

Adaptation and Training: Case Study of a Breaststroke Olympian Thai Swimmer
During 2016-2017

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Abstract

Introduction: The individual athletes' and adaptive response to training is important for physiological performance. The aim of the study was to analyze the load of 3 training cycles during 2016-2017.

Methods: The case study was a Thai male Olympian swimmer. Periodization training during 2016-2017 were 23 months: 2016 begun between February – December and 2017 begun between January – December, there were 3 training cycles of the macrocycle, including general, special, and specific. The mixed methods research: quantitative, periodization, distance of training, fitness testing, and qualitative data: special cycle and training intensity were adopted. For fitness testing, aerobic and anaerobic capacity, muscle power and body composition were tested at SAT and Burapha's physiological laboratory. Means and standard deviation was used for analyzing the quantitative data, whereas content analysis was used for qualitative data.

Results: The training volume of swimming 23 months, distanced was 2783.4 kms, in special was 2550.2 kms and specific was 674.2 kms. The physiological fitness showed his adaptation with good heart rate (50-52 bpm), and weight (+2.6%) and BMI (+2.7%). Hence, when measuring body composition, it was found that the lean mass increased. (+2.9%) The training load caused the Olympian stronger and increased his muscle. For leg strength (kgs.), seated chest press (kgs.), and seated rows (kgs.) showed the following details: max/average (+150%, +3%/+3%, +3.5%/+1.3%) which were his main changes.

Conclusions: The training cycles for the peak performance made his personal best time in the Olympic Game. Thus, the knowledge of sport science should be applied for further training.

Keywords: Adaptation, Training Cycle, Anaerobic Capacity, Anaerobic Power