

Individualised RPE during a self paced cycle time trial

Andrew Renfree, Julia West, Mark Corbett and Clare Rhoden

Abstract

A number of previous studies have demonstrated that increases in ratings of perceived exertion (RPE) during prolonged sub-maximal exercise are linear, and this phenomenon exists during constant load and self paced exercise. These studies have all reported group mean RPE's at various points throughout an exercise bout. A potential problem with use of the mean in these situations is group analysis of human perceptions may mask individual differences, thereby overlooking important information regarding the individual. This study therefore examined both group and individual RPE responses during paced cycle exercise.

Six well-trained participants performed two 20km laboratory time trials on their own bicycles mounted onto the Kingcycle ergometer. Throughout each trial they received feedback on distance covered, time elapsed, and speed. At 0.5km intervals RPE was reported using Borg's C20 scale. Both group mean and individual RPE data was subsequently plotted against distance completed for both trials.

During Trial 1 and Trial 2, the rate of increase in RPE was similar and linear in nature. However, this increase in RPE was not reflective of individual participants who displayed a variety of different RPE responses.

It is concluded that use of group mean data in this situation masks potentially important individual differences.