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_{2}max 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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