

高速水着のアシステッド練習用具としての可能性

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Possibilities for Utilizing a High-performance Swimsuit as an Assisted Training Gear

by

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ABSTRACT

This study aimed to investigate the after effects of wearing a high-performance swimsuit (HS) during training and warming-up swim on swimming motion and 100m swim performance. Trained collegiate male swimmers participated in this study. Three subjects performed 3 × 10-min swims using a swimming flume with about 15 minutes rest periods on land. The 1st and the 3rd swims were in a normal swimsuit (SS) and the 2nd was in a HS. The positions of the hip and the knee during the 2nd tended to

be higher than those during the 1st, and those during the 3rd were similar to those observed during the 2nd rather than those during the 1st. Seven subjects performed prescribed warming-up swim, followed by a maximal 100m swim after about 30 min rest on land. The warming-up swim were conducted in a HS or a SS, and the 100m swims were conducted in a competitive swimsuit using indoor 50m pool. Total time over the 100m swims and lap time for each 10m interval from 25m to 75m point were recorded. Blood lactate concentrations (LA) after the 100m swims were measured. No significant differences were found in total time and LA between two suit conditions. However, each lap time during the first half of the 100m swim tended to be shorten when warming up with wearing a HS. These results suggested that submaximal 10-min swim in a HS had after effects on maintaining a body position during post-swim in a SS, and furthermore, warming-up swim conducted in a HS were effective and implementable way to improve swim performance during less than 100m swims. To verify effective usage of wearing a HS as an assisted training gear, further researches were required.

要 旨

高速水着 (HS) を着用したトレーニングやウォーミングアップ (W-up) がその後の泳動作や泳パフォーマンスへ及ぼす影響を検討した。十分にトレーニングを積んだ大学生競泳選手を被験者とし、回流水槽にて最大下の泳速度を用いた10分間泳中の泳動作解析と、50m プールにてスーツ条件をかえて W-up を行った後に 100m 泳のパフォーマンス測定を行った。HS を着用して行った10分間泳中の姿勢は、その前に一般的な練習用水着 (SS) を着用して行った10分間泳中の姿勢と比較し、大転子および膝関節の鉛直方向変位が高い位置にあった。15分程度の完全休息を挿み再度 SS に着替えて行った10分間泳中の姿勢は、最初の SS 時の姿勢よりも直前の HS 時の姿勢に近い傾向がみられた。HS を着用して行った W-up の 100m 泳のパフォーマンスへの影響はみられなかったが、前半のタイムが短縮する傾向がみられた。これらの結果より HS 着用の

姿勢保持に対する持続効果が確認されたとともに、100m 泳よりも短い距離に対する HS 着用 W-up の効果が示唆された。