

## 階級制スポーツにおける急速減量に関する研究

### (2) レスリング選手の減量の筋持久力およびパワーに及ぼす影響

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## Studies on the Effects of Rapid Weight Reduction in Sports with Weight-Classification System

### Report 2. Effects of weight reduction of muscular endurance and power of wrestlers

by

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To find out the effects of rapid weight reduction on muscular endurance and power, Four college wrestlers in preparation for actual competition were exposed to radical dieting and sweating from physical exercise to reduce weight for the period of six to seven days and were subjected to the test of static muscular endurance and power by an inertia wheel before and after the weight reduction. Two wrestlers from the same university were used as a control. Results obtained were as follows.

1. The average amount of weight reduced was 3.6 kg (6.1%). Decrease in skinfold thickness was remarkable in abdomen (22%), and muscular strength (the elbow flexion) was decreased in average 8%.

2. As to the static muscular endurance, sustained time was reduced in average 27%, and decrement of maximum muscular strength which performed one bout per every two seconds for four seconds was also observed.

3. Arm power (watt) calculated from the result obtained by an inertia wheel was reduced in average 23.7% (including data obtained from the preceding experiment exceeded in 1968). In relation to the rate of weight loss, muscular power decreased in average 20% for a group which reduced 5.3~5.7% of their weight, while other group which reduced 6.0~6.7% of their weight decreased their power in average 31%.

4. From the above results, it may be said that the rapid weight reduction of average 6.1% might cause decrement in anaerobic muscular capacity and concentration of nervous impulse. [Proceedings of Department of Physical Education, College of General Education, University of Tokyo, No. 7, 41~47, 1972]

### 緒 言

本研究は前報<sup>1)</sup>に引き続き、試合を目前としたレスリング選手の1週間程度の減量について、特

に、筋持久力、およびパワーに与える影響について検討したので報告する。従来、減量が筋持久力やパワーに与える影響についての検索は少なく、わずかに白井<sup>2)</sup>、北<sup>3)</sup>、著者<sup>2)3)</sup>らの報告があるにすぎない。

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