

Comparison of Acute and Chronic Effects of Sodium Bicarbonate and Sodium Citrate on the Conductivity, Lactic Acid Level and Fatigue in lifesaving women

marziyeh mirhosseini moghadam*,

Abstract Sodium bicarbonate and sodium citrate are alkaline salts whose main function is to control the acid balance or to release lactic acid in the blood and extracellular fluid. Their role is to remove lactic acid during intense exercise. The aim of this study was to compare the acute and chronic effects of sodium bicarbonate and sodium citrate on the rate of performance, level of lactic acid in blood and fatigue in lifesaving women. The research was done by semi-experimental double blind method and 15 lifesaving women (age 34.6 ± 6.6 ; weight 63.6 ± 5.6 kg; height 166.7 ± 1.6 cm; BMI 2.23 ± 2.24 kg/m²) of Lahijan pool were ed as subjects of research. Sodium bicarbonate supplementation and placebo were acute (0.3 g/ kg body weight) and chronic (0.1 g/kg/daily for 3 days and on the fourth day 0.3 g/kg body weight), 90 minutes Before the test and sodium citrate supplementation, was also acute (0.5 g/kg body weight) and chronic (0.1 g/kg/daily for 3 days and on the fourth day 0.3 g/kg body weight),120 minutes before the test, and then the participants performed a special rescue test. The record of this activity was measured by a stopwatch, Before and after activity of lactic acid level by lactometer. To measure fatigue, the VAS self-declaration scale was used. Paired t-test was used to examine the results and analyze the variance of a repetitive design group for comparing the tests with a significant level of p 0.05). The level of lactic acid in the blood after acute and chronic administration of supplements was significantly lower than that of placebo (p

Keywords : Key word: sodium bicarbonate, sodium citrate, placebo, velocity, lactic acid, fatigue

