

- Internships should be designed in such a way as to support the beneficiaries in all the career planning (the period, planning of some activities regarding the options in career).
- Improving, disseminating and promoting some specific rules and procedures (regarding the internship, traineeships performance, volunteering) doubled by a responsible assumption from all stakeholders (employers, university environment).
- In the internships (defining the student-employer relationship), ways of consulting should be identified to find out what would be type of desirable institutional behaviour (discussions, workshops, focus-group, etc.); works to promote the internships (which can be achieved in partnership with universities and beneficiary companies) should be designed in a win-win manner, emphasizing multiple benefits (for student, university, employer).
- The development of theoretical training is recommended not only within the university, but also in hotels, restaurants, the organization of trainings and master-classes in companies, the acquisition of socialization and communication skills.
- Attracting the students in the development of projects , business-plans for companies, that will constitute methodical recommendations for the company administration.
- Sustainability monitoring (post-internship - newsletter, discussion group, forums, etc.).

#### References:

1. Calugher V., Lungu E. *The adaptation of university studies offer in the field of physical culture and sport according to the requirements of labour market. In: Logos unversality mentality education novelty. World LUMEN congress. Iași&Suceava, 2016, p. 116-117.*
2. Chiș V. *Pedagogia contemporană – pedagogia pentru competențe. Cluj-Napoca: Editura Casa Cărții de Știință, 2005, p.18.*
3. Mindrișan V. *Pregătirea profesional-pedagogică a specialiștilor în domeniul turismului. Chișinău: INEFS, 2001.*

## Pedagogical Control of Special Training of Professional Basketball Players Based on Measurement Procedures and Testing

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#### Abstract

The given paper summarizes the experience of using special training control professional basketball players, the approximate content of measurement procedures and tests used for the pedagogical control of basketball players. The monitoring of the functional condition is accomplished by using tests which shall provide information for coaches on the impact of training on the body, and will help to choose the optimal strategy for training the athletes. Also, the organization of the pedagogical control of the special training of basketball players is described.

*Keywords: basketball, measuring procedures, testing, abilities, qualified basketball players, pedagogical control, coordination abilities*

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**Introduction.** In sport field, measuring and testing represent important components of the athletes' training management process. These allow:

- to individualize the process of athletes' training;
- to evaluate the effectiveness of various training programs;
- to control the adaptation processes of the athletes;
- to predict predisposition to certain sport activities.

Basketball is a sport with non-standard movements and variable power operation. For a basketball player, the significant length of body is typical, as well as relatively narrow chest, disproportionate body weight (under - developed) towards the body's length and chest circumference. Professional basketball players should have

significant developed coordination abilities (especially space-time parameters of moves and accuracy), power abilities (especially developed speed), speed abilities (especially developed starting speed), anaerobic and aerobic abilities, and joint flexibility (especially the spine).

**Model characteristics for developing morphological features.** Usually, common methods are used for determining the morphological features, described by E.G. Martirosov and R.D. Aleksanyants. But there is only one question: what to determine?

For basketball men players, the main morphological indicators and their model characteristics are presented in Table 1.

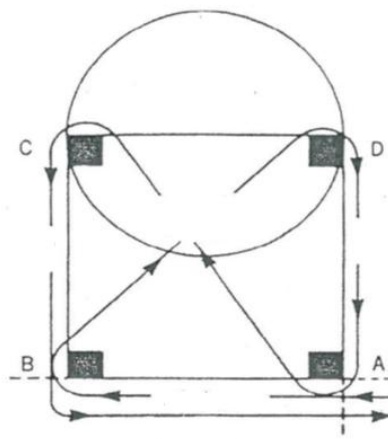
**Table 1. Morphological indicators of professional basketball players**

Morphological indicators	Average
Body length	198 cm
Body weight	93 kg
Arms Range	222 cm
Muscle mass	52%
Fat mass	12.8%

**Evaluation of coordinating abilities development.** Below, are described the content of tests used for developing motor abilities of basketball players. The development of special coordinating abilities (CA) of the basketball players may be determined by using tests which consist of making different moves, controlling the ball in various ways and in different directions, determining the target accuracy while throwing the ball. Hereunder are described the technologies of performing certain tests.

