

Supplementary Table S2. Additional cycling prediction equations.

Category	Multiple Regression Equation	MAE	Adjusted R ²
VO _{2AT} (eqs)	$10.65_{[5.37]SE} + 0.55_{[0.12]SEX} RVO_{2AT} - 0.06_{[0.03]SEX} RVE_{AT} - 0.07_{[0.03]SEX} RHR_{AT} - 0.36_{[0.17]SEX} RLac_{max} + 0.39_{[0.08]SEX} RVO_{2max}$	2.26	0.70
VO _{2AT} (eqms)	$-7.20_{[2.69]SE} + 0.33_{[0.10]SEX} RVO_{2AT} + 0.53_{[0.07]SEX} RVO_{2max}$	2.36	0.66
HR _{AT} (eqs)	$2.48_{[14.26]SE} + 0.40_{[0.12]SEX} RHR_{AT} + 0.40_{[0.12]SEX} RHR_{max}$	6.52	0.45
HR _{AT} (eqms)	---	---	---
VO _{2RCP} (eqs)	$-1.73_{[5.79]SE} + 0.80_{[0.14]SEX} RVO_{2AT} - 0.004_{[0.001]SEX} RVO_{2ATA} - 0.56_{[0.18]SEX} RLac_{max} + 0.46_{[0.08]SEX} RVO_{2max} + 0.64_{[0.24]SEX} BMI - 0.40_{[0.11]SEX} BF$	2.49	0.77
VO _{2RCP} (eqms)	$5.53_{[4.14]SE} + 0.64_{[0.14]SEX} RVO_{2AT} - 0.003_{[0.001]SEX} RVO_{2ATA} + 0.49_{[0.09]SEX} RVO_{2max} - 0.25_{[0.10]SEX} BF$	2.65	0.74
HR _{RCP} (eqs)	$18.94_{[10.80]SE} + 0.82_{[0.06]SEX} RHR_{max} - 0.36_{[0.14]SEX} BF$	4.85	0.64
HR _{RCP} (eqms)	$12.43_{[10.77]SE} + 0.82_{[0.06]SEX} RHR_{max}$	4.88	0.62
VO _{2max} (eqs)	$6.75_{[4.06]SE} + 0.07_{[0.03]SEX} RfR_{RCP} + 0.51_{[0.12]SEX} RVO_{2max} + 0.40_{[0.13]SEX} RVO_{2RCP} - 0.39_{[0.09]SEX} BF$	2.59	0.76
VO _{2max} (eqms)	$12.05_{[4.06]SE} + 0.84_{[0.06]SEX} RVO_{2max} - 0.41_{[0.09]SEX} BF$	2.80	0.75
HR _{max} (eqs)	$25.04_{[8.10]SE} + 0.25_{[0.13]SEX} RHR_{RCP} + 0.61_{[0.27]SEX} RLac_{max} + 0.59_{[0.12]SEX} RHR_{max} - 0.32_{[0.10]SEX} BF$	3.33	0.77
HR _{max} (eqms)	$20.36_{[8.25]SE} + 0.87_{[0.05]SEX} RHR_{max}$	3.61	0.75

Abbreviations: MAE, mean absolute error; VO_{2AT}, relative VO₂ at AT (mL·min⁻¹·kg⁻¹); eqs, equation in the simplified form; RVO_{2AT}, running relative VO₂ at AT (mL·min⁻¹·kg⁻¹); RVEAT, running pulmonary ventilation at AT (L·min⁻¹); RHRAT, running heart rate at AT (bpm); RLac_{max}, running maximal lactate concentration (mmol·L⁻¹); RVO_{2max}, running relative maximum VO₂ (mL·min⁻¹·kg⁻¹); eqms, equation in the most simplified form; RHR_{max}, running maximal heart rate (bpm); RVO_{2ATA}, running absolute VO₂ at AT (mL·min⁻¹); BMI, body mass index (kg·m⁻²); BF, body fat (%); RfRRCP, running respiratory frequency at RCP (breaths per minute); RVO_{2RCP}, running relative VO₂ at RCP (mL·min⁻¹·kg⁻¹); RHR_{RCP}, running heart rate at RCP (bpm).