

except the hand grip strength and leg muscle strength in the group of high dose wheat peptides.

**Conclusions:** Six weeks heavy load free combat training can cause over training of Free combat athletes, the addition of different dose wheat peptides after heavy load Free combat training can reduce the muscle damage of free combat athletes effectively, can celebrate the recovery of exercise fatigue, can prevent over training to some extent and the effect of the addition of moderate dose wheat peptides (6 g) was best.

#### HHME15-H12

### RESEARCH OF IMPROVING ATHLETIC ABILITY WITH SCIENTIFIC TRAINING OF TRACKERS BASED ON MEDICAL MONITORING

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**Aims:** To grasp the exercises and the quality and quantity of exercise intensity, improve the training effect, so as to improve the athletic ability of the trackers.

**Methods:** The trackers were chosen and research objects, blood indexes which were related with exercise closely were chosen: HB, RBC, T, C, CK, LDH, BUN; the indicators of human body: muscle mass, fat content, body index percent, protein, inorganic salt, body fat, the water content of the body, lean body mass(LBM) etc., half year's tracking and monitoring was continued, and combined with exercise training.

**Results:** The research was carried according to the improving of the sports ability of athletes and to choose the best training method through the functional condition evaluation.

**Conclusions:** The controlling and adjusting of training quantity and training intensity can improve the sports ability effectively.

#### HHME15-H13

### THE BLOOD BIOCHEMICAL PARAMETERS' CHANGES AFTER TENNIS PLAYERS' HEAVY LOADING

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**Aims:** To observe the changes of the biochemical indicators such as serum enzyme, serum enzyme and blood lactic acid, hemoglobin etc. of the elite athletes after training with heavy loading.

**Methods:** Sixteen cases male athletes of mid-long distance running events in the institute of physical education were chosen in this research. Incremental-load exhaustive middle and long distance events were used in the training. The level of blood serum testosterone and cortisol (T/C), the activities of the seroenzyme, the whole blood lactic acid value, and the level of hemoglobin were measured.

**Results:** The results of all the 16 cases of subjects were analyzed. (1) The change of serum testosterone and cortisol: the serum testosterone and cortisol were (4.56 ± 1.84) and (0.20 ± 0.03) µg/L immediately after exercise. It was lower than in the quiet state [(4.87 ± 0.20), (0.14 ± 0.03) µg/L,  $P < 0.05$ ]. The ratio of serum testosterone and cortisol was lower than in the state of quiet and the time after the activity's recovering [0.47 ± 0.15, 0.65 ± 0.17, 0.70 ± 0.21,  $P < 0.01$ ]. (2) The changes of serum creatine kinase, blood urea, lactate dehydrogenase: the serum creatine kinase activity after exercise recovery was higher than that in quiet time and after exercise immediately (6.86 ± 2.21), (5.79 ± 2.10), (5.20 ± 1.77)kat/L,  $P < 0.01$ ]. Lactate dehydrogenase activity was higher than that of quiet time [(5.18 ± 0.97), (4.28 ± 1.15) kat/L,  $P < 0.05$ ]. Blood urea level was higher than that in quiet time and after exercise immediately (178.2 ± 38.7), (151.9 ± 25.2), (100.7 ± 13.9) mg/L,  $P < 0.01$ ]. (3) The changes of blood lactate and hemoglobin: serum hemoglobin con-

tent after exercise immediately and after exercise recovery was lower than that in quiet state [(143.1 ± 7.8), (149.5 ± 13.4), (156.6 ± 11.7) g/L,  $P < 0.01$ ]. The whole blood lactic acid level was higher than that in the quiet time and after exercise [(3.95 ± 2.05), (9.56 ± 0.93), (2.87 ± 0.71)mmol/L,  $P < 0.01$ ].

**Conclusions:** After large amount of exercise training, the three indexes of testosterone cortisol, lactate dehydrogenase, blood lactic acid, creatine kinase during recovering time, the two indexes of blood urea can response the motion strength better.

#### HHME15-H14

### THE EFFECT OF DEXMEDETOMIDINE COMBINED WITH FENTANYL ON BLOOD PRESSURE AND HEART RATE IN PEDIATRIC CARDIAC SURGERY

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**Aims:** To discuss the effect of the effect of infusion of dexmedetomidine combined with fentanyl on impact of surgical skin incision stimulation on blood pressure and heart rate during the pediatric cardiac surgery, and whether need to control anesthesia depth with inhalational inspiratory of sevoflurane.

**Methods:** One hundred and twelve cases children who need to accept the congenital heart disease repairing with cardiopulmonary bypass were divided into two groups: 0.2mg/(kg · h) midazolam was given in the first hour in midazolam group(MDZ group); 1µg/(kg · h)dexmedetomidine was given in the first time in dexmedetomidine group(DEX group). The dose of infusion in the second hour was all reduce to a half. 10µg/kgfentanyl, 0.2mg/kgdexmedetomidine and 0.2mg/kgvecuronium were used as anesthesia induction in both of these two groups. In the first hour, fentanyl and vecuronium were use with the maintenance dose just like the dose above, and then reduce the dose of infusion in the second hour were all reduce to a half, until the operation finished. Sevoflurane inhalation was applied to control the hemodynamic responses during the strong stimulation of surgical incision and chest cutting.

**Results:** With the anesthesia method above, the systolic pressure and the heart rate all fell significantly. But in the DEX group, the systolic pressure and the heart rate were all stable when the child accepted the skinincision operation, and few children need to add anesthesia through the way breathing in sevoflurane.

**Conclusion:** During the CHD operation of children, the infusion of dexmedetomidine can help fentanyl to control the hemodynamic responses effectively.

#### HHME15-H15

### THE CORRELATION ANALYSIS BETWEEN LIPID LEVEL OR SERUM URIC ACID LEVEL AND CORONARY HEART DISEASE

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**Aims:** To discuss the correlation analysis between lipid level or serum uric acid level and coronary heart disease, and provide the diagnosis and preventive reference of coronary heart disease