BODY TEMPERATURE AFTER THE OPEN WATER SWIMMING
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PURPOSE. The open-water swimming, where swimmers swim twenty kilometers in sea or lake, is one the newer event of the swimming competitions. The most of physiological characteristics of this completion has not been known. Since swimmers take almost two hour in the water to complete this competition, the swimmers and coaches must be worry about the hypothermia. The body temperature decreases during the long-distance swimming as well as the channel swimming. However no previous investigation reported the body temperature responses to open-water swimming. Thus the purpose of the present investigation was to examine the body temperature responses after open-water swimming.

METHODS. A total twelve swimmers participated in the present investigation.
Of these subjects, six swimmers swim 10 kilometers (10 km OWS), and the reaming six subjects swim 3 kilometer (3 km OWS) in Japan open-water championship 2007. The body temperature was measured at the tympanic by means of an infrared thermometer. before and immediately after the competition as well as 5 minutes, 10 minutes, 30 minutes and 60 minutes after the competition. Additionally, blood lactate accumulation and blood sugar were measured immediately after the competition.

RESULTS. The record for the completion was 125 +/- 11 minutes in the 10km OWS and 33 +/- 3 minutes in the 3km OWS. The body temperature immediately after the completion was 34.4 +/- 0.3 degree in the 10 km OWS and 34.5 +/- 0.1 degree in the 3 km OWS, respectively. In both the 3 km OWS and the 10 km OWS, the body temperature at 5, 10, 30 and 60 minutes after the competition significantly lower than that at the baseline level. Furthermore, the body temperature at 10, 30 and 60 minutes after the competition negatively correlated with the record for the competition (p<0.05), whereas the body temperature immediately after the completion did not correlated significantly.

CONCLUSION. These results indicate that the temperature decreases after open water swimming for 60 minutes. Furthermore, in the lower ability swimmers, as a result of a long time flooding, the recovery of the body temperature would be slower and the hypothermia might be considered. Thereafter, it can be speculated that the superior open water swimmer may be able to protect the decreases of the core body temperature.

Keywords: Body Temperature, Swimming