

## Biochemical Changes and Recovery after Half-course Marathon

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### Introduction

To evaluate the influencing factors on biochemical changes of body after half-course marathon running.

### Material and Methods

Twenty-six amateur half course marathon runners were studied. Male in 23, female in 3 and average age was 45 years old. In order to evaluate the influencing factors, the participants were grouped according to career of running, history of smoking, and alcohol. Biochemical parameter with blood test including AST, ALT, CPK, CK-MB, Treponin, BUN, Cr, Na, K were evaluated at finish line, 2 days, 2 weeks, and 4 weeks after running.

### Result

In whole group, BUN and Cr reached to the maximum level at finish line. After 2 days, It recovered its pre-running level. AST, CPK, and CK-MB reached its maximum level after 2 days running and returned its pre-running level after 2 and 4 weeks test. The history of smoking, alcohol and career of running didn't affected the result.

### Conclusion

In case of half-course marathon, the changes of the kidney fement due to dehydration were recovered after 2 days. And the biochemical indicator of muscle fatigue including AST, CPK, and CK-MB were recovered after 2 weeks. It needs at least 2 weeks rest after half-course marathon to recover all the biochemical parameter of the body, regardless of history of smoking, alcohol, and career of running.

**Key word:** Half-course Marathon, Biochemical parameter

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