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*Abstract*

## Albumin excretion in olders with and without MetS in exercise

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ABSTRACT

**INTRODUCTION:** Exercising modifies renal function such as decreased kidney circulation and glomerular filtration in healthy conditions. In young and adults microalbuminuria could be induced by strenuous exercise however the effects of maximal and submaximal exercise on microalbuminuria in elderly (≥65 years) are not well known. We evaluated the effect of different intensities of acute exercise on microalbuminuria in elderly.

**PURPOSE**: We evaluated the effect of different intensities of acute exercise on microalbuminuria in elderly.

**METHODS**: The study involved 20 subjects, 13 men and 7 women (70 ± 5 years-old); they performed 3 bicycle exercise test a week apart of each other: maximal physical exercise (Maxcap-B), and two submaximal tests (Submax-B 80% and Submax-B 60%). In the first session after a 10 h fast, a blood sample was taken to determine serum glucose, creatinine, uric acid, cholesterol and triglycerides and clinical record and basal electrocardiogram and BMI ($kg/m^2$) were also obtained. Urine samples were collected before, immediately after, one hour and 24 hours after exercise to determine microalbuminuria (cutoff, 20-200 mg/l).

**RESULTS**: Healthy old adults were 4 male, the rest of the sample bear metabolic syndrome (MetS). Transient microalbuminuria was observed immediately after all three exercise tests, and 1 hour post-exercise in all individuals; however, it was higher in those with MetS. After 24 hours of exercise, no microalbuminuria was detected.

**CONCLUSION**: **Conclusion**: The maximal and submaximal exercise (Submax-B 80% and Submax-B 60%) transiently affected renal function in old adults, more importantly in those with metabolic syndrome.