**Running while changing the way of movement.** The purpose of the test is to determine the ability to coordinate movements while changing the motor activity. During the test, it is proposed to run on the basketball court in various ways. On one half of the field, in each corner, are placed four pillars (Figure 1).

Some options are proposed to overcome the distance: after starting from point A to point B – running by side steps, from point B to point D - running back in front, from point D to point A - normal running, from point A to point C - running back in front, from point C to point B – normal running and from point B to finish (point A) - running by side steps. When running by side steps, cross steps are not permitted. The total time for overcoming the distance is fixed.



**Fig 1. Running while changing the way of movement**

**Slalom running with the ball.** The purpose of the test is to determine the development of the ability to differentiate the space-time parameters of movements of the basketball players of different ages and sports qualifications. On a distance of 20 m, 9 flags are placed, while 2 flags are fixed at the start and finish lines. The flags are shown in Figure 2 (shall be noted that flag 7 and 8 are fixed not exactly in a straight line). The test participants shall run with one hand the ball as fast as possible as possible, on the route indicated in Figure 2. After the finish, participant continues to run the ball with the other hand and returns to the starting position. The total time for execution (with accuracy up to 0.1 s) is recorded.

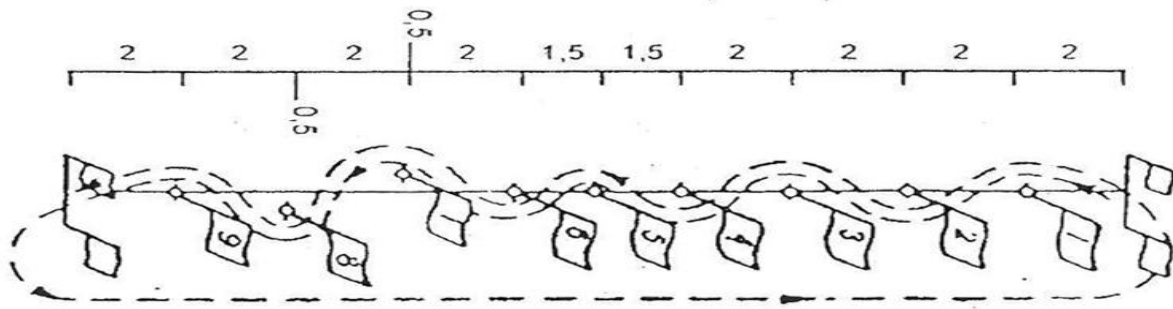


Fig 2. Equipment and trace for the course of slalom running with ball

**Distance basketball throws on speed and accuracy.** The purpose of the test is to evaluate the space-time parameters and the accuracy of the basketball players' movements. On one half of the basketball court, five points are marked (Figure 3). The testing participant starts from the front line and alternately tries to throw the ball into the basket as quickly as possible. After completing the fifth throw, the test participant runs by the front line, returns to the start line and performs five more throws at the basket. After the tenth throw, he runs around the penalty area and finishes. The time of the test and the number of ball are recorded. The integral indicator of speed execution and accuracy of throws (ICBT) is determined by the formula:  $IIOS = TT * 1 / (1 + 0.1 * A)$ , where TT is the test time, s; A is the accuracy of the ball hits, number.

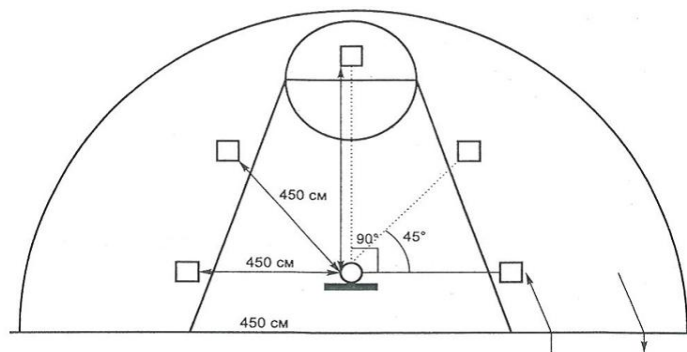


Fig 3. The marked points for performing the test by throwing the ball on speed and accuracy

**Evaluation of power abilities development.** For basketball players, it is important to develop absolute muscle strength (in particular, the sub-maximal strength of the upper and lower body part) and the legs explosive strength. Below, is described the technique of testing the power abilities.

