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Effects of fasting long distance run on metabolic and heart rate response with visual impairment athlete – case study

Wu-Kai Lee¹ Jia-Tezr Jang¹ Te-Sheng Chen¹

¹ Graduate Institute of Athletics and Coaching Science.National Taiwan Sport University,Taiwan

Abstract

Aim:The purpose was to compare the energy metabolic response and exercise performance after 17 hour fasting in a visual impairment athlete.**Method:** One elite visually impaired athlete (166cm, 65kg, 25yr) were completed a lactate threshold test and twice long distance campus run (17.1km) trials with a guide runner. The velocity of long distance run were set at IAT zone (individual anaerobic threshold). Blood sample lactate, glucose, and ammonia were drawn before and after trail; heart rate and time were recorded with GPS heart rate device. **Results:**The results showed that the La and NH₃ were increased after both run trails. The higher accumulation on La and NH₃, furthermore, more stable on glucose, higher heart rate, and better speed performance were present after fasting. **Conclusion:**Long distance at gastric empty condition may have higher stress on energy metabolism (La & NH₃) and better performance. Non-fasting may interfere with the concentration of glucose after run. The meal before exercise may play a role in metabolism and long distance run performance in visually impairment athlete.

Key words: anaerobic, exercise, starvation, hypoglycemia