

## CONTRIBUTIONS REGARDING THE DESIGN AND APPLICATION OF SOME PERSONALIZED PROGRAMS OF PHYSICAL DEVELOPMENT IN ADULTS THROUGH BODYBUILDING

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**Abstract:** Bodybuilding did not exist until the end of the 19<sup>th</sup> century when it was popularized by Eugen Sandow known as the “father of bodybuilding”. Sandow is credited as a pioneer of this sport due to the fact that he showed off his physique in various “strength demonstrations”. He became so popular by these demonstrations that he started many businesses and was among the first entrepreneurs to sell products under his own name (dumbbells, chest expanders etc). In Romania, during 1965-1969, the bases of bodybuilding were laid from a theoretical, practical, organization and competitive point of view, the year 1966 marking the beginning of a new phase in bodybuilding when it is organized, under the patronage of the Romanian Federation of Weightlifting, the first national championship in Craiova for juniors and in ClujNapoca for seniors, in those days on categories of height. On March 24, 1970, The Office of the National Council for Physical Education and Sports decided that the Romanian Federation of Weightlifting to change its name in the Romanian Federation of Weightlifting and Bodybuilding (F.R.H.C.) which was maintained until 1989.

**Keywords:** bodybuilding, physical development, personalized programs

### Introduction

The introduction of practicing physical exercises and more precisely bodybuilding among the sedentary persons for body remodeling and improving the general physical condition [1].

By using a series of aids specific to bodybuilding and by using and combining training methods with progressive loading the strength development can be improved and an important contribution can be brought to the muscular hypertrophy, to the improvement of joint mobility and reduction of the fat layers. Physical development represents a current issue, especially the biological indexes and the determining parameters for a good health state. Therefore, we proposed to illustrate the need of using the means specific to bodybuilding in the process of maintenance and selective influencing of the musculoskeletal system but also as an efficient way of decreasing the fat layer and body remodeling.[2]

**Research methods:** Study of the specialty literature, method of dialogue, method of observation, method of testing, graphical and table method.

### General and operational guiding objectives

#### General objectives:

- ✓ Development of the muscle volume
- ✓ Increase of strength.
- ✓ Increase of muscle density.
- ✓ Obtaining of muscle definition and striation.

- ✓ Improvement of the joint mobility degree

#### Objectives of anatomic adaptation:

- ✓ Effort involving all muscle groups, joints and tendons and their training for the next stages
- ✓ Preventing injuries by progressive increase of loading in training.
- ✓ Progressive increase of cardio-respiratory resistance.

#### Objectives of hypertrophy:

- ✓ Increase of muscle fibers by monitoring the ATP/CP energy deposits.
- ✓ Refining of the aspect of all muscle groups.
- ✓ Perfecting the muscle symmetry by balancing the proportions between the group volumes.

#### Objectives of strength development:

- ✓ Increasing the level of proteins from the muscle in order to induce chronic hypertrophy, increase of muscle tone and density.
- ✓ Increase of the diameter of muscle section and myosin filaments (the only way of inducing chronic hypertrophy).
- ✓ Recruiting and stimulating as many as fast type fibers as possible by applying heavy loads in training.

#### Objectives of muscle defining:

- ✓ Burning of subcutaneous fat and increase of the visibility of muscle striations.
- ✓ Increase of protein content of the muscle by using long sets with multiple repetitions.
- ✓ Increase of density of muscle capillaries by increasing the training volume in aerobic regime.

*Objectives of the transition period:*

- ✓ Decreasing the volume and intensity of the training.
  - ✓ Rebuilding the energy reserves and relaxation of the body and mind.
  - ✓ Recovery after the fatigue accumulated in the previous phases.
- Driving system for achieving the objectives of the experiment

