



## SELECTION AND TRAINING OF GOALKEEPERS FOR THE YOUNGER AGE CATEGORY (YAC)

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Nowadays, a general trend in world handball development and a condition of top performance in the field is the increase of players' heights. This is also true for goalkeepers, their stature being an objective selection criterion. The selection of tall goalkeepers is both an outcome of the general trend and a condition imposed by the necessity to correlate the athletes' somatic types and technical-tactical requirements of their roles on the court. The goalkeepers have to catch, turn away or alter the trajectories of balls thrown forcefully and precisely towards their goals. The goalkeepers must intersect the ball trajectories as soon as possible using their body parts (upper limbs, lower limbs, and trunk).

The action time, from the instant of shooting on goal till the instant of goalkeeper' contact with the ball is

$$T = t_r + t_b + t_{ul} + t_{ll}$$

where

$t_r$  = reaction time

$t_b$  = time to change body position (steps or jump towards the ball trajectory)

$t_{ul}$  = time to change upper limbs positions to cross the ball curve

$t_{ll}$  = time to change lower limbs positions to cross the ball curve

To reduce action time  $T$  means to reduce all its elements.

Here, I do not analyze the reaction time issue.

$t_{ul}$  and  $t_{ll}$  take into account the current body position got after  $t_b$ . In the ideal case  $t_b$  will be 0, meaning that the goalkeeper is positioned correctly before the shooting on goal and only  $t_{ul}$  and  $t_{ll}$  are needed. Of course, in practice the goalkeeper is not positioned just at the right place and the  $t_b$  is not zero. But this time can be reduced or almost cancelled out for goalkeepers with limbs of adequate lengths. As the height and the lengths of the body segments are directly related, one can conclude that to select tall goalkeepers is a must. Another argument that supports this selection criterion also takes into account the area defended by goalkeepers – 6 m<sup>2</sup>. A person with a height of 1.70m can cover an area of around 0.75 m<sup>2</sup>. This area increases for taller goalkeepers. Therefore the efficiency in goal protection increases accordingly.

Consequently, the somatic type selection criterion is a very important one. The goalkeepers should be tall and have long body segments. In addition to height, extension and the length of limbs, other elements that influence goalkeeper performance are:

- Weight - height relation (height-100 / weight ratio)
- Palm length
- The size of open palm
- The size of several body parts ( trunk length, waist diameter, shoulders width, feet size, etc)



Some of these somatic characteristics depend on heredity (for ex: longitudinal dimensions). They are important in selection process, but are not improvable by exercise. Other characteristics, like weight and body perimeters, can be improved by adequate training.

Taking into account all the above arguments, the Romanian Handball Federation fixed 3 height categories for goalkeepers depending on sex and age –see Table 1.

Table 1

<i>Category</i>	<i>Height for Boys (cm)</i>	<i>Height for Girls (cm)</i>
YOUTH III (Y-III) 13-14 years old	178 - 176	170 – 168
YOUTH II (Y-II) 15-16 years old	184 – 178	173 – 170
YOUTH I (Y-1) 17-18 years old	187 - 184	173 – 170

For these 3 categories, taking also into account the other anatomical characters related to height, we are able to define the 3 corresponding somatic types for young age people –see Table 2.

Table 2

<b>Character</b>	<b>Y-III</b>		<b>Y-II</b>		<b>Y-I</b>	
	<b>Boys</b>	<b>Girls</b>	<b>Boys</b>	<b>Girls</b>	<b>Boys</b>	<b>Girls</b>
Height (cm)	178-176	170-168	184-178	173-170	187-184	173-170
(Height-100)/Weight	1.06	1.08	1.06	1.08	1.06	1.08
Weight (kg)	73.5-71.5	65-63	79-73.5	67.5-65	82-79	67.5-65
Upper limbs span (cm)	183.3-181.3	175.1-173.1	189.5-183.3	178.9-175	198.2-195.4	183.4-180
Lower limbs length (cm)	85.5-84.5	79.9-78.9	88.3-85.5	81.3-79.9	90.7-88.3	81.3-79.9
Trunk length (cm)	92.5-91.5	90.1-89.1	95.7-92.5	91.7-90.1	97.3-95.7	91.7-90.1
Palm length	18.5-18.3	17.7-16.5	19.1-18.5	18-17.7	19.4-19.1	18-17.7

Examining the table, one can see the optimum goalkeeper type and the accepted ranges (maximum and minimum values).

It is well known that the selection of the optimum type is only a desiderate, In any case, in order to get top performance in modern handball we must try to find goalkeepers with the somatic type as close as possible to this theoretical type.

After selection, the performance of a handball goalkeeper can be improved by adequate training. The training tasks are presented in Table 3. There are 3 stages in this education process: learning, consolidation of the skills and improvement of skills.



Table 3

Note:

B = beginners

No.	Coaching task	Learning				Consolidation				Improvement				Education-development			
		B	J-III	J-II	J-I	B	J-III	J-II	J-I	B	J-III	J-II	J-I	B	J-III	J-II	J-I
	<b>I Technical-tactical instruction</b>																
1	Basic position	X	X				X				X	X					
2	Movement inside goal area	X	X				X				X	X					
3	Ball catch (stop)	X					X				X	X					
4	Counter the shot (repel) with 2 arms	X					X				X	X					
5	Counter the shot with 1 arm		X	X				X				X					
6	Counter the shot with leg	X						X			X	X					
7	Counter the shot with leg in extension			X				X				X					
8	Counter the shot with arm and leg and by lateral step		X	X				X				X					
9	Passive counter of balls shot from the wings		X					X				X					
10	Active counter of balls shot from the wings		X					X				X					
11	Counter of balls shot from goal area line		X	X				X				X					
12	Dive to counter the shot			X					X			X					
13	Stopping the opponents' counterattack		X					X				X					
14	Cooperation with the defenders			X				X	X			X					
15	Tactical use of technical procedures			X				X				X					
16	Defence against 7m-throws		X					X				X					
17	Regain of balls	X					X				X	X					
18	Throw the ball to an intermediary	X					X				X	X					
19	Throw the ball to the counterattackers' leader			X				X				X					
20	Play as court player	X	X	X					X			X					

