Biology of Sport

pISSN 0860-021X

» Journal Abstract

Seasonal variation in the physiological profile of high-level male field hockey players

KM Stagno, R Thatcher, KA van Someren

Biol Sport 2005; 22 (2):
ICID: 891537
Article type: Original article
IC™ Value: 10.26

Abstract provided by Publisher

Objectives: To measure the physiological profiles of elite players and observe changes throughout a season in order to provide guidelines for training. Secondly, investigate whether recent rule changes have had an impact on the physiological demands of match play. Material and Methods: Nine English premier division male field hockey players participated in this study (mean ± s: age 24± 4 years, body mass 80.8± 5.2 kg and height 181.8± 3.9 cm). Three treadmill exercise tests were performed at pre-season (T1), at the start of the competitive season (T2) and at mid-competitive season (T3), to determine the running velocity at a blood lactate concentration of 4 mmol× l-1 (VOBLA), individual HR: O2 regressions, O2peak, peak running speed (PRS) and time to exhaustion. Results: There were increases ($p<0.05$) between T1 and T2 in O2peak (54.0 ± 6.3 to 60.1± 7.6 ml•kg-1•min-1) and PRS (18.2± 1.7 to 19.1± 1.7 km•h-1). VOBLA increased from T2 to T3 (15.1± 1.7 to 15.8± 1.4 km•h-1, $p<0.05$) and time to exhaustion increased from T1 to T3 (30.3± 8.0 s to 33.0± 5.9 s). The subjects' mean responses to competition match play were; heart rate 167±8 beats •min-1, O2 42.8±6.3 ml•min-1•kg-1 and a fractional utilisation of 80±7 %. Conclusions: The high levels of aerobic fitness observed are consistent with the demands of the games. However, there were significant changes in fitness over the course of a training year. Recent rule changes do not seem to alter the physiological demands of match play.

ICID 891537

FULL TEXT 140 KB

Related articles

- in IndexCopernicus™
  - Physiological characteristics [0 related records]
  - Periodisation [0 related records]
  - Training [39 related records]

Search

Back