Table. 1. Programme for 6 weeks

Gr	Exercise	Phase duration: 6 weeks		Number				Weight % of 1RM 40-60 %
		Training/ week3	Groups/ sess. 8 P 3min.	ex/gr.1-2 P 1min.	set/ex 2- P 30sec	repet./set 8-12		
		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	
Pectorals	Supine pressing	3 x 10R	4x10R	3 x 8R	4x10R	3 x 8R	4x10R	
	Incline pressing	3 x 12R	3 x 8R	4x10R	3 x 8R	4x10R	3 x 8R	
	Chest fly with dumbbells	2 x 10R	4x12R	3 x 8R	3x12R	3 x 8R	3x12R	
	Pushups	3x 12R	3 x 8R	3x12R	3 x 8R	3x12R	3 x 8R	
	Tractions at weight machine	3x 8R	4x10R	3 x 8R	4x10R	3 x 8R	4x10R	
Shoulders	Ramat	3 x 10R	3 x 8R	4x10R	3 x 8R	4x10R	3 x 8R	
	Dumbbell raise	3 x 8R	3x12R	3 x 8R	3x12R	3 x 8R	4x12R	
	Pull – over	2 x 12R	3 x 8R	3x12R	3 x 8R	3x12R	3 x 8R	
	Behind the neck press	2 x 8R	4x10R	3 x 8R	4x10R	3 x 8R	4x10R	
	Lateral lifting with dumbbells	3 x 10R	3 x 8R	4x10R	3 x 8R	4x10R	3 x 8R	
Biceps	Crosses at cable machine	2 x 8R	4x12R	4 x 8R	3x12R	3 x 8R	3x12R	
	Should rotation with bar	2 x 12R	3 x 8R	3x12R	3 x 8R	3x12R	3 x 8R	
	Curls with bar	3 x 8R	4x10R	3 x 8R	4x10R	3 x 8R	4x10R	
	Curls with dumbbells	4 x 10R	3 x 8R	4x10R	3 x 8R	4x10R	3 x 8R	
	Curls with EZ bars	3 x 8R	3x12R	3 x 8R	4x12R	3 x 8R	3x12R	
Triceps	Larry-Scott curls	3 x 12R	3 x 8R	3x12R	3 x 8R	3x12R	3 x 8R	
	Close-grip press	3 x 8R	4x10R	3 x 8R	4x10R	3 x 8R	4x10R	
	Extensions at weight machine	4 x 10R	3 x 8R	4x10R	3 x 8R	4x10R	3 x 8R	
	Extensions with bar	3 x 8R	3x12R	3 x 8R	4x12R	3 x 8R	3x12R	
	Pushups at uneven bars	3 x 12R	3 x 8R	3x12R	3 x 8R	3x12R	3 x 8R	
Hips	Squats	3 x 8R	4x10R	3 x 8R	4x10R	3 x 8R	4x10R	
	Leg press	4 x 10R	3 x 8R	3x10R	3 x 8R	3x10R	3 x 8R	
	Leg extensions	3 x 8R	4x12R	3 x 8R	3x12R	3 x 8R	3x12R	
	Bench curls	3 x 12R	3 x 8R	3x12R	3 x 8R	3x12R	3 x 8R	
	Calf raise	3 x 8R	4x10R	3 x 8R	4x10R	3 x 8R	4x10R	
Abdomen	Press extensions	3 x 8R	3x12R	4 x 8R	3x12R	3 x 8R	3x12R	
	Jump rope	3 x 12R	3 x 8R	3x12R	3 x 8R	3x12R	3x 8R	
	Bench curls	3 x 8R	4x10R	4 x 8R	4x10R	3 x 8R	4x10R	
	Crunch curls	4 x 10R	3 x 8R	4x10R	3 x 8R	4x10R	3 x 8R	

The reference models in bodybuilding are generally well defined and established. If, in other sports the somatic biotype with certain

deficiencies may be compensated by qualities of will and ambition, in bodybuilding this cannot be achieved because the visual

examination of the individual on the stage allows the highlighting of all deficiencies. Therefore, the health state must be always very good. The diseases affecting the musculoskeletal system, rheumatism, spondylitis or physical deficiencies such as: scoliosis, kyphosis, pronounced lordosis, asymmetry of limbs exclude individuals from practicing competitive bodybuilding.[3]

Also, congenital and inherited cardiovascular diseases are not compatible with the practice of this sport. The digestive system must function in a normal way given the extraordinary requirements regarding the alimentation of a bodybuilder. The urinary system must have a normal functionality in order to allow the elimination of the metabolism products by effort. The tegument must be clean with a good elasticity and of adequate color.

By well-balanced training the muscle development of the entire body is achieved, aiming for the muscle mass to be as great as possible regarding volume and spreading, with correct anatomical proportions and a very good symmetry [4]. In the defining period, with the help of high intensity training associated with an adequate diet, the aim is to decrease as much as possible the subcutaneous fat layer and the elimination of water by the dermic tissues for a very precise visibility of the muscle fasciae. The sports training aims to develop the skeletal musculature of the entire body – both of the trunk and of the upper and lower limbs – achieving body harmony. The various segments of the body must be within

certain ratios between them, a fact which contributes to the impression of proportionality of the parts.

#### **Conclusions:**

The programs of applied exercises were conceived for each group and applied according to the training program on each period.

According to the above, it was found out that the objectives were achieved, the subjects responding positively to the applied programs without any issues.

Positive evolutions were recorded regarding the development of strength, modification of involved areas, decrease of the fat layer and improving of life quality [5]

The applied methodology is adequate, the exercises are efficient, a fact which shows that the programs can be applied without any issues to sedentary persons, the recorded evolutions being promising and the used methodology is efficient.

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