

Review

Tabata training-its theory and development

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ABSTRACT

In this review, theory and developments of Tabata training is described. Tabata training is an exhaustive intermittent bicycle exercise consisting of 6-7 sets of 20 sec exercise bouts with 10 sec rest between the bouts. Since oxygen uptake during the last bouts of the training reaches to maximal oxygen uptake and total oxygen deficit of the exercise amounts to be maximal oxygen deficit, this training was demonstrated to load both aerobic and anaerobic energy releasing system maximally and simultaneously, enabling these two energy releasing system to be improved maximally.

Nowadays, not only elite sportsmen and women, but also ordinary people enjoy this training for improving sports performance and health promotion (and fun), respectively. They uses body-weight bearing exercise, for example, berpee jump. In this review, physiological characteristics of the body-weight bearing exercises were described especially from view point of exercise intensity.

Furthermore, biological evidences of the Tabata training which have accumulated for explaining adaptations of skeletal muscle to the training in terms of elevated expression of proteins that have physiological functions regarding sports performance and health promotion were described briefly.

Keywords: high intensity intermittent training, Maximal oxygen uptake, Maximal oxygen deficit, Weight-bearing exercise