

原著論文

## 5-Aminolevulinic Acid 摂取が高強度負荷時の 運動パフォーマンスに及ぼす影響

Effect of 5-Aminolevulinic Acid Intake on Exercise Performance under  
High Intensity Load

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### Abstract

Today, in order to exercise and play sports safely and effectively, it should be considered that the training, the games and the rest-nutrition need to be seen as a trinity, and it is important to create an environment that includes nutritional management to compensate for the substances consumed by the body. It is also important to create an environment that includes nutritional management to replenish the substances consumed by the body. In addition, the reduction of fatigue and tiredness during daily training affects not only the next day's training but also the performance in games.

In the present study, subjects are 8 healthy males, who exercise moderately on a daily basis were randomly assigned to receive 5-ALA or placebo (100 mg/day) for 7 days in a crossover double-blind fashion. A performance test (exercise intensity 85%, pedaling 85 rpm) was performed before and after the intake of 5-ALA and placebo, and the effect of 5-ALA on exercise efficiency was analyzed, as well as the effect of exercise fatigue on performance.

As a result, in the performance test, VO<sub>2</sub> and HR showed a suppressive tendency to 5-ALA intake, and exercise efficiency showed an increase.

キーワード：運動効率, 心拍数, 疲労

Exercise efficiency, Heart rate, Fatigue

### 1. 緒言

競技スポーツにおいて、試合で良い結果を残すためには毎日のトレーニングの質と量が大切になってくる。この質と量においては「トレーニング」・「栄養と休息」・「試合」を三位一体と捉えることが重要と云える。「栄養と休息」については、日々のトレーニングにおける精神的・

肉体的疲労および疲労感を次の日のトレーニングにできるだけ影響させないことが、トレーニングの効果をより高いものとし、この積み重ねが試合でより良いパフォーマンスへと導くものと考えられる。しかし、実際にはコーチや選手において、トレーニングの量が少ないと感じることも良く見受けられる光景である。

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