

Effect of Post Circuit Resistance Exercise Glucose Feeding on Energy and Hormonal Indexes in Plasma and Lymphocyte in Free-Style Wrestlers

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Abstract : The purpose of the study was to determine the effect of glucose feeding on energy and hormonal indexes in plasma and lymphocyte immediately after wrestling - base techniques circuit exercise (WBTCE) in young male freestyle wrestlers. Sixteen wrestlers (weight = $75/45 \pm 12/92$ kg, age = $22/29 \pm 0/90$ years, BMI = $26/23 \pm 2/64$ kg/m²) were randomly divided into two groups: control (water), glucose (2 gr per kg body weight). Blood samples were obtained before, immediately, and 90 minutes of the post-exercise recovery period. Glucose (2 g/kg of body weight, 1W/5V) and water (equal volumes) solutions were given immediately after the second blood sampling. Data were analyzed by using an ANOVA (a repeated measure) and a suitable post hoc test (LSD). A significant decrease was observed in lymphocytes glycogen immediately after exercise ($P < 0.001$). In the experimental group, increase Lymphocyte glycogen concentration ($P < 0.028$) than in the control group in 90 min post-exercise. Plasma glucose concentrations increased in all groups immediately after exercise ($P < 0.05$). Plasma insulin concentrations in both groups decreased immediately after exercise, but at 90 min after exercise, its level was significantly increased only in glucose group ($P < 0.001$). Our results suggested that WBTCE protocol could be affected cellular energy sources and hormonal response. Furthermore, Glucose consumption can increase the lymphocyte glycogen and better energy within the cell.

Keywords : glucose feeding, lymphocyte, Wrestling - base techniques circuit , exercise

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