

Supplemental Digital Content 3.

Table. Prediction of MHR from age in all available data and in some restriction sets obtained by different trimming methods.

| | Number of tests | MHR best fitting formula |
|---|-----------------|--|
| A. All available tests | | |
| Completed any test * (ages 18 – 50) | 9622 | $179+0.29*age-0.011*age^2$ ($p<0.0001$) |
| Completed yr0+yr7 tests (ages 18 – 37) | 4432 | $190-0.37*age$ ($p<0.0001$) |
| Completed yr7+yr20 tests (ages 25 – 50) | 3148 | $199-0.63*age$ ($p<0.0001$) |
| B. Restricted sets of tests | | |
| Maximum RPE ≥ 15 † | 8622 | $178+0.39*age-0.012*age^2$ |
| Highest stage achieved >2 † | 9130 | $178+0.36*age-0.012*age^2$ |
| Highest stage achieved >3 † | 7779 | $175+0.63*age-0.015*age^2$ |
| MHR $>75\%$ * ($208-0.7*age$) † | 9380 | $182+0.19*age-0.010*age^2$ |
| MHR $>85\%$ * ($208-0.7*age$) † | 8588 | $186+0.10*age-0.009*age^2$ |
| Above trimline (182,130) | 7549 | $203-0.70*age$ |
| Above trimline (182,130) adjusted for baseline differences¶ | 7549 | $198 - 0.47*age - 0.003* age^2$ |

*The quadratic form was significant for all eligible tests.

†The quadratic form is significant at $\alpha=0.05$.

¶Further adjustment for baseline characteristics that may have been involved in selection bias, including sex, race, BMI, physical activity, smoking status, lung function and treadmill test duration, restored a quadratic association; the intercept includes those covariates evaluated at their means.