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Women's Freestyle Wrestling Athletes Prepare for Urine Ten Evaluation Before the National Games

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Objective Urine routines inspection was used as a kind of non invasive test method, which was used widely in the biochemical monitoring of athletes. The urine routine was monitored for nearly eight months prior to the 13th National games in this study, to find out the routine changes in urine of Hubei women's freestyle wrestlers during training cycle and pre-match preparation period.

Methods The study was conducted on 22 female freestyle wrestlers in Hubei province, with an average age of 22 years, and 2 athletes of national master level, with professional training period of 5 to 12 years. There are 3 athletes of 48 kg, 5 athletes of 53 kg, 5 athletes of 58 kg, 7 athletes of 63 kg, 1 athlete of 69 kg and 1 athlete of 75 kg. The test instrument is Kyoto PU-4210 urine analyzer. Urine test indicators include: GLU, PRO, BIL, URO, PH, S.G., BLD, KET, NIT, LEU. The urine sampling test method is divided into two parts. Urine sampling time during convalescence training: from the preparation period of the 13th national games to the pre-competition, the test was conducted on an empty stomach in the morning of the second day of rest every week. Namely: the continuous sampling of morning urine from August 2016 to April 2017, taking the middle urine sample at 7:20 every Monday morning, a total of 425 times. Urine sampling time during training period: from the preparation period of the 13th national games to the pre-competition, the test will be conducted immediately after the actual training. During the period from August 2016 to April 2017, samples were taken according to the training arrangement. After the actual training, urine samples were taken from the middle section and 288 person-times were tested in total. Search and sort out relevant literature to understand the research status. Statistical software SPSS19.0 was used for data processing and paired sample t test was used.

Results The results showed that the indicators of the ten positive urine test rates in the training period were: BLD 19.8%, S.G. 17.7%, PRO 14.9%, KET 12.8%, URO 4.5%, WBC 3.8%, BIL 3.1%. The indicators of positive morning urine detection rate during convalescence were: PRO 11.1%, BLD 8.9%, S.G. 7.6%, KET 4.2%, URO 1.9%, WBC 3.0%, BIL 1.2%. The results of ten subjects in training and convalescence were compared, and the indicators of recovery from fast to slow were successively: S.G. 80.4%, PRO 58.1%, BLD 56.1%, KET 48.6%, WBC 36.4%, BIL was 33.3%, URO 30.7%

Conclusions According to the analysis of the change of ten monitoring indexes of female freestyle wrestlers, wrestling is a violent antagonistic sport. The features of the event determine that the energy metabolism of wrestling is an anaerobic, aerobic and metabolic mix and alternation, and anaerobic metabolism is the main sport. The characteristics of the event can lead to different positive reactions in the ten items of urine.

1. The PRO, BIL, S.G. and KET should be regarded as the main indexes because of the high positive ration. This study shows that routine urine test can be used for female freestyle wrestlers to accurately grasp the characteristics of the program, provide technical support, and adjust the training program of coaches.

2. The PRO index can be used as a sensitive index to evaluate the training intensity. During the training, there is no adaptive state, and the urine protein shows a plus sign (+) for many times, and cannot be completely recovered in the morning. It reminds the coach to control the amount of exercise and exercise intensity properly.

3. The hematuria caused by exercise training is called motor hematuria. The probability of the occurrence of urinary occult blood is relatively high after the high-intensity training, which can be used as a sensitive index to evaluate the training amount of female athletes after removing the interference factors such as physiological periods.

4. The urine specific gravity index is mainly used to understand the concentration and dilution function of the kidney. The increased urine specific gravity of athletes can be seen in the large amount of sweating and dehydration during training. The specific gravity is related to the amount of drinking water. Excessive drinking water leads to low urine specific gravity, and attention should be paid to rehydration after daily training and training.

5. The KET index was positive to different degrees, reflecting the load of endurance training, indicating the imbalance of body electrolyte, and paying attention to electrolyte supplement during and after daily training.