The exceedingly high achievements in the modern sport, the whole modern system of training of athletes with its immense mental and physical loads place ever higher demands on selection of especially talented children and require that their training process strictly correspond to their individual features already at early stages of the long-term perfection. There is needed not only the mechanism for finding athletes, predisposed for achievements in specific disciplines of various ways for achievement of the highest sporting results by athletes, based on studying their predispositions and abilities, on regularities of formation of the sporting skill (1,4). The orientation involves selection of a narrow sporting specialization (sprinter, stayer, etc.), determination of an individual structure of the long-term training, dynamics of loads and achievement growth rates, establishment of the main factors of the fitness and contest activity, which can exert the governing effect on the level of sporting results, etc.

ORGANIZATION AND METHODS OF STUDY.

The experiment was preceded by selection of a set of characteristics for estimating the predisposition of swimmers for a predominantly sprinter or stayer work. Based on studying and summarizing the data presented in the special literature and the experience gained in the scientific and methodical support of sportsmen training, 32 characteristics in all were selected, which allowed a comprehensive evaluation of the predisposition of sportsmen for best results at different distances with the work time from 20-25 s to 15-20 min.

The characteristics used by us, which comprehensively displayed the capabilities of motor and vegetative functions, were divided into four groups:

1. characteristics of the morphological features of the young swimmers: height (cm); body mass (kg); length of arm, hand, leg (cm), girth of shoulder, forearm, thigh, shin, pelvis (cm); width of shoulders, pelvis, hand (cm); and ratios: arm length to shoulder girth; arm length to forearm girth; leg length to shin girth; and shoulder width to pelvis width;
2. characteristics of the capabilities of the energetics system: alactate and lactate anaerobic power of work (W/kg); maximum oxygen debt (ml/kg); maximum oxygen uptake (ml/kg/min); critical load power (W/kg); oxygen pulse (ml/beat); oxygen uptake increase actor (art», units); t50 of oxygen uptake at critical load power (s); and critical load power maintenance time (min);
3. characteristics of special exhibitions of motor qualities: “explosive” force in terms of high jump from standstill (cm); absolute swimming speed (m/s); 2000 m free-style swimming time (min); and sliding length.

Processing of findings has resulted in subdivision of subjects into five relatively independent groups on the basis of different indices reflecting predisposition of athlete to sprint or distance performance;

1 — athletes with evident sprint capacities (sprinters);
2 — athletes of mixed capacities with predisposition to sprint performance (mixts predisposed to sprint performance);
3 — athletes of mixed capacities with relatively equal level of their development (combined ability mixts);
4 — athletes of mixed capacities with predisposition to stayer performance (stayer-predisposed mixts);
5 — athletes with evident stayer capacities (stayers).

In general totality these groups are represented unequally: the less represented are groups of sprinters and stayers (6% and 12%, respectively); groups of mixts with mixed capacities are represented higher (20%), whereas those with predisposition to sprint or stayer performances are the most represented (30% and 32%, respectively) /Fig. I/.

Complex characteristics of young athletes belonging to different groups on the basis of wide circle of indices of morphological, physiological, biochemical, psychological and sports-pedagogical character may be used as a model during individual orientation of preparation process of athletes at the second and the third
It has been experimentally established, that utilization of differentiated programmes of preparation of young athletes based according to individual predisposition of swimmers to performance at different distances, is an important factor of increasing the efficiency of preparation at the stage of preliminary basic preparation within the system of long-term perfection.

The findings have demonstrated that objective estimation of young swimmers’ predisposition to high performances at different distances may be realized only on the basis of integrative information obtained as a result of utilization of wide complex of indices of morphological, physiological, biochemical, psychological and sports-pedagogical character. Methods of preparation of young swimmers already at an early stages of long-term perfection (stages of preliminary and specialized basic preparation) should envisage an integral combination of two factors:

1) correspondence of all components of preparation system to the requirements of sports event and its concrete discipline with respect to regular and relatively balanced development of all constituents of highly effective competitive activity;

2) provision of correspondence of preparation system to individual predisposition of athletes to high performances in definite events of the programme, estimated according to morphological and psychological aspects.

On the whole, the results of studies demonstrate sufficiently wide perspectives of reorganization of the system of preparation of young swimmers at early stages of long-term perfection in the direction of provision of its adequate correspondence to individual features of athletes. The above predetermines formation of the most efficient phenotype adaptation of the body of young swimmer necessary to demonstrate the highest performances in concrete events of the programme of competitive swimming.

REFERENCES


