SWIM TECHNIQUE CRAWL

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- The body position of the swimmer in the water as close as possible to horizontal. The angle of attack varies with speed and the individual characteristics of the athlete from 0 to 10° (the higher the speed, the smaller the angle). The high body position of the swimmer in the water is achieved due to the quality of the stroke with the hands.

  Feet enough for an effective shot depth (30-40 cm). Shoulders are above hips, thereby facilitating the release of the hands from the water and carry on, giving also the possibility when performing the stroke actively involve the muscles of the trunk.

  The position of the head on the longitudinal axis of the body. The face is turned forward and down, neck muscles straining almost.

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- The movement of the hands
  The sweep hands is the main source of driving forces. The traction force of the swimmer when swimming "crawl on his chest" is different depending on the skill of the swimmer: the master of sports of international class develops its maximum pulling force in 20-22 kg, the athlete first category is 16-18, the second - 12-14, the third - 9-12. To create traction of paramount importance is the position and character of movements of the brush during the stroke. The function of the brush during the stroke - the creation of a continuous support on the water. The first half of the stroke should be performed in all methods of swimming with the so-called "high-elbow", that enables already in the initial phase of the stroke to draw a hand of water under optimal from the point of view of biomechanics the corner.
  The cycle of movement of the hands can be divided into phases:
  The support portion (grip water). Arm performs energetic support moving forward and down, bending at the elbow (the angle between the arm and forearm 130-140°) and quickly goes in the position to perform the main part of the stroke. By the end of this phase the hand is relatively fixed in their joints, the elbow is held above the wrist.
  Main phase (pulling and pushing away) is performed by adduction, and shoulder extension, and flexion and extension of the arm at the elbow joint. In this phase of the stroke are the main forces pushing the swimmer forward. The main part of the stroke is executed with a bent arm (angle between shoulder and upper arm reaches 90-100°), the brush moves under the longitudinal axis of the body. When you stroke your fingers closed, palm flat. In the first part of the stroke the elbow pointing sideways and slightly back, the second hand turns his elbow back, and in the final part of the stroke as the swimmer pushes off from the water with a brush and forearm. The main phase of the stroke ends at the line of the pelvis. During the phase of tightening the roll angle of the body reaches a maximum, resulting in a repulsion direction of roll reverses.
  Exit hands out of the water coincides with the roll on the opposite side. Above the water surface appears the elbow, and then brush that out of the water behind the line of the pelvis at the hip.
  Movement over water or carry with one hand is performed in one rhythm with another rowing movement. Need to quickly bring the relaxed, bent at the elbow (elbow pointing up-to the side), accelerating it to the point of entry into the water. At the beginning of bringing the palm of the hand directed backward and slightly upward.
  Input hands in the water and influx. The speed of the hands directed forward and down, the horizontal speed more than vertical. The hand enters the water at a point between the longitudinal axis of the body and parallel to the line conventionally drawn through the shoulder joint. Brush at an acute angle with the water when the arm is still bent and arm straightened completely during flow. The sequence of immersion: hand, forearm, shoulder. Next, the relaxed hand is extended forward in a streamlined position. At the end of the influx of the brush takes place perpendicular to the motion, and the arm starts to bend at the elbow.

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- Coordination of hand movements to ensure continuity of the thrust forces from the transverse strokes by hand. When one hand performs the phase of repulsion, the other draws heavily on the water, while in the capture phase.

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- The movement of the legs
  Swimmers perform 6, 4, or 2 beats down on two strokes by hand. Currently the most common variant of shestidennomu crawl, in which the motion cycle of the stroke has two hands and six kicks.
  Of the swimmer moderately and rhythmically bending and unbending at the hip, knee and ankle joints are moved alternately up and down. The working part of the movement of a foot - a kick from top to bottom. The most effective biting is performed from the hip shot. While the hip moves with some advance relative to the leg and foot. The distance in feet between the extreme upper and lower position reaches 40 cm toe Socks drawn and rotated slightly inward, the thumbs almost touching. When swimming speed is maximized, stronger legs bent at the knees, foot and ankles out of the water, the range of movement increases.
  The choice of the coordination of movements depends on the length of the course and individual features of sportsmen. For example, 6-shock crawl with long power strokes are often used at distances from 50 to 200 m. At medium distances, as a rule, swimmers of average height float 4 and 2 drum crawl.

- Breathing

  Breathing when swimming crawl is coordinated with the hand movements. To perform the breath should not abruptly turn the face to the hands, ending at this point, the stroke (the other hand makes the influx). The beginning of the inhalation it is necessary to exit the water hands, same side breathing. Breath is the mouth and lasts about 0.3-0.5 seconds. Completes the breath at the beginning of the carrying arms in the air. Return movement of the head to the initial position is performed without delay, not sharply and coincides with the beginning of carrying arms. After immersion of the face in the water, the swimmer immediately starts to carry out a smooth exhale (so recommend sources). Older textbooks allow start exhaling after a brief breath hold (delay less than 1 stroke).

  The correlation of respiration with the motion cycle can be varied from 1 cycle movements and a single act of breathing, 2-3 cycles of movements of the hands and 1 breath (at short distances).

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- The competitions in swimming crawl on a breast athletes perform start with cabinets.