Supplementary Table S1

Mean ± standard deviation of HRV parameters from 24-h Holter electrocardiographic recordings by time period (n=139).

|  |  |
| --- | --- |
|  | Time period |
| HRV parameters | Morning(7 to 8 am) | Awake (9 am to 9 pm) | Evening(10 to 11 pm) | Asleep(12 to 6 am) | All 24 hours |
| Heart rate | 74.4±11.0 | 75.0±9.3 | 65.4±9.9 | 60.8±8.8 | 70.0±8.25 |
| Ln LF | 5.35±1.34 | 5.08±0.88 | 5.19±1.00 | 5.42±1.00 | 5.21±0.84 |
| Ln HF | 4.67±1.52 | 4.42±1.11 | 4.81±1.29 | 5.14±1.22 | 4.68±1.07 |
| Ln LF/HF | 1.20±0.16 | 1.20±0.16 | 1.12±0.16 | 1.09±0.14 | 1.16±0.14 |

Supplementary Table S2

Sex and age-adjusted means of casual and home systolic and diastolic blood pressures grouped by HRV parameter quartiles.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Systolic Blood Pressure, mmHg | 　 | Diastolic Blood Pressure, mmHg |
|  |  | Causal |  | Home |  | Causal |  | Home |
| HRV Parameters | SBP | 　 | Morning | Evening | 　 | DBP | 　 | Morning | Evening |
| SDNN | Q1 | 128.1 |  | 122.4 | 117.7 |  | 78.3 |  | 77.2 | 71.5 |
|  | Q2 | 126.7 |  | 121.5 | 117.8 |  | 77.5 |  | 77.0 | 71.9 |
|  | Q3 | 126.1 |  | 120.5 | 116.8 |  | 76.6 |  | 75.9 | 70.9 |
|  | Q4 | 126.5 |  | 121.3 | 117.2 |  | 75.7 |  | 75.2 | 70.5 |
|  | *P* for difference | 0.40 |  | 0.31 | 0.69 |  | <0.01 |  | <0.01 | 0.13 |
|  | *P* for trend | 0.30 |  | 0.14 | 0.29 |  | <0.001 |  | <0.01 | 0.05 |
| RMSSD | Q1 | 128.8 |  | 122.9 | 119.1 |  | 79.3 |  | 78.1 | 72.6 |
|  | Q2 | 127.1 |  | 121.1 | 116.8 |  | 77.3 |  | 76.4 | 71.2 |
|  | Q3 | 125.5 |  | 120.8 | 116.9 |  | 75.8 |  | 75.6 | 70.8 |
|  | Q4 | 126.1 |  | 120.9 | 116.7 |  | 75.6 |  | 75.3 | 70.3 |
|  | *P* for difference | 0.04 |  | 0.11 | 0.04 |  | <0.001 |  | <0.001 | <0.01 |
|  | *P* for trend | 0.04 |  | 0.06 | 0.03 |  | <0.001 |  | <0.001 | <0.001 |
| LF | Q1 | 127.2 |  | 122.7 | 118.1 |  | 77.8 |  | 77.2 | 71.4 |
|  | Q2 | 126.3 |  | 120.7 | 116.9 |  | 77.3 |  | 76.8 | 71.8 |
|  | Q3 | 127.0 |  | 121.2 | 117.7 |  | 77.0 |  | 76.2 | 71.3 |
|  | Q4 | 126.9 |  | 121.1 | 116.7 |  | 76.1 |  | 75.3 | 70.4 |
|  | *P* for difference | 0.89 |  | 0.21 | 0.42 |  | 0.18 |  | 0.04 | 0.18 |
|  | *P* for trend | 0.95 |  | 0.15 | 0.25 |  | 0.01 |  | <0.01 | 0.048 |
| HF | Q1 | 128.3 |  | 123.0 | 119.2 |  | 79.1 |  | 78.0 | 72.5 |
|  | Q2 | 127.3 |  | 120.9 | 116.7 |  | 77.4 |  | 76.3 | 71.1 |
|  | Q3 | 125.5 |  | 120.9 | 116.9 |  | 75.9 |  | 75.8 | 70.8 |
|  | Q4 | 126.3 |  | 120.8 | 116.6 |  | 75.6 |  | 75.1 | 70.4 |
|  | *P* for difference | 0.12 |  | 0.09 | 0.02 |  | <0.001 |  | <0.001 | <0.01 |
|  | *P* for trend | 0.16 |  | 0.05 | 0.03 |  | <0.001 |  | <0.001 | <0.01 |
| LF/HF | Q1 | 126.5 |  | 121.3 | 117.1 |  | 76.4 |  | 75.9 | 70.8 |
|  | Q2 | 126.6 |  | 121.5 | 116.9 |  | 77.0 |  | 76.7 | 71.2 |
|  | Q3 | 126.2 |  | 120.9 | 117.2 |  | 76.3 |  | 75.9 | 71.2 |
|  | Q4 | 128.2 |  | 121.9 | 118.2 |  | 78.3 |  | 76.7 | 71.5 |
|  | *P* for difference | 0.29 |  | 0.72 | 0.49 |  | 0.02 |  | 0.46 | 0.70 |
| 　 | *P* for trend | 0.04 | 　 | 0.48 | 0.10 | 　 | <0.01 | 　 | 0.52 | 0.19 |

Systolic and diastolic blood pressures were adjusted for sex and age by ANCOVA.