**Evaluation of the sub-maximal force during lying press bench test.** The purpose of the test is to evaluate the development of arms and shoulders muscle strength. For the test, it is used a bar placed, firstly placed on a post. The testing participant lays down on the bench, while the entire foot is on the floor. Straight arms are on the bar. The grip width corresponds to the shoulder width. With the help of an assistant, the test participant lifts the bar and lowers it slowly until it touches the chest. After this, the bar press is performed until the hands are fully straightened. The result is estimated in kg, which a basketball player can raise three times in a row. The normative indicators of performing this test by basketball players are given in Table. 2. This score can be recounted to one kilogram of body weight.

Table 2. Evaluation norms for "lying bench press" test with a maximum repetition of three times for professional basketball players

Statistical values	Women		Men
	Adults	Juniors	Juniors
$X \pm S$	50.7±5.3	44.7±6.0	79.6±13.4
Maximum	34	27.5	45
Minimum	62.5	57.5	102.5

**Evaluation of the development of explosive strength when performance the "jump up" test.** Due to the fact that in basketball it is possible to perform various kinds of jumps, it is suggested to determine the leg speed of the basketball players in two variants.

**First variant.** It is suggested to jump up after the first step. To evaluate the results of this test, on the wall are made some marks. The testing participant smears his finger with magnesia or chalk, stays sideway to the wall on which the markings are made, stays with shoulder width apart and hands down. In the initial position, the test person raises his hand, marking on the wall his starting position. After that, he makes a preparatory move: makes one step back, then makes a step forward and a sharp swing with his hands, jumps with two legs trying to touch the mark with his fingers as high as possible (Figure 4). The difference in the initial and final marks determines the result of this jump. Normative indicators for basketball players of different sex and age are given in Table. 3.

**Table 3. Evaluation norms for the "jump up" test after making one step for professional basketball players**

Age	Women	Men
Juniors	50	70
Adults	55	75

**Evaluation of the development of speed abilities.** Basketball players need to highly develop their speed abilities. The game requires quick moves in a straight line and changed direction. Further is described the technology for performing one test.

**20 m sprint test.** The purpose of the test is to estimate the acceleration and the speed distance in running a short distance. Basketball players are invited to run a 20m sprint in a straight line. The test begins with a high start and the time (with an accuracy up to 0.01 sec) of overcoming the distance of 5.10 and 20 m is recorded (intermediate and finishing marks are placed on the distance line). The norms for evaluating the running speed within this test, for professional basketball players, are given in Table 4.

**Table 4. Evaluation of time norms for the "20 m sprint test" for professional basketball players**

Gender, qualification	n	Distance, m					
		5		10		20	
		$X \pm S$	max–min	$X \pm S$	max–min	$X \pm S$	max–min
<b>Women</b>							
<b>National team</b>	<b>30</b>	1.20±0.08	0.96–1.40	-	-	3.48±0.21	3.04–4.34
<b>Capital League</b>	<b>7</b>	1.21±0.07	1.12–1.28	2.05–0.11	1.92–2.21	3.55±0.21	3.32–3.87
<b>Men</b>							
<b>District League</b>	<b>28</b>	1.06±0.06	1.00–1.18	1.79–0.07	1.68–1.95	3.05±0.04	2.86–3.26
<b>Capital League</b>	<b>13</b>	1.02±0.04	0.97–1.10	1.74–0.05	1.65–1.83	3.00±0.09	2.88–3.16

### Conclusions:

1. As a rule, during the game season, periodic parameters monitoring (functional monitoring) of the functional condition of athletes is necessary. During the monitoring process, it is necessary to evaluate how the physical condition of the basketball players is changing under the influence of the competition and the training process.
2. One of the most important goals during the season is to maintain a high physical condition, achieved during the training period, due to competently planned training cycles. Conducting functional monitoring, due to use of tests, provides for the coach information on the effect of training on the body and allows choosing the optimal strategy for training the athlete.
3. One of the important requirements for the test is its specificity for a certain type of sport. Testing should demonstrate how much the athlete is prepared for practicing professional basketball.

