

## **Pacing Strategies in the 200 Yard Freestyle by Collegiate Men**

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### **ABSTRACT**

Examination of components of a 200 yd freestyle race may provide useful information for understanding how pacing strategy contributes to successful performance. **PURPOSE:** To compare 50-yd splits of a 200-yd freestyle race in higher performing and lower performing swimmers to assess if pacing strategy differs between groups. **METHODS:** An ex post facto design was used employed to create a dataset of 200 yd freestyle results. Split times were generated for each 50 yard segment of a 200 yd race for two performance groups of swimmers; the first and last four finalists in eight conference championships each for NCAA Division I and NCAA Division III (16 meets total). Standardized splits were calculated as a percentage of total race time. Pacing between groups was compared separately for each NCAA Division using a 2x4 (group x split) Mixed Model ANOVA. Significant group x split interactions were followed with independent samples t tests to compare each split time between groups. Stepwise Multiple Linear Regression was used to examine the contribution of splits to final place using both absolute and standardized split times. **RESULTS:** A significant interaction between Group and Split was found for Division 1 ( $p=0.002$ ) and Division 3 ( $p=0.00$ ) absolute data, as well as standardized data ( $p=0.024$  and  $p=0.001$ , respectively). Subsequent independent t-tests revealed the third 50 of top performers ( $23.42 \pm 0.59$  s) to be significantly faster ( $t=8.263$ ,  $p=0.000$ ) than lower placing swimmers ( $25.29 \pm 0.61$  s) for Division 1. Similarly, for Division 3 swimmers the third 50 of top performers ( $26.08 \pm 0.22$  s) to be significantly faster ( $t=5.696$ ,  $p=0.000$ ) than lower placing swimmers ( $28.60 \pm 2.46$  s). Regression analysis suggested that the third 50 of the race significantly predicted place and explained 52.4% of the variance in place ( $\beta = 0.724$ ,  $R^2 = 0.524$ ,  $p = 0.000$ ) in Division 1 athletes. Likewise, In Division 3, the third 50 also significantly predicted place and explained 34.4% of the variance in place ( $\beta = 0.586$ ,  $R^2 = 0.344$ ,  $p = 0.000$ ). **CONCLUSION:** The third 50 is most indicative of success in the 200y freestyle for NCAA men in both Division 1 and 3, despite high variability in Division 3 data. Thus, top performers in both divisions place more emphasis on the latter half of the race, specifically in the third 50.