



Influence of Winter Training on Physiological and Biochemical Indexes of Bicyclist

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Objective The research took the bicyclists in Zhejiang for preparing of the Thirteenth National Games in winter training as the subjects. Through physiological and biochemical index of testing during the winter training, we attempted to find out some rules or problems by exploring the characteristics of their training during winter training, Reached on body function and the training intensity of athletes for effective monitoring and adjustment effect during winter training, and to provide a reference for the development of scientific in bicycle training.

Methods During the long term bicycle training, some physical fitness evaluation indices including $VO_{2\max}$, anaerobic power, body composition, Hb, Bun, CK, T and NEUT% were tested and analyzed systematically. Master the bike athletes body function changes during the winter training, and discuss the relationship between these indexes and body function condition.

Results $VO_{2\max}$, $VO_{2\max}$ relative value almost no change during the winter training; The Large Anaerobic work, 30s average anaerobic work and an body composition indicators no significant difference ($p < 0.05$), but had a significant change. Hb, Bun, CK, T, NEUT% based standard value in the normal range, throughout the winter training period, Hb, BUN and CK, T, NEUT % has experienced cyclical changes along with the change of sports load: Hb, T at the beginning of the winter training has a downward trend, CK and NEUT % in the early part of the winter training has a rising trend, but as for the winter training gradually restored, BUN rising during the winter training, two weeks before the end of winter training to get down.

Conclusions 1, the pros and cons of aerobic capacity is not the main factors influencing the cycling short athlete special performance, but of eliminating anaerobic lactic acid after training to play an active role, aerobic ability training should be strengthened.

2, anaerobic metabolism energy is the important factors that affect cycling short athlete sport result, peak power and 30s average power to scientific evaluation of the athlete's training effect.

3, decreased body fat percentage and lean body mass increase, to improve the athlete special scores play a positive role.

4, during the winter training athletes Hb, CK, T, NEUT % changes over motion load, NEUT % can be used as auxiliary training monitoring indexes of female athletes on the biochemical indexes of the sensitivity is higher than male athletes.

5, in the case of lean body mass is not fall, blood urea to maintain at a high level of cycling short athletes may not bring much impact performance.

6, Because of the mobilization can bear the load and strength are not the same, the same load and intensity produced by the reflect function will not the same, further analysis is needed to combined with physiological and biochemical indexes and individual training plan situation carries on the comprehensive consideration, so as to improve the accuracy of measurement analysis.