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Predictors of Two Kilometer Rowing Ergometer Time Trial Performance

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Predictors of performance can aid coaches and trainers in prescribing exercise programs for rowing athletes. To date, most of the prediction models have been developed for runners and cyclists. **PURPOSE**: The aim of this study was to develop a regression model to predict performance of a simulated 2 kilometer rowing ergometer time trial. **METHODS**: A group of mixed gender rowing athletes (n=12) completed in a counterbalanced order a 2 Kilometer rowing time trial and a continuous progressively incremented graded exercise test on a rowing ergometer. Subjects were 23.91±4.99 years old, weighed 79.14±12.85 kg, were 187.38±12.60 cm, had a VO_2max of 55.48±10.32 ml/kg/min and had 3.17±2.79 years of rowing experience. Physiological measures were recorded during both testing protocols. **RESULTS**: Maximum Power/Stroke Ratio ($r = -0.96$, $p<0.001$), Power/Stroke Ratio at the ventilatory breakpoint ($r = -0.90$, $p<0.001$), Maximal Oxygen Uptake ($r = -0.84$, $p<0.001$) and Oxygen Uptake at the ventilatory breakpoint ($r = -0.82$, $p<0.001$) were found to be strong and significant predictors of 2 kilometer rowing performance. **CONCLUSIONS**: The four significant predictors of rowing performance suggest training should focus on improving both aerobic capacity and strength.

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