviations: ORs, Odds ratios; CIs, Confidence intervals; SNP, Single nucleotide polymorphisms; Chr, Chromosome. MV adjusted: age (years, continuous), sex (men, women), BMI (<23 and ≥23 kg/m$^2$), alcohol intake (never, ever for men; never, ever for women), smoking status (never, ever for HEXA, CAVAS, TWIN, never, pack-years <10, 10–<20, 20–<30, 30-<40 ≥40 for men; never, pack-years <5, 5–<10, ≥10 for women for KARE), education level (middle school or less, and high school or above), green tea intake (0-<2, and ≥2 cups/day), and total energy intake (kcal/day, continuous)) [1)]*p* for heterogeneity of odds ratios for top vs bottom categories in MV adjusted model was presented * Only the CAVAS and the KARE studies were included in analysis.