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Correlation Analysis between Blood Cell Viability, Five Elements and Competition Performance of Elite Men's Rowers

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Objective To observe the national elite male rowers blood, red blood cell activity and serum copper, zinc, calcium, magnesium and iron content of the five elements, and compared with the ordinary people. Aimed to investigate the between athletes, athletes and ordinary differences between the two sets of indicators and to explore the impact of element contents in red blood cell activity and five factors. Trying to bring two sets of indicators and specific combining ability, used in training on the monitoring function, and for the future to provide some references for further study.

Methods It was included 22 athletes and 22 ordinary men, as the research object, in the collection of blood, measuring red blood cell activity in the blood content of the five elements, simultaneous measurement of physical indicators, will be doing all the data at the differences between the two groups compared to the group to do correlation analysis. The recent record of 2000m, 6000m rowing Dynamometer test results, and red blood cell activity associated with the five elements of content analysis.

Results 1. Athletes indicators related to aerobic exercise were significantly higher than ordinary people. The white blood cells of athletes group were average. It shows that athletes have high aerobic capacity, while white blood cells are more stable than normal people.

2. The members of the national rowing men's iron, magnesium content was significantly higher than ordinary group, the iron content is higher than the normal reference value; blood calcium levels were significantly lower than ordinary people, and lower than the normal reference value.

3. The total number of red blood cells and the number of living cells was very significant positive correlation in two groups subjects; Red blood cell activity and red blood cell diameter is proportional, and red blood cell roundness in inverse proportion to the relationship; from this experiment a special ability to see red blood cell activity and there is no correlation.

4. In both groups, hemoglobin was positively correlated with iron content, while iron was positively correlated with copper content.

Conclusions 1. Increasing the number and volume of red blood cells can effectively increase the activity of red blood cells; red blood cell activity has no correlation with specific ability, and can not be used as an indicator to determine specific ability.

2. The content of iron and magnesium in rowers is higher than that in ordinary people, which indicates that the adjustment of aerobic capacity and nerve control is very effective. The lower calcium content indicates that the injury caused by calcium loss should be prevented and the urgency of calcium supplementation should be emphasized.

3. In training, we should pay attention to increasing hemoglobin content and aerobic capacity by supplementing iron. We can further consider the effect of supplementing copper to promote iron supplementation.