**Supplementary Materials**

**Supplementary Table 1: Characteristics of study participants in 2007 by quartiles of 15-year cumulative systolic blood pressure levels.**

|  |  |
| --- | --- |
| **Parameters** | **Cumulative SBP** |
| **Quartile 1** | **Quartile 2** | **Quartile 3** | **Quartile 4** |
| Age (years) | 59.1 ± 6.9 | 61.7 ± 7.9 | 62.9 ± 7.7 | 64.9 ± 7.8 |
| Male, *n* (%) | 200 (32.9) | 255 (41.9) | 285 (47.0) | 302 (49.8) |
| BMI (kg/m2) | 23.9 ± 3.0 | 24.8 ± 3.0 | 25.4 ± 3.5 | 26.2 ± 3.7 |
| Waist circumference (cm) | 81.8 ± 9.3 | 84.2 ± 8.9 | 85.5 ± 10.2 | 87.9 ± 9.2 |
| FBG (mmol/L) | 5.6 ± 1.0 | 5.8 ± 1.2 | 6.0 ± 1.3 | 6.4 ± 1.8 |
| TC (mmol/L) | 5.5 ± 1.0 | 5.4 ± 1.0 | 5.4 ± 0.9 | 5.4 ± 1.0 |
| LDL-C (mmol/L) | 3.4 ± 0.8 | 3.4 ± 0.9 | 3.4 ± 0.8 | 3.5 ± 0.9 |
| HDL-C (mmol/L) | 1.4 ± 0.3 | 1.4 ± 0.3 | 1.3 ± 0.3 | 1.3 ± 0.3 |
| TG (mmol/L) | 1.4 (1.0-1.9) | 1.5 (1.1–2.1) | 1.5 (1.1–2.1) | 1.7 (1.2–2.3) |
| SBP (mmHg) | 119.9 ± 11.5 | 131.4 ± 11.2 | 139.7 ± 12.5 | 153.6 ± 16.9 |
| DBP (mmHg) | 75.9 ± 8.0 | 81.0 ± 7.8 | 83.9 ± 8.5 | 88.6 ± 10.5 |
| Smoking, *n* (%) | 68 (11.2) | 75 (12.3) | 80 (13.2) | 60 (9.9) |
| Diabetes, *n* (%) | 56 (9.2) | 81 (13.3) | 124 (20.4) | 163 (26.9) |
| Antihypertensive drug use, *n* (%) | 44 (7.2) | 136 (22.4) | 249 (41.0) | 400 (65.9) |
| Lipid-lowering drug use, *n* (%) | 37 (6.1) | 62 (10.2) | 48 (7.9) | 69 (11.4) |

DBP: Diastolic blood pressure; FBG: Fasting blood glucose; HDL-C: High-density lipoprotein cholesterol; LDL-C: Low-density lipoprotein cholesterol; SBP: Systolic blood pressure; TC: Total cholesterol; TG: Triglycerides.

**Supplementary Table 2: Characteristics of study participants in 2007 by quartiles of 15-year cumulative diastolic blood pressure levels.**

|  |  |
| --- | --- |
| **Parameters** | **Cumulative DBP** |
| **Quartile 1** | **Quartile 2** | **Quartile 3** | **Quartile 4** |
| Age (year) | 62.0 ± 8.1 | 62.4 ± 8.1 | 62.2 ± 7.8 | 62.0 ± 7.6 |
| Male, *n* (%) | 184 (30.3) | 228 (37.6) | 280 (46.1) | 350 (57.7) |
| BMI (kg/m2) | 23.5 ± 2.8 | 24.7 ± 3.1 | 25.6 ± 3.7 | 26.5 ± 3.2 |
| Waist circumference (cm) | 80.8 ± 8.4 | 83.9 ± 8.5 | 86.0 ± 10.0 | 88.7 ± 9.8 |
| FBG (mmol/L) | 5.6 ± 1.1 | 5.8 ± 1.2 | 6.0 ± 1.4 | 6.3 ± 1.7 |
| TC (mmol/L) | 5.4 ± 1.0 | 5.5 ± 1.0 | 5.4 ± 0.9 | 5.4 ± 1.0 |
| LDL-C (mmol/L) | 3.3 ± 0.8 | 3.5 ± 0.9 | 3.4 ± 0.9 | 3.5 ± 0.9 |
| HDL-C (mmol/L) | 1.4 ± 0.3 | 1.4 ± 0.3 | 1.3 ± 0.3 | 1.3 ± 0.3 |
| TG (mmol/L) | 1.3 (1.0–1.9) | 1.5 (1.1–2.1) | 1.5 (1.1-2.2) | 1.7 (1.2-2.3) |
| SBP (mmHg) | 124.0 ± 14.1 | 132.4 ± 14.7 | 139.2 ± 15.0 | 149.0 ± 18.0 |
| DBP (mmHg) | 74.1 ± 7.0 | 79.7 ± 6.8 | 84.8 ± 7.6 | 90.8 ± 9.3 |
| Smoking, *n* (%) | 54 (8.9) | 72 (11.9) | 76 (12.5) | 81 (13.3) |
| Diabetes, *n* (%) | 64 (10.5) | 95 (15.7) | 109 (17.9) | 156 (25.7) |
| Antihypertensive drug use, *n* (%) | 89 (14.7) | 147 (24.2) | 235 (38.7) | 358 (59.0) |
| Lipid-lowering drug use, *n* (%) | 52 (8.6) | 41 (6.8) | 69 (11.3) | 54 (8.9) |

