SUPPLEMENTARY DATA

**Supplementary Table 1.** Correlation coefficients between common indices of insulin sensitivity and glucose disposal rate (GDR) per lean body mass without BMI adjustment

| | **Correlation coefficients between common indices of insulin sensitivity and GDR** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Indices employed fasting condition** | | | | | **Indices derived from oral glucose tolerance test** | | | | |
| | | FIL | HOMA | Log HOMA | QUICKI | | Matsuda index | Simple index | Avignon index | Stumvoll index |
| | N | *R* | *R* | *R* | *R* | N | *R* | *R* | *R* | *R* |
| total subjects | 240 | -0.392* | -0.399* | -0.433* | 0.385* | 198 | 0.468* | 0.511* | 0.353* | 0.469* |
| all EA | 141 | -0.429* | -0.471* | -0.432* | 0.370* | 119 | 0.445* | 0.507* | 0.404* | 0.514* |
| EA male | 68 | -0.437* | -0.472* | -0.510* | 0.406$ | 51 | 0.545* | 0.566* | 0.417$ | 0.562* |
| EA female | 73 | -0.424* | -0.471* | -0.343* | 0.355$ | 68 | 0.351$ | 0.469* | 0.417* | 0.497* |
| all AA | 99 | -0.386* | -0.367* | -0.452* | 0.406* | 79 | 0.531* | 0.529* | 0.293$ | 0.427* |
| AA male | 43 | 0.009 | 0.025 | -0.318 | 0.185 | 34 | 0.406# | 0.405# | 0.218 | 0.317 |
| AA female | 56 | -0.538* | -0.531* | -0.520* | 0.521* | 45 | 0.593* | 0.603* | 0.414$ | 0.499* |
| all male | 111 | -0.208# | -0.214# | -0.446* | 0.328$ | 85 | 0.487* | 0.503* | 0.351$ | 0.423* |
| all female | 129 | -0.482* | -0.496* | -0.432* | 0.444* | 113 | 0.458* | 0.525* | 0.394* | 0.491* |

N is the number in each group, *R* is the correlation coefficient. All bold values are statistically significant.
# $P < 0.05$, $ $P < 0.01$, * $P < 0.001$

SUPPLEMENTARY DATA

**Supplementary Table 2.** Comparison of correlation coefficients between common indices of insulin sensitivity and glucose disposal rate (GDR) per lean body mass.

| | ***P*-value compare correlation coefficients between insulin sensitivity indices and GDR** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | HOMA VS FIL | Log HOMA VS FIL | QUICKI VS FIL | Matsuda VS FIL | Avignon VS FIL | StumvollI VS FIL | Simple index VS FIL | Matsuda VS QUICKI | Avignon VS QUICKI | StumvollI VS QUICKI | Simple index VS QUICKI |
| total subjects | NS | NS | NS | NS | NS | NS | NS | 0.04# | NS | NS | 0.04# |
| all EA | 0.04# | NS | NS | NS | NS | NS | NS | 0.01# | NS | NS | NS |
| EA male | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| EA female | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| all AA | NS | NS | NS | NS | NS | NS | NS | 0.01# | NS | NS | NS |
| AA male | NS | 0.008# | 0.006# | 0.002# | NS | 0.02# | 0.005# | 0.02# | NS | NS | NS |
| AA female | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| all male | NS | 0.003# | 0.05# | 0.007# | NS | 0.03# | 0.005# | 0.04# | NS | NS | NS |
| all female | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

NS, non-significant p-value; GDR, glucose disposal rate measured by hyperinsulinemic clamp; FIL, fasting insulin level; HOMA, the homostatic model assessment for insulin resistance; QUICKI, the quantitative insulin sensitivity check index; $SI_{is}$OGTT, the simple index assessing insulin sensitivity using oral glucose tolerance test. # Significance indicates superiority of the top index VS the bottom index; † Significance indicates superiority of the bottom index VS the top index.

SUPPLEMENTARY DATA

**Supplementary Table 2(continued).**

| | ***P*-value compare correlation coefficients between insulin sensitivity indices and GDR** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Log HOMA VS HOMA | QUICKI VS HOMA | Matsuda VS HOMA | Avignon VS HOMA | Stumvoll VS HOMA | Simple index VS HOMA | QUICKI VS Log HOMA | Matsuda VS Log HOMA | Avignon VS Log HOMA | Stumvoll VS Log HOMA | Simple index VS Log HOMA |
| total subjects | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| all EA | NS | 0.02† | NS | NS | NS | NS | 0.03† | NS | NS | NS | NS |
| EA male | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| EA female | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| all AA | NS | NS | 0.04# | NS | NS | 0.04# | NS | NS | NS | NS | NS |
| AA male | 0.001# | 0.003# | 0.002# | NS | 0.02# | 0.004# | NS | 0.02# | NS | NS | NS |
| AA female | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| all male | 0.02# | 0.04# | 0.009# | NS | 0.03# | 0.004# | NS | NS | NS | NS | NS |
| all female | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

NS, non-significant p-value; GDR, glucose disposal rate measured by hyperinsulinemic clamp; FIL, fasting insulin level; HOMA, the homostatic model assessment for insulin resistance; QUICKI, the quantitative insulin sensitivity check index; $SI_{is}$OGTT, the simple index assessing insulin sensitivity using oral glucose tolerance test. # Significance indicates superiority of the top index VS the bottom index; † Significance indicates superiority of the bottom index VS the top index.

**Supplementary Table 2 (continued).**

| | ***P*-value compare correlation coefficients between insulin sensitivity indices and GDR** | | | | | |
|---|---|---|---|---|---|---|
| | Avignon VS Matsuda | Stumvoll VS Matsuda | Simple index VS Matsuda | Stumvoll VS Avignon | Simple index VS Avignon | Simple index VS Stumvoll |
| total subjects | NS | NS | NS | NS | 0.006# | NS |
| all EA | NS | NS | NS | NS | NS | NS |
| EA male | NS | NS | NS | NS | NS | NS |
| EA female | NS | NS | NS | NS | NS | NS |
| all AA | 0.02† | NS | NS | NS | 0.003# | NS |
| AA male | NS | NS | NS | NS | NS | NS |
| AA female | NS | NS | NS | NS | 0.04# | NS |
| all male | NS | NS | NS | NS | NS | NS |
| all female | NS | NS | 0.01# | NS | 0.05# | NS |

NS, non-significant p-value; GDR, glucose disposal rate measured by hyperinsulinemic clamp; FIL, fasting insulin level; HOMA, the homostatic model assessment for insulin resistance; QUICKI, the quantitative insulin sensitivity check index; $SI_{is}$OGTT, the simple index assessing insulin sensitivity using oral glucose tolerance test. # Significance indicates superiority of the top index VS the bottom index; † Significance indicates superiority of the bottom index VS the top index.