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## Starting Skill for Competitive Swimming and the Preventive Measures Against the Accidents

By *Ryuji Takamine\**

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The purpose of this study was to grope about coaching method for safety start in swimming. The start-form in recent year named "Pike-start" is too danger for the unskilled, because the angle of body to surface of water while diving into the water, is larger than the old form before.

I analyzed the starting-form of the top-swimmers in japan and junior high school students, and compared the two gropes.

The diving motion was recorded with VTR camera and the images of VTR (the body positions in the air, into the surface of water and under the water) were measured.

The angle of entering into water of top-swimmers were  $49.2 \pm 6.2^\circ$ , studnts were  $23.2 \pm 14.8^\circ$ . And yet, the depth of their going underwater was nearly point.

The form of top-swimmers were looked so danger, but they moved quickly on characteristic body-action before entering into the water and underwater. Their characteristic body-action was change quickly the body-position from bent-waist position to backward position.

Junior high-school students try to imitate the action of topswimmers, however, if they dive same angle, it was very danger because their diving skill (body-action) was incomplete.

Therefore, I thoght that teachers never incoporate "Pike-start" in their lesson plan of swimming-class at school.

The important factor of diving start for safety is quckly body-action passing through the surface of water. The body-action is quick changing the body position from bent-waist forward position to backward position.

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