

Effect of Gym Training and Cycling on Albuminuria among Gym Trainees and Professional Cyclists

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Testing for the effects of physical activities on the health condition of athletes is important. This study aims at studying the effect of cycling and gym training on albuminuria. Thirty gym-trainees in the Gampaha division and 12 cyclists from Naval Base-Welisara were selected using proportionate stratified random sampling, and total population sampling respectively. Urine Albumin to Creatinine Ratio (ACR) was used to assess the albuminuria of both groups before and after training. Workout intensity was measured by calculations done using post-training pulse rate. Hydration level was measured using bodyweight loss, water intake and urine volume passed. A paired t-test was used to test the effect of gym-training and cycling on albuminuria. Pearson correlation test was performed to identify the relationship of ACR difference between the intensity of the training and sweating rate. Moreover, the relationship between the pre- and post-session ACR was also assessed. A Mann-Whitney test was performed to compare the post-session ACR of gym trainees and cyclists. There was a significant difference between pre-session and post-session ACR for both cyclists and gym trainees. There was a positive correlation between the ACR difference and the intensity in both groups. There was no significant relationship between the sweating rate and ACR difference in both groups. There was a positive relationship between pre-session and post-session ACR levels. According to albuminuria assessing criteria, gym trainees indicated a higher elevation of post-session ACR (micro-albuminuria) than cyclists (normal).

Keywords: *ACR, gym training, cycling*