SUPPLEMENTAL MATERIAL 1

Reference equations for breathlessness during incremental cycle exercise testing

Table A1. Quasi Information Criterion for different models of breathlessness. Restricted cubic splines with knots placed at the 5th, 35th 65th and 95th percentiles are written as f(x), i.e. f(age) denotes the restricted cubic spline of age. Lower values indicate a better fitting model (bold).

Variables in model	QIC Men	QIC Women
$f(\%predW_{max})$	25165	16911
$f(\%predW_{max})+ f(age)$	25011	16626
$f(\%predW_{max}) + f(age)+f(height)$	24963	16643
$f(\%predW_{max}) + f(age) + height$	24957	16632
$f(\%predW_{max}) + f(age) + height + weight$	24962	16632
$f(\%predW_{max}) + f(age) + height + f(weight)$	24953	16635
$f(\%predW_{max}) + f(age) + height + f(weight) + \%predW_{max}*age$	**24935**	16618
$f(\%predW_{max}) + f(age) + height + \%predW_{max}*age$	**24939**	**16614**
$f(\%predW_{max}) + f(age) + \%predW_{max}*age$	24993	**16608**

Table A2. Parameter estimates.

Parameter	Men Estimate	Women Estimate
Intercept1	7.105994524	2.823125
Intercept2	8.466031224	4.014411
Intercept3	9.825848726	5.44524
Intercept4	11.61099378	7.29478
Intercept5	12.82448793	8.37268
Intercept6	13.9804337	9.643334
Intercept7	14.54650183	10.10118
Intercept8	15.83592933	11.62911
Intercept9	16.66525731	12.36298
Intercept10	18.4985691	13.74351
%predSpl_1	-0.109693986	-0.10982
%predSpl_2	-0.000438626	-0.00041
%predSpl_3	0.002369292	0.002344
AgeSpl_1	0.046027134	0.039811
AgeSpl_2	-0.001408948	0.001028
AgeSpl_3	0.004509744	-0.00237
Height	-0.025396237	
lastW_of_pred*Age	-0.000302552	-0.0004

Table A3. Spline knots

Variable	Men	Women
Age	21.92, 40.20, 52.33, 69.03	27.57, 48.37, 59.21, 73.48
%predW$_{max}$	36.54, 62.51, 83.25, 108.84	36.75, 62.28, 83.70, 110.73

See Hastie, et al 2009 for calculation of splines.