

A GUIDE FOR THE CO-ORDINATION IN THE FRONT CRAWL VARIANTS

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In this presentation an interactive cd-rom, describing and discussing the front crawl of high level swimmers, is introduced; more specifically several variants (e.g. 6-beat, 2-beat, 2 beat crossover) and different technique aspects. The intention is that the coach corrects the own competition swimmers and triathletes, based on a careful video observation. Therefore, only practical knowledge is collected, confirmed by expertise and applied research at the K.U.Leuven Evaluation Centre. Different variants and technique aspects are clarified by video images of recent swimmers at national level in different speeds, obtained with 5 rotating cameras from 5 points of view.

To be able to start with an Evaluation Centre, in the movement analysis of high level swimmers special attention was given to the co-ordination of the arm, leg and head movements (relative to the body) and of the body movements (relative to the water surface). Since the Olympic Games in Munich (1972), for each segment clearly delimited phases were studied in the stroke cycle of each variant. An interesting criterion for propulsion is the speed variation of the body from phase to phase. Each swimmer can feel propulsion per phase, estimated by the coach on video, from bubbles displaced backward; each swimmer can also feel the coordination, observable by the coach on video.

Although the optimal variant per distance of a swimmer could be determined from his physical profile (e.g.; body structure, buoyancy, flexibility, strength,,), each individual is advised to experiment with the different variants and technique aspects. Speed and/or economy remain the essential criterions. The body control of swimmers must thus be very adaptable.