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A Study about Exercises by the Use of Swedish Bars

By *Takashi Morishita**

The objectives of this paper is to study the prescriptive factors of exercises made using Swedish bars, such as the intensity of exercise, methods for exercise, steps of coating, muscle training, etc.

What are included in this study are chinning which may be termed as the features of exercises by the use of Swedish bars, the relationships between chinning and complex exercises, electromyogram sparke pattern appearing when the chest is moved, when gymnastics is exercised empty-handed and when an exercise is made using Swedish bars.

1. Kinds of Exercises of which Measurements were Carried Out

a) Chinning

Strength chinning and weak strength chinning

Strength chinning and weak strength chinning with the knees raised and the legs hung down, as well as with the thighs and legs stretched forward

b) Chest Exercises

The chest is bent backward as the arms are raised aslant and the palms and open

Exercises using Swedish bars—The chest is bent backward as the arms are raised (Standing).

Exercises using Swedish bars—The chest is bent backward as the arms are raised (Standing with the heels raised).

2. Results of Measurement

In the case of Strength chinning, the joints of the upper arms as well as the ribs and the collarbones are in the position when they are raised. The muscles which

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are moved to grasp the bars are supposed to be affected. The body-weight, as the muscles of the upper limbs which mainly act are extended, is supposed to be supported by the strength of the ligaments and the joint capsules as well as by the strength of the muscles themselves. While in the case of weak strength chinning, the electric discharge phenomenon caused by the M. Pectoralis, M. Latissimus dorsi, etc., appears prominently on the chest, upper arm cords and upper arm muscles. For this chinning, intensive efforts are required, which is appropriate used for training purposes.

When chinning is mixed with other exercises, such as weak strength chinning with the knees bent and the thighs raised, strength chinning with the knees stretched and the legs raised, weak strength chinning with the knees stretched and the legs raised electromyogram sparke pattern which appears on M. rectus abdominis shows the same tendency. This indicates that such exercises have no great influence upon the load applying on the upper arm muscles. From the results of measurements carried out this time, it was recognized that weak strength chinning was superior to strength chinning when one of them was exercised independently from the other.

Also in the case of the exercises of the chest, electromyogram sparke pattern which appeared on the selected muscles were generally more prominent with the exercises made using wall bars than those made using no Swedish bars. It was also recognized that accurate guidances should be exercised as to the methods of exercise.

3. Conclusions

It is not too much to say that all of the exercises which are made by the use of Swedish bars are developed with supporting action as a basis.

Strength chinning exercised in a simple manner, weak strength chinning useful to maintain muscular strength and chinning with the elbows bent, and further reverse chinning, as well as others into which other exercises are mixed, will provide a plenty of training materials. As to exercises of part of the body and exercises with the use of Swedish bars, training materials can be obtained abundantly like in the case mentioned above.

If the materials thus obtained are analized, and further, if static and dynamic factors are adopted versatilely and collectively, very useful materials will surely be obtained.

By obtaining sparke pattern from electromyogram while exercises are made for such training materials, standardization of intensity of exercises may be realized. By so doing, it is hoped that a clue to making prescription appropriate to sexes, ages and individual physical strength will be found.