Supplementary Table S3

Multivariable-adjusted means of casual, and home systolic and diastolic blood pressures grouped by HRV parameter quartiles.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Systolic Blood Pressure, mmHg | 　 | Diastolic Blood Pressure, mmHg |
|  |  | Causal |  | Home |  | Causal |  | Home |
| HRV Parameters | SBP | 　 | Morning | Night | 　 | DBP | 　 | Morning | Night |
| SDNN | Q1 | 130.3 |  | 123.8 | 119.4 |  | 78.0 |  | 76.3 | 70.6 |
|  | Q2 | 129.8 |  | 123.7 | 120.3 |  | 77.6 |  | 76.4 | 71.5 |
|  | Q3 | 129.9 |  | 123.5 | 120.0 |  | 77.1 |  | 75.7 | 70.8 |
|  | Q4 | 130.1 |  | 123.9 | 120.3 |  | 76.1 |  | 74.9 | 70.5 |
|  | *P* for difference | 0.97 |  | 0.96 | 0.67 |  | 0.06 |  | 0.08 | 0.35 |
|  | *P* for trend | 0.90 |  | 0.79 | 0.65 |  | <0.01 |  | <0.01 | 0.43 |
| RMSSD | Q1 | 131.0 |  | 124.3 | 120.8 |  | 78.9 |  | 77.0 | 71.6 |
|  | Q2 | 130.3 |  | 123.5 | 119.4 |  | 77.5 |  | 75.9 | 70.8 |
|  | Q3 | 128.9 |  | 123.3 | 119.5 |  | 76.0 |  | 75.1 | 70.4 |
|  | Q4 | 130.0 |  | 123.9 | 120.1 |  | 76.2 |  | 75.1 | 70.4 |
|  | *P* for difference | 0.29 |  | 0.63 | 0.39 |  | <0.001 |  | <0.01 | 0.18 |
|  | *P* for trend | 0.33 |  | 0.44 | 0.40 |  | <0.001 |  | <0.01 | 0.03 |
| LF | Q1 | 129.6 |  | 124.2 | 119.8 |  | 77.6 |  | 76.3 | 70.7 |
|  | Q2 | 129.4 |  | 122.9 | 119.3 |  | 77.3 |  | 76.0 | 71.1 |
|  | Q3 | 130.7 |  | 124.1 | 120.9 |  | 77.4 |  | 76.0 | 71.3 |
|  | Q4 | 130.4 |  | 123.7 | 119.7 |  | 76.4 |  | 74.9 | 70.3 |
|  | *P* for difference | 0.63 |  | 0.41 | 0.26 |  | 0.35 |  | 0.11 | 0.32 |
|  | *P* for trend | 0.38 |  | 0.67 | 0.94 |  | 0.06 |  | <0.01 | 0.27 |
| HF | Q1 | 130.2 |  | 124.1 | 120.5 |  | 78.5 |  | 76.7 | 71.3 |
|  | Q2 | 130.6 |  | 123.4 | 119.4 |  | 77.7 |  | 75.9 | 70.8 |
|  | Q3 | 129.4 |  | 124.0 | 120.2 |  | 76.4 |  | 75.6 | 70.8 |
|  | Q4 | 130.0 |  | 123.6 | 119.8 |  | 76.1 |  | 74.9 | 70.4 |
|  | *P* for difference | 0.76 |  | 0.86 | 0.58 |  | <0.01 |  | 0.04 | 0.49 |
|  | *P* for trend | 0.77 |  | 0.48 | 0.43 |  | <0.01 |  | <0.01 | 0.15 |
| LF/HF | Q1 | 129.9 |  | 123.8 | 120.0 |  | 76.8 |  | 75.6 | 70.6 |
|  | Q2 | 129.7 |  | 123.8 | 119.4 |  | 77.2 |  | 76.2 | 70.9 |
|  | Q3 | 129.6 |  | 123.3 | 120.0 |  | 76.5 |  | 75.4 | 70.9 |
|  | Q4 | 131.2 |  | 124.1 | 120.6 |  | 78.2 |  | 75.9 | 70.9 |
|  | *P* for difference | 0.44 |  | 0.87 | 0.59 |  | 0.06 |  | 0.61 | 0.98 |
| 　 | *P* for trend | 0.10 | 　 | 0.84 | 0.26 | 　 | 0.03 | 　 | 0.82 | 0.66 |

Systolic and diastolic blood pressures were adjusted for sex, age, smoking, alcohol drinking, the use of hypertensive agents, diabetes, sleep duration, snoring, physical activity, and SF-8 mental component score by ANCOVA.