DBP: Diastolic blood pressure; FBG: Fasting blood glucose; HDL-C: High-density lipoprotein cholesterol; LDL-C: Low-density lipoprotein cholesterol; SBP: Systolic blood pressure; TC: Total cholesterol; TG: Triglycerides.

**Supplementary Table 3. Hazard ratios and 95% confidence intervals for incident CVD by quartiles of 15-year cumulative blood pressure levels among 2326 participants with complete data.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Items** | **Cumulative SBP** |  | **Cumulative DBP** |
| **Traditional risk factors\*** |  | **Traditional risk factors\* + SBP** |  | **Traditional risk factors\*** |  | **Traditional risk factors\* + DBP** |
| **Hazard ratios (95% CI)** | ***P***  |  | **Hazard ratios (95% CI)** | ***P***  |  | **Hazard ratios (95%CI)** | ***P***  |  | **Hazard ratios (95%CI)** | ***P***  |
| Quartile 1 | Reference |  |  | Reference |  |  | Reference |  |  | Reference |  |
| Quartile 2 | 1.15 (0.65–2.04) | 0.630 |  | 1.02 (0.57–1.82) | 0.954 |  | 1.54 (0.90–2.63) | 0.115 |  | 1.41 (0.82–2.42) | 0.218 |
| Quartile 3 | 2.12 (1.26–3.55) | 0.004 |  | 1.71 (0.99–2.95) | 0.053 |  | 2.36 (1.42–3.92) | 0.001 |  | 2.02 (1.19–3.45) | 0.010 |
| Quartile 4 | 3.28 (1.94–5.54) | <0.001 |  | 2.24 (1.22–4.13) | 0.010 |  | 2.65 (1.58–4.44) | <0.001 |  | 2.03 (1.12–3.67) | 0.019 |

CVD: Cardiovascular disease; DBP: Diastolic blood pressure; HDL-C: High-density lipoprotein cholesterol; LDL-C: Low-density lipoprotein cholesterol; SBP: Systolic blood pressure.**\***Classical risk factors include age, sex, smoking status, diabetes, levels of HDL-C and LDL-C, and the use of antihypertensive and lipid-lowering drugs.

**Supplementary Table 4. Hazard ratios and 95% confidence intervals for incident CVD associated with levels of 2007 blood pressure and 15-year cumulative blood pressure.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **BP levels** | **SBP** |  |  | **DBP** |
| **2007 SBP** | **Cumulative SBP** |  |  | **2007 DBP** | **Cumulative DBP** |
| Per SD increase |  |  |  |  |  |  |
| 1 SD  | 1.46 (1.28–1.67) | 1.64 (1.42–1.88) |  |  | 1.34 (1.17–1.54) | 1.47 (1.27–1.70) |
| Quartiles |  |  |  |  |  |  |
| Quartile 1 | Reference | Reference |  |  | Reference | Reference |
| Quartile 2 | 1.45 (0.87–2.42) | 1.17 (0.67–2.04) |  |  | 1.11 (0.70–1.75) | 1.61 (0.96–2.71) |
| Quartile 3 | 1.71 (1.04–2.83) | 2.10 (1.27–3.48) |  |  | 1.62 (1.06–2.49) | 2.36 (1.43–3.87) |
| Quartile 4 | 2.71 (1.68–4.39) | 3.27 (1.97–5.43) |  |  | 1.93 (1.26–2.96) | 2.78 (1.69–4.60) |

CVD: Cardiovascular disease; DBP: Diastolic blood pressure; SBP: Systolic blood pressure.





**Supplementary Figure 1:** Proportions of blood pressure category in 1992, 2002, and 2007 by quartiles of cumulative blood pressure levels. **(A)** SBP; **(B)** DBP. DBP: Diastolic blood pressure; SBP: Systolic blood pressure.





**Supplementary Figure 2:** Adjusted cubic spline for the hazard of incident cardiovascular disease by cumulative blood pressure levels. **(A)** SBP; **(B)** DBP. DBP: Diastolic blood pressure; SBP: Systolic blood pressure.