4. Within this study are presented morphological indices which are typical for skilled basketball players. The test technology is also included, thus allowing the determination of special training for basketball players.
5. The generalized experience of pedagogical monitoring of the training of professional basketball players allows composing the most effective tests for the working-training process.

**References :**

1. Алексаняц Г. Д., Абушкевич В. В., Тлехас Д. Б., Филенко А. М., Ананьев И. Н., Гричанова Т. Г., Спортивная морфология: Учебное пособие, М: Советский спорт, 2005, 92 с.
2. Бубэ Х. Тесты в спортивной практике / Х. Бубэ, Г. Фэк, Х. Штюблер, Ф. Трогш., М: Физкультура и спорт, 1968, 239 с.
3. Волков В.М., Филин В.П. Спортивный отбор. М., 1983, 153 с.
4. Зазиорский, В. М. Физические качества спортсмена, М., 2010, 100 с.
5. Карасев, А.В. Энциклопедия физической подготовки (Методические основы развития физических качеств) / Е.Н. Захаров, А.В.Карасев, А.А.Сафонов; Под общей редакцией А.В.Карасева. М: Леггос, 1994, 368 с. 2.
6. Набатникова М. Я. Основы управления подготовкой юных спортсменов, Под ред. М: Физкультура и спорт, 1982, 280 с.
7. Николитч А., Параносич В. Отбор в баскетболе / Пер. с сербскохорватского, М: Физкультура и спорт, 2004, 144 с.
8. Young W. B. Specificity of jumping ability and implications for training and testing athletes / W. B. Young // Proceedings of the National Coaching, Conference, Canberra: Australian Sports Commission, 1994, p. 217–221.

## **Means and Methods of Strength Training of Middle Distance Runners during Initial Sports Specialization**

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### **Abstract**

Training aimed at development of endurance, the mode of muscle work, the nature of the developing efforts determine the appropriate transformation in the muscles themselves, which are formed by all content of the training process. In providing the necessary level of development of endurance namely strength training has an important role to play because it is impossible to resolve the problem solely by means of cross-country athletics. With the aim of identifying features in the means and methods of strength training of middle distance runners in the study was carried out a survey of experts (n = 21), which were provided with a list of 46 physical training means. The means and methods of strength training were examined as well within the context of analysis of the loads of this group of means, developed by runners on average distances at SISS. The study analyses the records of 14 coaches. The results of the analysis have allowed identifying the most frequently used means and methods of strength training of middle distance runners aged 13-15 years.

*Keywords: a stage of initial sports specialization, means, methods, strength training, runners on average distances*

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### **Introduction**

Among the factors determining the state of efficiency of middle distance runners, it is often included the adaptation of muscle to stress, which manifests such physical quality as endurance. According to many authors, the development of this quality will not only contribute to improving the system of oxygen transportation to the muscles, but also cause changes that are directly related to its more full utilization [1, 4, 7 etc.].

At the same time specialists admit the need for adaptation of muscles in middle distance runners to adequate or excess effects according to their efforts that they manifest in terms of competitive activities [3, 6, 8, 9]. The authors agree that the contractile and oxidative properties of the muscles of the athlete can to a large extent determine his motor capabilities, while the remaining physiological systems of the body functionally support and provide the required level of muscle activity [2, 3, 4, 5, 8, 9, 10 etc].

This point of view is shared by V. Sirenko [9, p. 68], who states that when exercise is primarily aimed at the development of endurance, the mode of the muscle work and the nature of efforts developed determine the