

## Effects of L-Carnitine on Obese Rats Exposed to Swimming Exercise

Musa Con<sup>1</sup>, Mehmet Yalcin Tasmektepligil<sup>2</sup>, Soner Cankaya<sup>3</sup>, S. Ahmet Agaoglu<sup>4</sup>,  
Erol Dogan<sup>5</sup>, Sena Cenesiz<sup>6</sup> and Metin Cenesiz<sup>7</sup>

<sup>1,2,4,5</sup>*Ondokuz Mayis University, Yasar Dogu Faculty of Sports Sciences, 55139, Samsun, Turkey*

<sup>3</sup>*Ordu University, Faculty of Medicine, Department of Biostatistics, 52200, Ordu, Turkey*

<sup>6</sup>*Ondokuz Mayis University, Faculty of Veterinary Medicine, Department of Biochemistry,  
55139, Samsun, Turkey*

<sup>7</sup>*Ondokuz Mayis University, Faculty of Veterinary Medicine, Department of Physiology,  
55139, Samsun, Turkey*

*E-mail: <sup>1</sup>musacon@omu.edu.tr, <sup>2</sup><myalcint@gmail.com>, <sup>3</sup><sonercankaya@gmail.com>,  
<sup>4</sup><s.ahmet.agaoglu@gmail.com>, <sup>5</sup><erol.dogan@omu.edu.tr>, <sup>6</sup><scenesiz@omu.edu.tr>,  
<sup>7</sup><mcenesiz@omu.edu.tr>*

**KEYWORDS** Obesity. Glucose. Cholesterol. AST. ALT

**ABSTRACT** The aim of the present study is to investigate the effects of L-carnitine usage on weight loss, performance value and plasma biochemical parameters of the obesity induced rats during swimming exercise. A total of 40 male Sprague-Dawley rats were allocated randomly to four treatment groups (negative control, placebo group, Group 3 and Group 4 were fed a diet including 150 and 300 mg/kg/day L-carnitine, respectively). The results showed that glucose, cholesterol, HDL, LDL levels and ALT activity of rats in Group 4 were higher than that of controlled group. These results indicated that the supplementation of 300 mg/kg/day L-carnitine into the diet may increase performance and weight loss of obese rats compared to control group, placebo group and Group 3. Although, the weight loss of this group rats was higher than other group rats, determination of elevation in glucose, cholesterol and ALT activity indicates that 150 mg/kg/day L-carnitine intake is appropriate.